

Welcome to your CDP Water Security Questionnaire 2020

W0. Introduction

W0.1

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

Sempra Energy (which we refer to as “Sempra Energy,” “Sempra” or the “Company” in these responses) is an energy services holding company with 2019 revenues of \$10.8 billion. We and our family of companies invest in, develop and operate energy infrastructure and provide electric and gas services to customers in what we believe are the most attractive markets in North America: California, Texas, and Mexico and we participate in the development and operation of LNG export facilities. Our businesses position us at the intersection of two broad trends: innovation in energy technology and infrastructure; and growing demand for lower-carbon energy. Sempra Energy is committed to driving responsible strategies to meet the evolving market need for sustainable, resilient and affordable energy. This is critical to our ability to deliver long-term, sustainable value to all our stakeholders. Our operating companies include:

- San Diego Gas & Electric Company (SDG&E), based in San Diego, California, is a regulated public utility that provides electric services to a population of approximately 3.7 million consumers and natural gas services to approximately 3.4 million of that population.
- Southern California Gas Company (SoCalGas), based in Los Angeles, California, is the largest natural gas distribution utility in the U.S. and delivers natural gas to approximately 22 million consumers.
- Oncor Electric Delivery Company LLC (Oncor)*, based in Dallas, Texas, operates the largest electric transmission and distribution infrastructure system in the state, and provides electric service to an estimated population of 10 million Texans.
- Infraestructura Energetica Nova, S.A.B. de C.V. (IEnova), based in Mexico City, Mexico, develops, owns and operates or holds interests in energy infrastructure in Mexico and is one of the largest private energy companies in the country.
- Sempra LNG*, based in Houston, Texas, owns a 50.2% interest in the recently completed three-train LNG facility in Hackberry, Louisiana (Cameron LNG)* and is currently developing additional LNG export facilities in the Gulf coast and Pacific coast of North America.

*Cameron LNG and Oncor Electric Delivery Company LLC are not consolidated entities and therefore, data for these operations are not included in this response. Additional information and data can be found in our sustainability report at www.sempra.com/sustainability.



W-EU0.1a

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

- Electricity generation
- Transmission
- Distribution

W-EU0.1b

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

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	0	0	0
Lignite	0	0	0
Oil	0	0	0
Gas	1,818	76	6,469.76
Biomass	0	0	0
Waste (non-biomass)	0	0	0
Nuclear	0	0	0
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	0	0	0
Hydropower	0	0	0
Wind	329.5	14	1,102.58
Solar	241	10	381.46
Marine	0	0	0



Other renewable	0	0	0
Other non-renewable	0	0	0
Total	2,389	100	7,953.8

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.

- Mexico
- United States of America

W0.4

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

- USD

W0.5

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

- Companies, entities or groups over which operational control is exercised



W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Water used for hydrostatic testing of some natural gas pipelines at our California utilities.	Aggregated data collection for this source is not currently in place, we hope to include this in our disclosure in future years. Recycled water is typically used for this process and used several times before being discharged for an alternate use such as dust control.
Water recycling/reuse in some of our operations.	While several of our facilities utilize water recycling, we are still working to capture this data from all relevant facilities.
Construction projects and major projects outside the scope of normal operations.	Construction and major projects are generally excluded from the scope of our corporate data collection process.
Operating companies for which we have operational control and joint ventures with a material ownership percentage.	We include data from businesses and facilities that we own and operate; for joint ventures where we have operational control, we include data based on our ownership interest.

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	Important	Important	Freshwater is used across our operations, particularly in employee-occupied facilities. Municipal water is also used in some power plant operations. Natural gas and electricity suppliers are a critical part of our supply chain. While their water sources will vary, for some access to freshwater is vital to the provision of this commodity to our company.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Salt/brackish and recycled water are particularly important to our operations. For example, our LNG receipt terminal in Mexico withdraws seawater for use in its operations, and carefully returns it to the ocean after it's used. Termoelectrica de Mexicali (TDM), IEnova's natural gas-powered combined cycle electricity generating plant in Mexico relies heavily on recycled/wastewater for operations. Natural gas and electricity suppliers are a critical part of our supply chain. While their water sources will vary, for some, access to recycled, brackish or produced water is vital to the provision of this commodity to our company.

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%	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water on a consistent basis, including withdrawals. Their measurement methods (well measurement, water utility bills) will depend on what is most relevant for the facility. Data is also submitted to the corporate sustainability team annually. Additionally, certain facilities, such as those at our two California utilities, have water related goals.

Water withdrawals – volumes by source	100%	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water data on a consistent basis, depending on what is most relevant for the facility. Given the varied nature of our facilities, water comes from different sources, depending on the nature of operations. Data on water withdrawals by source is submitted to the corporate sustainability team annually. Additionally, certain facilities, such as those at our two California utilities, have water related goals.
Water withdrawals quality	100%	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water quality data on a consistent basis, depending on what is most relevant for the facility. Data related to water quality parameters utilized is also submitted to the corporate sustainability team annually. Additionally, certain facilities, such as those at our two California utilities, have water related goals.
Water discharges – total volumes	76-99	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water data on a consistent basis, depending on what is most relevant for the facility. Data for water discharge volumes is submitted to the corporate sustainability team annually. Municipal water discharges at employee occupied facilities are not typically monitored.
Water discharges – volumes by destination	76-99	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water data on a consistent basis, depending on what is most relevant for the facility. Data for water discharges by destination is also submitted to the corporate sustainability team annually. Municipal water discharges at employee occupied facilities are not typically monitored.
Water discharges – volumes by treatment method	76-99	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. This is measured at the facility level, according to permitting and other



		regulatory requirements. Water treatment will vary based on the specific operations of the facility. Municipal water discharges at employee occupied facilities are not typically monitored.
Water discharge quality – by standard effluent parameters	76-99	This is measured at the facility level, according to permitting and other regulatory requirements. Our operating companies are held strictly accountable for following all environmental regulations and laws, including those related to water quality, and obtaining all required permits. For example, IEnova's TDM electric generating facility processes over 1 billion gallons of sewage yearly for plant operations. After, they send the clean irrigation-quality water to the Rio Nuevo, which is considered one of the most polluted rivers of its size. Several water quality parameters are reviewed before water is discharged. SDG&E's Palomar Energy Center, which uses reclaimed sewage water purchased from the city of Escondido, currently discharges water under an Industrial Use Discharge permit. Both sections of the permit have specific discharge limits and monitoring requirements, for TOCs, TSS, chlorine content and other parameters. The term "facility" has the same definition as stated above.
Water discharge quality – temperature	76-99	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water data on a consistent basis, depending on what is most relevant for the facility. For example, at IEnova's LNG receipt terminal in Mexico, water discharge temperature is very relevant since the seawater withdrawn for use in its operations must be carefully returned to the ocean after it is used. Data is also submitted to the corporate sustainability team annually. Municipal water discharges at employee occupied facilities are not typically monitored.
Water consumption – total volume	100%	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. Individual facilities monitor water data on a consistent basis, depending on what is most relevant for the facility. Data is also submitted to the corporate sustainability team annually. Water recycled for reuse in certain facilities is not captured at all relevant locations. Additionally, certain facilities, such as those at our two California utilities, have water related goals.



Water recycled/reused	Not monitored	For our company, the term 'facilities' encompasses employee occupied offices, power plants, renewable generation assets such as wind farms and solar plants, LNG terminals, and natural gas pipelines. While several of our facilities utilize water recycling, we are still working to ensure that all relevant facilities are included and are capturing recycled water use accurately, given the complexity of these calculations.
The provision of fully-functioning, safely managed WASH services to all workers	Not relevant	Access to WASH services is currently not relevant for our operations. All facilities provide safely managed 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	101,619.01	Lower	Our total water withdrawal was 4% lower in 2019 mainly due to the sale of our Midstream storage assets. Water withdrawal varies year-over-year based on the operational needs of our facilities. While we continue to improve data collection related to water, these numbers do not account for all aspects of our operations, including natural gas pipeline testing at our California utilities.
Total discharges	95,468.19	About the same	Our overall water discharges were 2% lower in 2019. Of the total water discharged, 92% was returned to source, with negligible losses or variation in quality. Water discharge varies year-over-year based on the operational needs of our facilities. In future years, we expect that total water discharge will increase with the completion of new facilities.
Total consumption	6,150.82	Much lower	Our overall consumption was 25% lower in 2019 as compared to 2018 based on a company-wide calculation (total withdrawals minus total discharges). The variance is mainly due to the sale of our midstream storage assets in February 2019. Overall, Sempra Energy consumed



			approximately 6% of the water withdrawn in 2019 and returned around 92% of the water withdrawn to the source of extraction. Water consumption varies year-over-year based on the operational needs of our facilities. In future years, we expect that total water consumption will increase with the completion of new facilities.
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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	1-10	Lower	WWF Water Risk Filter	In 2019 we used the WWF Water Risk Filter Tool to identify the water stress levels at locations in which our facilities operate. We determined which of our operating sites that use freshwater are located in areas where the water depletion threshold is at or above 3.8 per the WWF basin risk results. Based on the WWF Water Risk Filter Tool used in 2019, the portion of water withdrawn from facilities located in water stressed areas in 2019 was 1.90%, a decrease of 22% when compared to 2018. The comparison with the previous reporting year is taking into account the facilities identified as being in water stressed locations based on the current water tool used (WWF tool). This decrease is mainly due to a decrease in operations at SDG&E's Palomar power plant. Water withdrawals from stressed areas come mainly from our California utilities, San Diego Gas and Electric and SoCalGas.

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	0.6	Much lower	Fresh surface water withdrawal decreased by 34% compared to 2018. This decrease is mainly due to the sale of our Peruvian operating company which relied on fresh surface water due to the minimal water infrastructure available near the rural company asset. We anticipate that our use of fresh surface water will decrease in 2020 as a result of this divestment.
Brackish surface water/Seawater	Relevant	94,234.78	About the same	Our seawater surface withdrawal remained about the same (2% decrease in 2019). Our brackish surface water/seawater withdrawal varies year-over-year based on the operational needs of our facilities. Overall, we anticipate that our total brackish/seawater withdrawal will increase in future years with the completion of new facilities, including three liquefaction trains at Cameron LNG.
Groundwater – renewable	Relevant	27.31	Much lower	With the sale of our midstream natural gas storage assets in 2019, renewable groundwater withdrawn decreased by 99% compared to 2018. The remaining groundwater withdrawn in 2019 was sourced from wells and water hydrants used for hydrotesting. Most of this water was later reused for dust control purposes. As we improve our water data capturing method around hydrotesting in 2020, we expect an increase in the amount of groundwater reported in 2019 due to the increased accuracy of the water data captured.
Groundwater – non-renewable	Not relevant			Non-renewable groundwater is not utilized at any of our facilities. In 2018, the renewable groundwater withdrawn for our operations was erroneously classified as non-renewable. Refer to row above for any explanations on the changes in renewable groundwater withdrawn. We do not anticipate sourcing non-renewable groundwater in 2020.



Produced/Entrained water	Not relevant			With the sale of our midstream natural gas storage assets, in 2019 we no longer utilize produced water in our operations. Compared to 2018, the volume of produced water withdrawn was zero. No significant changes are anticipated in 2020.
Third party sources	Relevant	7,356.32	Lower	Water withdrawals from third party sources come primarily from municipal wastewater and from municipal water. Our water withdrawals from these sources decreased 8% compared to last year mainly due to a decrease in the electricity generation at our Palomar power plant in 2019. Our water withdrawal from third party sources varies year-over-year based on the operational needs of our facilities.

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	434.74	Much lower	We experienced an approximately 75% decrease in freshwater discharge due to a decrease in operations at our Palomar and TDM generating power plants. Our fresh surface water discharges varies year-over-year based on the operational needs of our facilities.
Brackish surface water/seawater	Relevant	94,111.73	About the same	The volume of water discharged to seawater remained about the same (2% lower than in 2018). The seawater is utilized as cooling water for our LNG receipt terminal operations in Mexico. We anticipate that our total brackish/seawater discharges will increase in future years with the completion of new facilities, including the three liquefaction trains at Cameron LNG.

Groundwater	Relevant	8.22	This is our first year of measurement	In 2019 we have new methods to capture water discharges for hydrotests performed at SoCalGas facilities. Water was directly recharged to the ground through percolation methods. As we improve our water data capturing method around hydrotesting in 2020, we expect an increase in the amount of groundwater reported due to the increased accuracy of the water data captured.
Third-party destinations	Relevant	913.49	Much higher	We experienced a significant increase in discharges to third-party destinations (municipal treatment plants and storage/waste lagoon) due to the reclassification of water discharged from IEnova's TDM power plant. Our water discharged to third party sources varies year-over-year based on the operational needs of our facilities.

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
0.73	Other, please specify Water consumed for generation activities	MWh	Much higher	Though our total water withdrawn decreased compared to 2018, the increase in our water intensity value is due to the sale of all our U.S. renewable generation assets. The sale resulted in a significant decrease in our total power generation compared to 2018, while a similar amount of water was consumed. Water consumption did not decrease proportionately to the decrease in power generation because renewable generation requires significantly less water than our natural gas power plants. This resulted in our overall water intensity value to increase significantly compared to



				<p>2018.</p> <p>We included all sources of water used for our power generation-related activities. For joint ventures, the water consumption amount as well as the MWh production is proportional to the company's percent interest in each asset. Due to the sale of the assets in 2019, they were not included in this calculation.</p> <p>We anticipate a decrease in water intensity in 2020 due to the new solar generation facilities that commenced operation in 2020.</p>
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W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

1-25

% of total procurement spend

76-100

Rationale for this coverage



This information is only for our California utilities, SDG&E and SoCalGas. These businesses represent the majority of Sempra's expenditures with suppliers. Through our membership in the Electric Utility Industry Sustainable Supply Chain Alliance, a non-profit organization formed by investor-owned utilities across the U.S. to promote environmental stewardship, we survey select suppliers on an annual basis to better understand and evaluate their environmental performance, policies, and resource use. The survey includes questions on environmental compliance and management, GHG emissions, energy consumption, water use, and waste management. The suppliers selected to complete the survey include those considered top-tier (traditionally high spend suppliers) in each supply management category area (e.g. Electric Construction, IT, Support Services), those identified as part of the SRM program, and any other suppliers that are critical to the business based on Business Resumption plans.

Impact of the engagement and measures of success

With the Alliance survey SDG&E and SoCalGas achieved a completion rate of approximately 27% for the suppliers selected to take the survey and 54% of suppliers responded by at least initiating either the planning or assessment phase of the survey. Completion means that the supplier took the survey and received a score and also created a plan to enhance their sustainability score in the identified areas for improvement. Suppliers are provided percentage scores based on their responses, including a percentage breakdown per area (e.g. Administration, Construction, etc.) to show areas of opportunity for improvement (starting with the 2019 survey). Each area provides methodologies to enhance performance in the targeted areas. With other programs mentioned, such as the SRM program, success can be measured in terms of reductions in cost and environmental impact.

Comment

The percentage of suppliers includes all bidders, not solely those which the utilities contract with as a result of our evaluation. This process allows all bidders to understand the significance of this element as part of doing business with Sempra. While 10% of all bidders were required to answer the survey in 2019, this accounts for 82% of all dollars for RFP bid events in 2019. Bid-winning suppliers with RFPs over \$1M represent approximately 44% of the procurement spend for the year.

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Onboarding & compliance

Details of engagement

Inclusion of water stewardship and risk management in supplier selection mechanism

Requirement for water-related targets is included in your supplier selection mechanism

Requirement to adhere to our code of conduct regarding water stewardship and management

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for the coverage of your engagement

The information is for our SDG&E and SoCalGas operating companies. Sempra's engagement with its suppliers begins with the supplier code of conduct, which outlines our expectations on environmental stewardship. We value suppliers that evaluate their products and services from a total lifecycle perspective, have solid environmental metrics tracking practices, use resources responsibly, reuse and recycle when possible, and work to eliminate environmental incidents.

To evaluate suppliers, all Requests for Proposals (RFPs) over \$1 million include sustainability performance questions, as well as other suppliers based on criticality and type of work being completed. Supplier responses to the questionnaires are factored in during the bid award evaluation. In addition, critical suppliers engagement continues through the SRM program on metrics addressing operational sustainability (presence of a management system and goal setting related to emissions, energy, water, and waste).

Impact of the engagement and measures of success

In 2019, SDG&E and SoCalGas achieved a completion rate of approximately 27% for the suppliers selected to take the survey and 54% of suppliers responded by at least initiating either the planning or assessment phase of the survey. Completion means that the supplier took the survey and received a score and also created a plan to enhance their sustainability score in the identified areas for improvement. The survey is also used to create a baseline for the selected vendors and provides suppliers with benchmark dashboards against others in their category and best practices to increase scores in the applicable areas (e.g. Governance & Management, Electricity/Natural Gas, Waste, and Water).

Additionally, the tool allows suppliers to create plans to implement and enhance their everyday sustainability activities and thereby raise their sustainability scores in the following year using best practices from the benchmarking dashboard.



Comment

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Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship is integrated into supplier evaluation processes

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for the coverage of your engagement

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Impact of the engagement and measures of success



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Comment

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Type of engagement

Innovation & collaboration

Details of engagement

Encourage/incentivize innovation to reduce water impacts in products and services

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for the coverage of your engagement

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Comment

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W1.4c

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

Each year our California utilities, SDG&E and SoCalGas, provide millions of dollars in incentives for homes and businesses to implement energy efficiency programs. We help to identify process improvements and incentivize new appliances that can help save water and energy; lower operating costs; and reduce greenhouse gas emissions. Energy efficiency programs are key to the state's GHG emissions reduction goals. In fact, California is the state with the second-lowest per capita energy consumption in the U.S., in part because California regulators provide incentives for utilities to achieve energy-efficiency goals. By improving energy efficiency, the state has avoided the need to build additional power generation facilities. In 2019,

energy-efficiency programs saved 218,000 megawatt-hours of electricity, enough to power more than 45,000 homes for a year; and 56 million therms of natural gas, enough to serve over 115,000 homes for a year. Since 1990, these efforts have saved 7.4 million megawatt hours of energy, and more than 750 million therms of natural gas.

As part of these efforts, our companies utilize a variety of programs to engage with value chain customers on water-related issues. For example, in California, where we often face extreme drought conditions, programs exist to assist customers in implementing water efficient solutions. SDG&E offers a no-cost program, Water Infrastructure and System Efficiency (WISE), to conduct water pump optimization and utilization testing linking reduced energy to reduced water use for agricultural customers and other businesses facilities. Additionally, financial incentives and rebate programs are available to help offset WISE project implementation costs. This rebate program incentivizes businesses/agricultural customers to test their water pump systems so that they are operating efficiently and determine any maintenance needs. The testing results in energy cost savings, reduction of GHG emissions, and reduced water waste.

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?

Sempra Energy's water policy addresses our commitment to use water in a responsible and sustainable manner. This includes preparing for water related emergencies and abiding by applicable water related laws, regulations and permit requirements. We measure and report on our use of water; are sensitive to water availability and work to minimize the use of water in our operations when feasible; address water quality issues related to our operations; and work to ensure that water discharged from our facilities meets or exceeds permit requirements. Under this framework each business manages the identification and classification of potential water pollutants in line with the relevant regulatory requirements in each location.

Examples of these efforts include:

- At facilities where water discharge occurs, after the potential water pollutants are identified and classified, our operating companies and facilities require testing and analysis of the water prior to discharging to maintain compliance with applicable laws and regulations around water pollutant parameters.
- At our California utility, SDG&E, every product used must be evaluated to determine the nature of potential hazards. SDG&E Safety Services and Environmental Services must approve all hazardous substances for use, including all purchased chemicals, samples, and demonstration materials, through the Safety and Environmental Product Approval (SEPA) and Inventory Update Process. Therefore, any potential water pollutants are identified prior to their exposure to any water ecosystem. Water pollutants vary depending on the business activity (e.g. construction, facilities, support activities, etc). These water pollutants are further classified by various environmental rules, regulations, and permits to protect air, water, land and natural resources on the local, state, or federal levels. As a result of these regulations, SDG&E implemented company policies, a Construction Best Management Practices (BMP) manual, a Water Pollution Control Plan, a State Construction General Permit (CGP) Storm Water Pollution Prevention Plan, among others. Additionally, the company has permits such as the National Pollution Discharge Elimination System (NPDES), Industrial User Discharge (IUD), and Water Reuse Requirements (WRR). Further, employees receive proper training, and implement monitoring activities such as inspections and routine reports to comply with internal and external requirements.
- Examples of water pollutants according to the activity are:
 - Construction projects (dirt disturbance less than 1 acre, locally regulated): sediment, trash, equipment, material, vehicle related pollutants (e.g. total suspended solids - TSS, and oil and grease)



- Construction projects (dirt disturbance of 1 acre or more): sediment, trash, equipment, material, vehicle related pollutants (e.g. total suspended solids - TSS, pH, and oil and grease)
- Facilities: water pollutants include those mentioned for construction activities plus pH, Oil/grease/ TSS, free Chlorine, Chromium, Residual Chlorine, Zinc, Clean Water Act Priority Pollutants (added for cooling tower maintenance).
- Support activities (vault dewatering, industrial user discharge, water reclamation and reuse, etc): Oil/grease, Chemical Oxygen Demand, pH, TPH-Diesel, TPH-Gas and TSS.
- The potential water pollutants also vary across our operating companies depending on our operating activities. For example, residual water resulting from electricity generation operations in Mexico is regulated by the NOMS (Norma Oficial Mexicana). The NOM establishes and defines the water pollutants, permissible parameters, and testing methods, which serve as the basis for water testing protocols and procedures.
- For our midstream-related operations, potential water pollutants are identified through the Globally Harmonized System (GHS) program managed by the United Nations, which provides a Safety Data Sheet (SDS) for onsite chemicals. In addition to the GHS program the site Spill Prevention Control and Countermeasure (SPCC) plan identifies petroleum products stored onsite and how to prevent impacts to water ecosystems and/or human health.
- In addition, we have zero liquid discharge (ZLD) facilities, such as the Desert Star Energy Center (DSEC), which is mandated by Groundwater Discharge Permit issued by the State of Nevada – Division of Environmental Protection. This facility does not pollute water ecosystems and therefore has no impact on human health. At the Miramar natural gas-fired power plant treatment, storage, and disposal does not allow discharges either to comply with local stormwater requirements.

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
Other, please specify Trash, chemicals, metal, equipment, etc.	The type of pollutant varies according to business operations and activities, which includes construction projects, facility-related activities, and other support activities. Some examples of water pollutants are sediment, trash, equipment, material, and vehicle related pollutants (e.g. total suspended solids, pH, oil and grease), or chemicals and metals, such as free	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement	Water pollutants are regulated by water quality standards, which define the parameters of pollutants allowed. To mitigate adverse environmental impacts, activities are typically governed by company policies and/or by various environmental rules, regulations, and permits to protect water and other natural resources on the



	<p>chlorine, chromium, residual chlorine, and zinc. The main pollutants of concern in stormwater runoff from power generation sources are oil/grease, pH, TSS, and metals such as iron and zinc. In addition, the cooling towers blowdowns from steam cycle power plants also contain residual chlorine (from the use of chlorine for control of biofouling).</p> <p>Erosion of soil at construction sites is the major source of total suspended solids (TSS). The TSS entrained in stormwater runoff from construction activities contributes to many water quality, habitat, and aesthetic problems in urban waterways. Elevated levels of TSS increase turbidity, reduce the penetration of light at depth within the water column, and limit the growth of desirable aquatic plants. Solids that settle out as bottom deposits contribute to sedimentation and can alter and eventually destroy habitat for fish and bottom-dwelling organisms. TSS also provide a medium for the accumulation, transport and storage of other pollutants including nutrients, metals, and oil and grease that could increase toxicity in receiving water bodies and alter ecosystems and ultimately impact human health (via bioaccumulation in fish and subsequent human consumption).</p> <p>Stormwater runoff from construction sites if not adequately controlled (via use of Best Management Practices, appropriate housekeeping, or treatment),</p>	<p>Emergency preparedness</p>	<p>local, state, or federal levels. These regulations and water quality standards define the parameters of pollutants allowed.</p> <p>For example, SDG&E activities are generally assessed up-front for water related risk which include: assessing water quality impacts from construction projects and facilities operations, determining pollutants of concern, identifying pollutant pathways, assessing exposure to stormwater contamination, characterizing discharge for pollutants, assessing potential impacts to impaired receiving waters, identifying appropriate best management practices for implementation, and securing required permits, or authorizations.</p> <p>Every product used at SDG&E also requires to be evaluated to determine the nature of potential hazards. SDG&E Safety Services and Environmental Services must approve all hazardous substances for use, including all purchased chemicals, samples, and demonstration materials, through the Safety and Environmental Product Approval (SEPA) and Inventory Update Process. Therefore, any potential water pollutants are identified prior to their exposure to any water ecosystem.</p> <p>Another example of preventative activities at SDG&E are the implementation of a Construction Best Management Practices Manual, water pollution</p>
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	<p>can be laden with sediment and other pollutants such as building materials, concrete washout, paint, fuel, wastewater, oil and solvents. The contaminated runoff can then potentially enter a Municipal Separate Storm Sewer System (MS4) system and can be routed to local streams, rivers, lakes, or ocean outfalls.</p>		<p>control plan, and storm water pollution prevention plan, storm water management plan among others, that comply with requirements. Additionally, routine inspections are conducted, adequate training on all plans is provided, discharges are monitored, and site assessments are performed.</p>
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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 part of an enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management
Other

Tools and methods used

WRI Aqueduct
WWF Water Risk Filter
COSO Enterprise Risk Management Framework
Internal company methods

Comment

At the parent company level, the Board and Enterprise Risk Management Oversight Committee provide oversight and guidance in all risk areas to identify, analyze and manage them adequately. Water is integrated into this process. Corporate, operating company risk management, environmental services and the corporate sustainability teams assess and monitor exposure through risk maps and other risk analysis tools. Risks identified as affecting the entire Company include environmental compliance, climate-related, regulatory, health/safety, operational/reliability, and financial risks, among others.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Annually

How far into the future are risks considered?

1 to 3 years

Type of tools and methods used

Other



Tools and methods used

Internal company methods

External consultants

Other, please specify

SDG&E is a member of the Electric Utility Industry Sustainable Supply Chain Alliance, a non-profit organization formed by investor-owned utilities across the U.S. to promote environmental stewardship.

Comment

SDG&E is a member of the Electric Utility Industry Sustainable Supply Chain Alliance (the Alliance). The Alliance has created a set of voluntary standards to evaluate the supply chain on environmental performance. These standards include suggested questions on environmental compliance and management, GHG emissions, energy consumption, water use, and waste management. Through the Alliance, an annual survey is sent to select suppliers that allows us to better understand their environmental impacts, policies, and any goal setting around resource use. The suppliers selected to complete the survey include those considered top-tier (traditionally high spend suppliers) in each supply management category area (e.g. Electric Construction, IT, Support Services), those identified as part of the SRM program, and any other suppliers that are critical to the business based on the utilities Supply Management Business Resumption plans. At SoCalGas, suppliers that are identified as critical become part of the SRM program. The current SRM supplier areas were determined to be critical based on a supplier assessment we originally conducted in 2015 (e.g. construction contractors) and have reviewed critical and high-risk suppliers as part of the utilities SRM program annually. Through this program, SoCalGas tracks supplier performance and looks for ways to gain efficiencies, both in terms of cost and environmental impact.

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	<p>Water is critical to our businesses, particularly in the LNG and power generation operations. They have made significant progress in minimizing use of freshwater, particularly in water-stressed areas. This includes working with local water agencies to encourage consumers to reduce their use of this valuable resource and integrating climate related water risks (including the potential impact of both droughts and floods) into their construction and business resumption plans. Examples of this include IEnova’s power plant in Mexico which uses treated sewage water to cool the plant, and SDG&E’s Palomar Energy Center plant in California which uses reclaimed water (treated wastewater) in their electric generation process. Additionally, our LNG operations utilize sea/brackish water as opposed to freshwater.</p> <p>Where water is needed for power generation, the permitting of our power plants and those of our suppliers requires securing a long-term supply and completing an impact mitigation plan. In addition to monitoring of wells and other water sources, our public and regulatory affairs teams from across the company stay abreast of issues that affect our operations, including water availability and related regulations.</p> <p>In 2019, 92% of the water withdrawn was returned to the source, and freshwater represented just 0.01% of our total water withdrawal.</p>
Water quality at a basin/catchment level	Relevant, always included	<p>Water is critical to our businesses, particularly in the LNG and power generation operations. They have made significant progress in minimizing their use of freshwater, particularly in water-stressed areas. Examples of this include IEnova’s power plant in Mexico which uses treated sewage water to cool the plant, and SDG&E’s Palomar Energy Center plant in California which uses reclaimed water (treated wastewater) in their electric generation process. Additionally, our LNG operations utilize sea/brackish water as opposed to freshwater.</p> <p>Water resource availability, quality, and reliability are addressed by regulatory permitting agencies for licensing power generation facilities. We must comply with all water requirements in the licensing process for the life of the project.</p>

<p>Stakeholder conflicts concerning water resources at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Sempra Energy interacts with its key stakeholders on a continuous basis on a variety of topics, including water, especially during the various stages of an infrastructure project, from concept, to permitting, to construction and then operation. Our operating companies work with our stakeholders, including water agencies, government and businesses to support joint energy and water efficiency programs. We customize our approach and response on a community-by-community basis and pride ourselves in being systematic and responsive to stakeholder input.</p> <p>Please refer to our Stakeholder Engagement Policy for more details, available at the following link: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/stakeholder-engagement-policy2.pdf</p>
<p>Implications of water on your key commodities/raw materials</p>	<p>Relevant, not included</p>	<p>Sempra Energy is a large purchaser of natural gas (our utility SoCalGas is the largest natural gas distribution utility in the U.S.). Hydraulic fracturing is playing an increasing role in natural gas extraction and is water intensive. We are working to better understand the implications of this upstream supply chain issue.</p>
<p>Water-related regulatory frameworks</p>	<p>Relevant, always included</p>	<p>Water resource availability, quality, and reliability are addressed by regulatory permitting agencies for licensing generation facilities. We must comply with all water requirements in the licensing process for the life of the project. Sempra's Water Policy emphasizes our commitment to use water in a responsible and sustainable manner and abide by applicable water related laws, regulations and permit requirements.</p> <p>Beyond these compliance issues our government affairs groups participate in the legislative and regulatory debate on topics that affect our operations to identify and manage regulatory risk. We analyze the risks and opportunities associated with these policies.</p>
<p>Status of ecosystems and habitats</p>	<p>Relevant, always included</p>	<p>When we are looking to permit and build a new facility where water rights are needed, evaluation of ecosystems and habitats is an important part of this process. We often rely on NGOs with deep experience in ecosystems and habitat local to the area. For existing facilities, compliance with programmatic permits and other environmental regulations is continuously monitored. Refer to our Corporate Sustainability Report and our Biodiversity Policy for more details on how we integrate biodiversity considerations into the planning, construction and operation of energy facilities, balancing the protection of sensitive plant and animal life with</p>

		project requirements (available at the following link: https://www.sempra.com/sites/default/files/content/files/node-page/file-list/2018/biodiversity-policy.pdf).
Access to fully-functioning, safely managed WASH services for all employees	Not relevant, explanation provided	Access to WASH services is currently not relevant for our operations.
Other contextual issues, please specify	Relevant, always included	<p>Other issues considered include physical risks related to climate change such as more frequent and intense floods, drought, wind events, wildfires and temperature extremes as well as sea level rise. The potential financial impacts of these risks include disruption to production or operation of our energy infrastructure assets; disruption to our supply chain, including changes in the cost of the natural gas and electricity that we purchase and deliver; physical damage to our assets; and changes in demand for the energy we provide.</p> <p>As a result, our board also reviews and discusses strategies to address these risks, improve our resilience, and maximize climate-related opportunities for our company. These include increased demand for lower carbon energy and the infrastructure to deliver it; increased demand for LNG, including from countries that currently rely on coal or fuel-oil to generate power; increased energy efficiency requirements, which our utilities would help to implement; and increased demand for clean transportation, energy storage and renewable natural gas.</p>

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	Sempra Energy delivers energy to approximately 35 million consumers worldwide. Given that availability and access to water has the potential to impact our customers through impacts to rates and the reliability of the electric and transmission distribution systems at our utilities, the customer perspective is factored into our risk assessments. Ensuring energy reliability is key to our operations and we take action to prevent or mitigate water-related risks that could affect our customers starting from generation activities to aiding customers in being more energy and water efficient.

		<p>We engage with customers on water primarily through energy efficiency initiatives that save both water and energy. For example, our California utility customers offer a no-cost kit that includes a low-flow shower head and three faucet aerators, which can help them save water, energy used for water-heating, and lower energy use. These items maintain a high-pressure flow while reducing water usage up to 11%. Additionally, these utilities provide millions of dollars in incentives for homes and businesses to implement energy efficiency programs.</p>
Employees	Relevant, always included	<p>Employees play a critical role in the overall effort to reduce water use at our facilities. Only 0.01% of our water withdrawals are from freshwater sources, much of which is used for employee-occupied facilities. We are focused on employee engagement and communication to enhance their role in overall water conservation efforts. This includes employee organized green teams at several locations that work to develop sustainability-related programs for employees.</p> <p>Provision of water for employee use is currently not an issue at our locations.</p>
Investors	Relevant, always included	<p>To the extent that water issues could affect the performance of the company, the investor perspective is included in our analysis. For example, frequent drought conditions and unseasonably warm temperatures have increased the degree and prevalence of wildfires in California including in SDG&E's and SoCalGas' service territories, making this a material risk. The risk of wildfires fuelled by excessive drought conditions is identified as a material risk in our 10-K.</p>
Local communities	Relevant, always included	<p>Sempra's operating companies are diligent in soliciting and maintaining a dialogue with stakeholders, including local communities, to understand their perspectives and concerns. One way we obtain and monitor stakeholder issues is through our community advisory councils, which provide our operating companies with local guidance, perspective and insight.</p> <p>Community and stakeholder engagement is an essential component to developing, siting, building and operating energy infrastructure, and in some cases, may even be a requirement.</p> <p>To assist in managing stakeholder engagement, a stakeholder engagement plans are</p>

		<p>developed when considering major infrastructure developments. The goal of the stakeholder engagement plan is to provide transparent, two-way communication to all stakeholder audiences to build trust and credibility. It also serves to meet agreed-upon governance objectives sometime required by lenders, business partners or customers. Additionally, a plan helps ensure that there is a structure for stakeholders to express any issues or concerns that may arise so that they can be resolved in a timely manner.</p>
NGOs	Relevant, always included	<p>Sempra's operating companies are diligent reaching out to, and maintaining a dialogue with stakeholders, including NGOs, to understand their perspectives and concerns. Employees, particularly those responsible for infrastructure planning, project development and operations, are expected to proactively engage with NGOs and other stakeholders to seek their input; listen to their perspectives; and consider, prioritize and integrate the input received, where possible.</p>
Other water users at a basin/catchment level	Relevant, always included	<p>Sempra's operating companies are diligent in maintaining a dialogue with stakeholders, other water users near our facilities, and water providers and agencies, to understand their perspectives and concerns. Our community advisory councils are one way we might have a dialogue with other water users.</p> <p>Employees, particularly those responsible for infrastructure planning, project development and operations, are expected to proactively engage with stakeholders to seek their input; listen to their perspectives; and consider, prioritize and integrate the input received, where possible.</p>
Regulators	Relevant, always included	<p>Sempra Energy works with various regulators to manage our operations, including those impacting water. Our operating companies are heavily engaged with regulators especially during construction activities, for example during the permitting phase regarding a wide array of topics from environmental considerations (including water) and project benefits, such as new jobs, community investment and public safety, to facility design, routes, location and other important parameters.</p> <p>Another way we engage with regulators is through our government affairs teams throughout our operating companies. They closely monitor developments related to water regulations and use and analyze the associated risks and opportunities.</p>
River basin management authorities	Relevant, always included	<p>In our larger urban business areas, we have regular contact with the River basin management authorities. However, in more rural areas this contact may be less frequent.</p>

		Our Stakeholder Engagement Policy provides further details on how we engage with our stakeholders to determine which issues matter most.
Statutory special interest groups at a local level	Relevant, always included	Statutory special interest groups play a significant role, particularly for our utilities in California. Another example of a special interest group we work with are North American tribes. Their positions are closely monitored and factored into our decision-making and risk management processes.
Suppliers	Relevant, always included	Water is of particular focus in contracts with electricity suppliers as it can be an important ingredient to the production of electricity. For conventional capacity that we buy under contract, our RFO stipulates that respondents must have all necessary water rights. These suppliers are required to describe how they will deliver upon their contract and assure that risk associated with non-delivery is carried by them, consistent with our overall approach to risk management.
Water utilities at a local level	Relevant, always included	Sempra Energy's operating companies maintain close relationships with water utilities and suppliers where we do business. We work together on water conservation initiatives, decreasing our use of freshwater, increasing use of recycled water and also discussing specific issues related to our facilities.
Other stakeholder, please specify	Not relevant, explanation provided	

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.

Water-related risks are assessed at various levels of our organization:

- At the parent level of the company, the Board and Enterprise Risk Management Oversight Committee is responsible for overseeing and providing guidance on the array of risks Sempra Energy is exposed to, including water-related risks, as water is critical to our business, especially in our electricity generation operations.
- At the Corporate and operating company levels, risk management teams are assessing and monitoring exposure through risk maps and other risk analysis tools on a continuous basis.



- At the asset level, risks are mitigated through emergency preparedness and business resumption plans.
- At the facility level, the corporate responsibility group maps Sempra Energy's facilities and evaluates water risks using the WWF Water Risk Filter and the WRI Water tools on an annual basis. This frequency allows us to update our analysis for any new facilities and capture any data changes from these organizations. The current risks identified by these tools are considered, in addition to projections of water risk.

SDG&E is a member of the Electric Utility Industry Sustainable Supply Chain Alliance (EUISSCA), a non-profit organization formed by investor-owned utilities across the U.S. to promote environmental stewardship. Through collaboration with the (EUISSCA), a supplier sustainability questionnaire was developed and is used as part of the RFP process for our California utilities, SDG&E and SoCalGas. The use of this questionnaire and the EUISSCA procurement standards allow the California utility to implement best practices for supply chain environmental management.

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?

Sempra Energy defines and identifies risk factors that could have a material financial impact on our business and in relation to our mission in our Form 10-K and Form 10-Q filings with the U.S. Securities and Exchange Commission. The risk factors outlined in the Form 10-Ks and Form 10-Qs are those that could materially adversely affect our actual results and cause such results to differ materially from those expressed in any forward-looking statements made by us or on our behalf. We also describe in other sections of our Form 10-Ks and Form 10-Qs certain material factors that could affect our results of operations, liquidity and financial condition. Our most recent Form 10-K identifies a number of risk factors that are or could be a result of water-related issues, such as the potential for tsunamis, floods, mudslides, and especially drought.



Additionally, water-risks that would impact Sempra's ability to achieve our critical success factors, such as our ability to provide safe and reliable energy service to our customers, could have a strategic impact on our business. Many of these risks may be addressed in our Form 10-K and Form 10-Q filings in a summary or otherwise different manner than the presentation in this discussion.

For transparency purposes, in the responses below we have also included additional water-related risks that we have identified that may not meet the threshold of materiality relevant to our Form 10-K and Form 10-Q filings, but we believe are useful in providing context to the significance of water in our operations and supply chain and therefore merit inclusion in this discussion.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	9	26-50	<p>Sempra Energy's responses in section W4 includes all facilities owned and operating as of year-end 2019, except that it excludes operating companies classified as 'discontinued operations', as they have since been sold and no longer impact our exposure to water risks or opportunities.</p> <p>In the context of section W4 responses, our use of the term "facility" refers to Sempra's assets that, given their exposure to water risks, have the potential to have a substantive financial or strategic impact on our business. Aside from employee-occupied offices and buildings, all operations (such as power generation plants and related gas and power infrastructure) are included. Data for certain facilities may be aggregated (for example, pipelines) based on how the data is collected for corporate sustainability reporting. In an effort to be transparent, in the comments section we also discuss other facilities exposed to water risk, but that do not represent a substantive financial or strategic impact on our business.</p> <p>Nine of 21 of our facilities have been identified as being exposed to substantive water risks due to their location within a region of water stress, as determined using the Water Risk Filter tool developed by WWF.</p>



			<p>The facilities we consider to be exposed to water risks are those that have a water depletion value at or above 3.8 and that use freshwater in their operations.</p> <p>The facilities exposed to water risks include four natural gas power generation plants, a renewable generation facility, one electric and natural gas utility, two natural gas utilities, and a natural gas transportation system, which are critical components for the reliable delivery of power and gas to our customers.</p> <p>In addition, there are two employee-occupied office buildings and an LNG regasification terminal located in water-stressed regions, but that utilize none to minimal freshwater and therefore have less water related risk.</p>
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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
 Other, please specify
 GHAASBasin3725

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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



Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

The facility affected by this river basin is our Miramar Energy Center (generation power plant), which represents 5% of Company-wide facilities. This 96MW peaker power plant provided 0.94% of our company's total gross generation in 2019. The two employee occupied buildings mentioned in W4.1b, Sempra Energy and SDG&E headquarters buildings, are also located in this river basin.

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin3736

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

1-25

% company's total global revenue that could be affected

Unknown

Comment

The facility affected by this river basin is Palomar Energy Center, which represents 5% of Company-wide facilities. Palomar Energy Center is a 560 MW natural gas-powered electric generation facility. The portion of our electric generation that had the potential to be affected by water-related risks was 15% in 2019.

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin3724

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

The facility affected by this river basin is our Cuyamaca Energy Center peaker power plant. The percentage of Company-wide facilities this represents is 5%, and the portion of our electric generation that could be affected due to the water risk this facility is exposed to is not significant (0.09%).

Country/Area & River basin

United States of America

Other, please specify

Southwestern California

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

Less than 1%

% company's total global revenue that could be affected

Comment

SDG&E's gas & electric transmission and distribution system facilities are located within the San Diego County and southern Orange County regions in southern California, United States. The water data represents 93 substations and 22 employee occupied offices at SDG&E, which is most of SDG&E's facilities (SDG&E is working on including water data for new and leased sites). The percentage of Company-wide facilities this represents is 5%. This facility does not generate electricity (SDG&E's power generation plants exposed to water risks are included separately above).

Country/Area & River basin

United States of America

Other, please specify

Boulder City, Nevada (Colorado River)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

26-50

% company's total global revenue that could be affected

Unknown

Comment

Desert Star Energy Center is a 480MW natural gas-powered electric generation facility owned by SDG&E located in Boulder City, Nev. As a dry-cooling facility, it uses 90-percent less water than a traditional power plant. This facility which represents 5% of Company-wide facilities. The portion of our electric generation that had the potential to be affected by water-related risks was 17% in 2019.

Country/Area & River basin

Mexico

Bravo

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

The facility affected by this river basin are our Mexico Pipelines (IEnova Transporte), IEnova's gas transmission and distribution system. The percentage of Company-wide facilities this represents is 5%, and its exposure to water risk does not affect our electric generation because this facility does not generate power.



Country/Area & River basin

United States of America
Other, please specify
Southern California

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

Less than 1%

% company's total global revenue that could be affected

Unknown

Comment

SoCalGas is the largest natural gas distribution utility in the U.S., providing safe, reliable and increasingly renewable natural gas service to approximately 22 million consumers located in Southern California. This facility is compromised by natural gas delivery system infrastructure, such as compressor stations, pipelines, and storage assets. The percentage of Company-wide facilities this represents is 5% based on the total number of facilities, and its exposure to water risk does not affect our electric generation because SoCalGas does not generate power.

Country/Area & River basin

Mexico
Colorado River (Pacific Ocean)

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

Comment

The facilities affected by this river basin are two of IEnova's facilities: Energia Sierra Juarez (ESJ) and Ecogas (Mexicali location). Energía Sierra Juarez is a 155 MW wind farm located on Baja California's Sierra de Juarez mountain range. The project interconnects with the Southwest Powerlink transmission system at SDG&E's East County substation. Ecogas Mexicali is part of the natural gas distribution utility, Ecogas México. Ecogas Mexicali provides natural gas to approximately 11,000 consumers.

Each of these facilities represents 5% of Company-wide facilities. The portion of our electric generation that had the potential to be affected by water-related risks was 3% in 2019 (ESJ only). For Ecogas, exposure to water risk does not affect our electric generation because this facility does not generate power.

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

Other, please specify

(GHAASBasin3724, 3725 and 3736

Type of risk & Primary risk driver

Physical

Other, please specify

Rising sea levels

Primary potential impact

Impact on company assets

Company-specific description

Rising sea levels pose a threat to our energy infrastructure located in coastal areas. Through our California utilities, SDG&E and SoCalGas, and IEnova's operations, we have a concentration of operations and infrastructure in coastal areas of California and Northern Baja California, Mexico. According to the San Diego Region Report issued by Scripps Institution of Oceanography in partnership with other regional partners as part of California's 4th climate change assessment, sea level may rise in the San Diego region significantly faster between now and 2050 than the roughly 0.6 feet of rise measured over the last century. In fact, the report says that by 2050, we could experience a rise of about 12 inches relative to sea level in 2000. Sea level rise will be compounded by other causes of flooding that we already experience- extreme high tides and storm surges- that are expected to cause the greatest impacts. Coastal flooding will lead to further beach and bluff erosion as well as runoff and drainage problems from intense storms. If these effects were to occur, extended service losses and operational challenges could result. The gas system could also experience some impacts from climate change, including in the form of increased repair/maintenance needs or localized disruptions. Widespread disruptions to natural gas infrastructure would not be expected due to limited project exposure to climate hazards, and low system sensitivity when hazards do occur. Other indirect impacts could be experienced by nearby communities if critical customers served by the substations, such as sewage pumping stations, hospitals, airports, and ports, are affected by outages. For other asset types, potential direct impacts are expected in the form of increased maintenance and repair costs.

Timeframe

More than 6 years

Magnitude of potential impact

High

Likelihood

Likely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Develop flood emergency plans

Description of response

To better understand this threat and be able to take the necessary actions, SDG&E and SoCalGas participated in a study with the California Energy Commission analyzing the exposure of utility assets to climate change-driven sea level rise. To develop action plans for the adaptation actions identified in the study, SDG&E and SoCalGas have focused on reporting the study results throughout the organization, utilizing workshops and one-on-one communication. Maps are being developed that will be integrated into the geographic information system highlighting at-risk infrastructure and locations that can be used to inform new construction standards. SDG&E is identifying monitoring procedures through a flexible adaptation pathways approach in which short and long-term adaptation measures are identified and evaluated. For example, upon looking further into the results of the scenario analysis study, SDG&E determined that one substation faces the highest level of risk for impacts related to sea level rise. SDG&E has partnered with the Scripps Institution of Oceanography to install a sensor west of the substation that will monitor and generate wave models, which will allow for more detailed projections of coastal flooding and better understanding of potential sea level rise in the future. In addition, SDG&E is now engaged in a vulnerability assessment for its entire service territory and all its assets for a multitude of climate hazards on several different time scales going out at least 50 years from today. This will be the most comprehensive assessment the utility has conducted to date and will serve as a guiding document for how the utility addresses climate change risks moving forward.

Cost of response

Explanation of cost of response

The cost of response is already built into the current capital plan. A cost estimate cannot be determined.

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin 3724, 3725, 3736; Colorado

Type of risk & Primary risk driver

Physical

Drought

Primary potential impact

Impact on company assets

Company-specific description

Sempra Energy's operating companies will face increasing risks to the water supplies for their operations to the extent that temperatures increase and drought conditions worsen. Our power generation facilities and two of our utilities, SDG&E and SoCalGas are located in the southwestern region of the U.S., an area increasingly short on water supply and prone to drought conditions. An additional power generation facility near Mexicali, Mexico is also subject to these conditions.

Timeframe

Current up to one year

Magnitude of potential impact

Low

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

Primary response to risk

Other, please specify

Investment in infrastructure

Description of response

Currently, power plants in the southwest region of the U.S. and northwestern Mexico are the Company's main source of generating capacity. These plants were designed to be operable under drought conditions and already use water-saving technologies: The Desert Star power plant uses dry-cooling, which uses over 90% less water to produce power than traditional wet-cooled power plants. The Palomar Energy Center uses reclaimed water to generate electricity. We have also engaged with local water authorities to increase our access to recycled water sources, including for our Miramar natural gas-fired power plant in San Diego. In addition, we require our suppliers of capacity, through the procurement process, to describe in detail how they will deliver on their contract with us in times of water or natural gas-related shortages. At the asset level, risks are mitigated through emergency preparedness and business resumption plans as well, which help reduce risks in this area.

Cost of response

Explanation of cost of response

The cost of response is already built into the current capital plan. A cost estimate cannot be determined.

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin 3724, 3725, 3736

Type of risk & Primary risk driver

Physical

Severe weather events

Primary potential impact

Other, please specify

Wildfires have several areas of impact for our company: increased operational costs; brand damage; impact on company assets; increased insurance premiums

Company-specific description

Sempra Energy may face increasing risks if temperatures increase and drought conditions worsen. Our operating companies' power generation facilities in the southwest, while built to tolerate drought conditions, remain vulnerable during incidents of heat and extraordinary weather. Affected facilities include: SDG&E's Palomar Energy, a 566-megawatt facility located in Escondido, CA; Miramar Energy, a 96-megawatt peaking facility in San Diego, CA; Desert Star Energy, a 480-megawatt plant located in Boulder City, NV; and IEnova's 625-megawatt Termoeléctrica de Mexicali power plant in Mexicali, Mexico. In addition, SDG&E and SoCalGas, are also located in the southwestern region of the U.S. This part of the country is prone to drought conditions and is sometimes low on water supplies. From time to time, this region is confronted with a weather pattern known as "Santa Ana" winds: strong, very dry offshore winds often associated with the hottest and driest weather of the year. The combination of dry brush and hurricane force winds may fan regional wildfires that can put infrastructure and customers at risk. In addition, if overhead power lines are implicated in wildfires, as was the case in 2007, it represents further financial risk.



Climate models predict increasing severity and frequency of wildfires in California. The aftermath of fires can also lead to flash flooding and mudslides, further damaging infrastructure, property and even lives as was the case in other parts of California in late 2017 and 2018.

Timeframe

Current up to one year

Magnitude of potential impact

High

Likelihood

About as likely as not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

In July 2019, the Governor of California signed Assembly Bill 1054 and Assembly Bill 111 (collectively the Wildfire Legislation) into law, which addresses certain important issues related to catastrophic wildfires in California and their impact on electric investor owned utilities (IOUs). The Wildfire Legislation did not change the doctrine of inverse condemnation, which imposes strict liability on a utility (meaning that a utility may be found liable regardless of fault) whose equipment is determined to be a cause of a fire. The Wildfire Legislation established a revised legal standard for the recovery of wildfire costs (Revised Prudent Manager Standard) and established a fund (the Wildfire Fund) designed to provide liquidity to participating California electric IOUs to pay IOU wildfire-related claims in the event the governmental agency responsible for determining causation determines the applicable IOU's equipment caused the ignition of a wildfire, primary insurance coverage is exceeded and

certain other conditions are satisfied. An Electric IOU is not required to repay the Wildfire Fund if deemed prudent under the Revised Prudent Manager Standard. But if the IOU is deemed imprudent, it is required to repay the Wildfire Fund, subject to a cap on liability for an IOU with a valid Safety Certification. We are unable to predict whether the Wildfire Legislation will be effectively implemented and its impact on SDG&E's ability to recover certain costs and expenses in cases where SDG&E's equipment is determined to be a cause of a fire.

Primary response to risk

Other, please specify

Hardening of infrastructure

Description of response

SDG&E has strong risk management practices in place to mitigate wildfire risk. This has been an effort developed over the last decade, including over \$2.0 billion invested in wildfire mitigation since 2007 (which amount does not attempt to quantify future costs). As an example, in 2019, SDG&E issued its wildfire mitigation plan which outlines efforts to mitigate these risks. These efforts include:

- A cross functional wildfire risk mitigation governance structure; extensive workforce wildfire prevention training; fire potential communicated daily; stringent monitoring and inspection standards with robust internal controls;
- Aggressive infrastructure hardening + robust vegetation management program
- Leading practices in construction, maintenance and operations, including proactive de-energization for safety
- Dedicated firefighting resources and one of the largest heli-tankers in the world;
- Advanced situational awareness tools for modelling fire risk: Santa Ana Wildfire Threat Index | Wildfire Risk Reduction Modelling; Highest concentration of utility-owned weather network in the U.S. with 100+ cameras; Robust vegetation management program tracking 460K+ trees;
- Stakeholder collaboration with ~100 community partners
- Weather data shared with fire and weather agencies, academia and general public
- Community Resource Centers supporting most impacted customers.

Cost of response

2,000,000

Explanation of cost of response

SDG&E has strong risk management practices in place to mitigate wildfire risk. This has been an effort developed over the last decade, including over \$2.0 billion invested in wildfire mitigation since 2007 (which amount does not attempt to quantify future costs).

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin3724, 3725 and 3736

Type of risk & Primary risk driver

Physical

Drought

Primary potential impact

Increased operating costs

Company-specific description

Changing precipitation patterns and increased drought are one of the impacts of a changing climate. Long-term drought conditions lead to decreasing water supplies, and negatively impact the availability of hydroelectric resources in the Northwest U.S., which subsequently impacts the availability of a reliable energy supply into the California electric grid. Without an alternative source of electricity, this could result in temporary power shortages in SDG&E's service territory.

Timeframe

1-3 years

Magnitude of potential impact

Low

Likelihood

Likely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The financial impacts (although likely negative and potentially significant) are difficult to estimate. A September 2011 power outage in SDG&E service territory that lasted 12 hours provides insight into the potential impacts. While SDG&E was not held responsible for this event, customers filed a class action lawsuit seeking unspecified damages against SDG&E and other parties alleging the company failed to prevent the outage. 6,500 customer claims, primarily related to food spoilage, were also filed.

Primary response to risk

Engage with suppliers

Description of response

While our SDG&E utility does not rely on any large hydroelectric resources to meet load, such a scenario would put further pressure on the state's already-strained power grid. To avoid load shedding, more fossil and renewable generation along with additional import capacity from adjacent states may be needed. More than 30 years ago, the company recognized the benefits of our proximity to Tijuana and the rest of Baja California and built our region's first cross-border energy ties to the Federal Electricity Commission in Mexico -- linking our electrical grids and demonstrating economic cooperation and support for one another. The financial implications associated with long-term drought are not as significant to our utility SDG&E as they might be to other generators that rely on hydropower, since it is already a major importer of power from other markets where drought conditions are uncommon. Still, in response to ongoing drought conditions, we have taken steps to provide adequate in-basin generation resources and transmission import capacity to meet demand. We require our suppliers of capacity, through the procurement process, to describe in detail how they will deliver on their contract with us in times of water or natural gas-related shortages. We also assign all risk and related costs associated with non-delivery of contracted electricity to our suppliers. Within company operations, each department also annually develops business resumption plans.

Cost of response

Explanation of cost of response

Costs of this response are already built into existing departments including resource planning and emergency management. A cost estimate cannot be determined.

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

Other, please specify

(various, southwest U.S.)

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Disruption to sales due to value chain disruption

Company-specific description

We work with suppliers located throughout the U.S. who provide contracted electricity capacity to our SDG&E utility. According to the WWF Water Risk Filter tool our suppliers located in Southern California reside in a water-stressed region. As water can be a key component in the



electricity generation process (particularly for fossil fuel-fired generation), any interruption in the operations of our suppliers due to water scarcity could negatively impact our ability to provide electricity to customers.

Timeframe

4-6 years

Magnitude of potential impact

Low

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

The financial impacts (although likely negative and potentially significant) are difficult to estimate.

Primary response to risk

Supplier engagement

Develop supplier drought emergency plans

Description of response

Water is an important factor in our contracts with electricity suppliers since water is generally an important ingredient in the production of electricity. For conventional capacity that we buy under contract with power producers, our Request for Offer (RFO) stipulates that respondents must have all necessary water rights consistent with the generating resource needs. We also manage water risk in the supply chain by including sustainability-related questions in Requests for Proposals (RFPs), customizing our questions to the material or service being procured. We further work to model the water impacts of our supply chain to identify key suppliers with whom to engage on this issue.

Cost of response

Explanation of cost of response

The cost of response is already built into the budget. A cost estimate cannot be determined.

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

Other

Primary water-related opportunity

Other, please specify

Incentive award for implementation

Company-specific description & strategy to realize opportunity

Maintain focus on energy efficiency programs that also result in water savings. In our home state of California, where the bulk of our customers reside, water and energy are typically managed separately despite the important links between the two. Water is used in the production of nearly every major energy source. Likewise, energy is used in multiple ways and at multiple steps in water delivery and treatment systems as well as wastewater collection and treatment. As a result, utilities receive financial incentives for the successful implementation of energy-efficiency programs that often reduce water use as well, through energy and water-efficient appliances and equipment. To the extent our customers become more focused on reducing energy and water use, this provides our California utilities with more opportunities to save natural resources and earn financial incentives, as available.

SDG&E and SoCalGas continue to focus their efforts on delivering energy efficiency benefits for customers through a wide variety of programs, including easy access to their accounts and energy management tools; SDG&E's Energy Marketplace, which offers customers an easy way to review and purchase energy efficiency-related products; and demand side management programs with residential and commercial customers. As an example, SDG&E business customers can earn rebates on improvements with Energy Efficiency Business Rebates. Small to mid-size business customers may be able to receive a no-cost audit and installation of many energy-efficient products at reduced or no-cost through the Business Energy Solutions Program. With Energy Efficiency Business Incentives, customers benefit from cash incentives for retrofitting or installing new equipment. Eligible customers can get 0% financing for qualifying energy-efficient improvements to their business with On-Bill Financing.

In 2019, SDG&E realized electricity savings of approximately 218,000 MWh and reduced peak demand by 45 MW, enough to power 45,435 homes for a year. Through SDG&E and SoCalGas, energy efficiency efforts saved 55.6 million therms of natural gas, enough to serve more than 105,250 homes for a year. The cost to realize the opportunity is based on the CPUC-approved 2019 energy efficiency program budget for SDG&E and SoCalGas of about \$222.5 million, \$118 million for gas-related programs and \$104 million for electric-related programs. These costs are recovered through a public purpose charge in utility rates.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Low



Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

SDG&E and SoCalGas received \$12 million in energy efficiency awards from 2016-2018. In March 2017, the CPUC approved the settlement agreements reached with the Cal PA and TURN regarding the incentive awards to the utilities for program years 2006 through 2008, wherein the parties agreed that SDG&E and SoCalGas would offset up to a total of approximately \$4 million each against future incentive awards over a three-year period beginning in 2017. If the total incentive awards ultimately authorized for 2017 through 2019 are less than approximately \$4 million for either utility, the applicable utility is released from paying any remaining unapplied amount.

Type of opportunity

Other

Primary water-related opportunity

Other, please specify
Enhanced reputation

Company-specific description & strategy to realize opportunity

Sempra has taken many steps to minimize water use in our operations. This includes using reclaimed water and dry-cooling at our power plants. As water becomes an increasingly scarce resource and Sempra and its operating companies are recognized for taking action to reduce water use, this can positively impact our reputation, making it easier to do business and get new projects permitted and approved. In order to

continue to realize this opportunity, we must continue communication efforts with key stakeholders about how we do business and our efforts to reduce our impacts on the environment. Examples include: Our annual corporate sustainability report; Community Advisory Councils where community leaders have direct interaction with senior Sempra business leaders and discuss a variety of topics; customer communications on key programs and plans through websites, bill inserts, advertising messages and social media networks.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

It is difficult to estimate financial impacts related to reputational issues.

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

Our Sempra headquarters building and SDG&E utility are reducing water use at employee-occupied facilities through equipment upgrades, such as a more efficient heating, ventilation, and air conditioning system, low flow domestic water devices (toilets, faucets, shower heads, etc.), in addition to water-saving measures for landscaping, such as drought-tolerant plants and weather-based irrigation. The water savings from the drought tolerant landscaping reduced water consumption at Century Park (SDG&E's headquarters building) by 43%, or a 15% total consumption reduction at SDG&E's employee occupied facilities. It is estimated to lead to 4,000,000 million gallons of water savings on an annual basis.

We also utilize water-saving technologies for power generation, including dry cooling and the use of reclaimed water. When we save water, we also reduce energy use, further reducing costs and impacts to the environment. In order to take advantage of this opportunity, we must continue to make improvements to our operations to further reduce our water use.

Estimated timeframe for realization

More than 6 years

Magnitude of potential financial impact

Low-medium

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

After rebates and the total annual return on investment related to water savings and reduced maintenance, it is expected to recover the financial investment for this project in approximately 10 years after implementation.

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)

Miramar Energy Center

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin3725

Latitude

32.878013

Longitude

-117.166674

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

34.4

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

34.4

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)

34.4

Comparison of total consumption with previous reporting year

Lower

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Miramar Energy Center is a peaker power plant that produces 96 MW of power and can reach full generating capacity within 10 to 15 minutes to meet immediate demand on the grid. This facility utilizes municipal water and does not track discharges. Therefore we currently do not have insight into the amount of water discharged. Compared to last year, water withdrawal decreased 7% due to a decrease in generation, resulting in less water used. In this case, water consumption is equal to water withdrawal. Our water withdrawal from third party sources varies from year-to-year based on the operational needs of our facilities, as such we cannot anticipate future withdrawals.

Facility reference number

Facility 2

Facility name (optional)

Palomar Energy Center

Country/Area & River basin

United States of America
Other, please specify
GHAASBasin3736

Latitude

33.119593

Longitude

-117.117413

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

1,303

Comparison of total withdrawals with previous reporting year

Much 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

1,303

Total water discharges at this facility (megaliters/year)

440.17

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

434.74

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

5.43

Total water consumption at this facility (megaliters/year)

862.76

Comparison of total consumption with previous reporting year

Much lower

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Palomar Energy Center is a 560 MW natural gas power plant that was designed to use reclaimed water (municipal waste water) to generate electricity in an effort to increase water conservation and use recycled water, which mitigates the impact the generation plant has on regional water supply. The amount of water withdrawal and discharged at this facility is directly measured, and consumption is calculated manually (withdrawals minus discharges). Water withdrawals were 30% lower than in 2018 due to a decrease in power generation, and discharges were 39% lower, resulting in a lower water consumption (consumption decreased by 39% compared to 2018). Our water withdrawal from third party sources varies from year-to-year based on the operational needs of our facilities, as such we cannot anticipate future withdrawals.

Facility reference number

Facility 3

Facility name (optional)

Cuyamaca Peak Energy Plant

Country/Area & River basin

United States of America

Other, please specify

GHAASBasin3724

Latitude

32.796635

Longitude

-116.971039

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

0.03

Comparison of total withdrawals with previous reporting year

Much 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

0.03

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)

0.03

Comparison of total consumption with previous reporting year

Much lower

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Cuyamaca Peak Energy Plant is a peaker power plant that produces 45 MW of power. This facility utilizes municipal water for sanitation and does not track discharges. Therefore we currently do not have insight into the amount of water discharged. In this case, water withdrawal is equal to water consumed. The water use amount is directly measured through a meter and is monitored by the facility throughout the year. Water consumption decreased from 0.10 in 2018 to 0.03 megaliters in 2019, due to operational needs and decreased usage of the facility. Though this power plant utilizes minimal amounts of municipal water, we are including it because it meets our inclusion threshold based on its location in a water stressed area and its use of freshwater.

Facility reference number

Facility 4

Facility name (optional)

San Diego Gas & Electric (SDG&E)

Country/Area & River basin

United States of America
Other, please specify
Southern California

Latitude

32.823698

Longitude

-117.14295

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

110.66

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

110.66

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)

110.66

Comparison of total consumption with previous reporting year

About the same

Please explain



This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. SDG&E's gas & electric transmission and distribution system facilities are located within the San Diego County and southern Orange County regions in southern California, United States. This water data mainly represents employee-occupied offices and facilities, such as the SDG&E headquarters, but also includes water used for the utility's gas and electric infrastructure. These facilities and offices rely on municipal water for sanitation and other uses. The water use amount is directly measured and is monitored by the facility throughout the year. Certain facilities, particularly office buildings and similar facilities that rely on municipal water for sanitation and other uses do not have discharge meters, so we currently do not have insight into the amount of water discharged. In this case, water withdrawal (measured directly through a meter) is equal to water consumed. Compared to last year, water withdrawal (directly measured through meters) decreased by 1%.

Facility reference number

Facility 5

Facility name (optional)

Southern California Gas Company (SoCalGas)

Country/Area & River basin

United States of America

Other, please specify

Southern California

Latitude

34.050069

Longitude

-118.253248

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

258.27

Comparison of total withdrawals with previous reporting year

About the same

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

0.6

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

13.57

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

244.09

Total water discharges at this facility (megaliters/year)

8.22

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

8.22

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

250.04

Comparison of total consumption with previous reporting year

Lower

Please explain

This facility is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. SoCalGas is the largest natural gas distribution utility in the U.S., providing safe, reliable and increasingly renewable natural gas service to approximately 21.9 million consumers located in Southern California. This facility is comprised of natural gas delivery system infrastructure, such as compressor stations, pipelines, and storage assets. This water data mainly represents employee-occupied offices and facilities, such as the SoCalGas headquarters, but also includes water used throughout the utility's gas infrastructure. These facilities and offices rely on municipal water for sanitation and other uses, while hydrotesting utilizes groundwater from wells. The water use amount is directly measured and is monitored by the facility throughout the year. As we improve our water data capturing method around hydrotesting in 2020, we expect an increase in the amount of groundwater reported due to the increased accuracy of the water data captured. Certain facilities, particularly office buildings and similar facilities that rely on municipal water for sanitation and other uses do not have discharge meters, so we currently do not have insight into the amount of water discharged at those locations. Compared to last year, water withdrawal (directly measured) decreased by 5%.

Facility reference number

Facility 6

Facility name (optional)

ENova Pipelines

Country/Area & River basin

Mexico

Bravo

Latitude

31.290496

Longitude

-106.6307

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

19.85

Comparison of total withdrawals with previous reporting year

Much higher

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

13.74

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

6.12

Total water discharges at this facility (megaliters/year)

2.46

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

2.46

Total water consumption at this facility (megaliters/year)

17.39

Comparison of total consumption with previous reporting year

Much higher

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. IEnova's owns and operates various natural gas transportation systems in the states of Baja California, Chihuahua, Nuevo León, Sinaloa, San Luis Potosi, Sonora, and Tamaulipas. This water data mainly represents employee-occupied offices and facilities, but also includes water used for maintenance on equipment and pipelines . These facilities and offices rely on municipal water for sanitation and other uses and fresh groundwater. The water use amount is directly measured and is monitored by the facility throughout the year. Certain facilities, particularly office buildings and similar facilities that rely on municipal water for sanitation and other uses do not have discharge meters, so for those facilities we currently do not have insight into the amount of water discharged. In those cases, water withdrawal (measured directly through a meter) is equal to water consumed. Compared to last year, water withdrawal (directly measured through meters) increased by 55% due to new infrastructure installed and increase in personnel. Discharges increased by 74% compared to 2018, and consumption increased by 52%.

Facility reference number

Facility 7

Facility name (optional)

Desert Star

Country/Area & River basin

United States of America

Other, please specify

Nevada

Latitude

35.789728

Longitude

-114.994542

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

176.56

Comparison of total withdrawals with previous reporting year

Higher

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

176.56

Total water discharges at this facility (megaliters/year)

132.43

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

132.43

Total water consumption at this facility (megaliters/year)

44.13

Comparison of total consumption with previous reporting year

About the same

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Desert Star Energy Center is a 480 MW natural gas-powered electric generation facility owned by San Diego Gas & Electric (SDG&E) located in Boulder City, Nev. As a dry-cooling facility, it uses 90-percent less water than a traditional power plant. The amount of water withdrawal and discharged at this facility is directly measured, and consumption is calculated manually (withdrawals minus discharges). Water withdrawals were 13% higher than in 2018 due to a 25% increase in plant starts in 2019, which utilizes more water, and discharges were 21% higher, resulting in a similar water consumption as last year (consumption decreased by 4% compared to 2018). Our water withdrawal from third party sources varies from year-to-year based on the operational needs of our facilities, as such we cannot anticipate future withdrawals.

Facility reference number

Facility 8

Facility name (optional)

Energia Sierra Juarez (ESJ)

Country/Area & River basin

Mexico

Colorado River (Pacific Ocean)

Latitude

32.416477

Longitude

-115.895921

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Wind

Total water withdrawals at this facility (megaliters/year)

0.19

Comparison of total withdrawals with previous reporting year

Higher

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

0.19

Total water discharges at this facility (megaliters/year)

0.13

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.13

Total water consumption at this facility (megaliters/year)

0.06

Comparison of total consumption with previous reporting year

Lower

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Energía Sierra Juarez (ESJ) is a 155 MW wind farm located on Baja California's Sierra de Juarez mountain range. The project interconnects with the Southwest Powerlink transmission system at SDG&E's East County substation. The amount of water withdrawal and discharged at this facility is directly measured, and consumption is calculated manually (withdrawals minus discharges). Water withdrawals were 55% higher than in 2018 due to an increase in electricity generated and construction activities, and discharges were 300% higher, resulting in a decrease in water consumption of 27% compared to 2018. Our water withdrawal from third party sources varies from year-to-year based on the operational needs of our facilities, as such we cannot anticipate future withdrawals.

Facility reference number

Facility 9

Facility name (optional)

Ecogas Mexicali

Country/Area & River basin

Mexico

Colorado River (Pacific Ocean)

Latitude

32.644544

Longitude

-115.441309

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

0.52

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

0.523

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)

0.52

Comparison of total consumption with previous reporting year

About the same

Please explain

This site is located in a water stressed area per the WWF Water Risk Tool based on a water depletion value above a 3.8 threshold. Ecogas Mexicali is part of IEnova's natural gas distribution utility, Ecogas México. Ecogas Mexicali provides natural gas to approximately 11,000 consumers of Ecogas' total 132,000 consumers. This water data represents employee-occupied offices and facilities. These facilities and offices rely on municipal water for sanitation and other uses. The water use amount is directly measured and is monitored by the facility throughout the year. Certain facilities, particularly office buildings and similar facilities that rely on municipal water for sanitation and other uses do not have discharge meters, so for this facility we currently do not have insight into the amount of water discharged. In this case, water withdrawal (measured directly through a meter) is equal to water consumed. Compared to last year, water withdrawal (directly measured through meters), water discharges, and consumption remained approximately the same compared to 2018.

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

Not verified

Water withdrawals – volume by source

% verified

Not verified

Water withdrawals – quality

% verified

Not verified

Water discharges – total volumes

% verified

Not verified

Water discharges – volume by destination

% verified

Not verified

Water discharges – volume by treatment method

% verified

Not verified

Water discharge quality – quality by standard effluent parameters



% verified

Not verified

Water discharge quality – temperature

% verified

Not verified

Water consumption – total volume

% verified

Not verified

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 that is publicly available

W6.1a

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

Scope	Content	Please explain
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<p>Row 1</p>	<p>Company-wide</p>	<p>Description of business dependency on water</p> <p>Description of water-related performance standards for direct operations</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>Sempra Energy implemented a company-wide water policy in May 2015 (updated in December 2017) that applies to all Company operations.</p> <p>The policy focuses on the connection between energy and water and Sempra's commitment to: use water in a responsible and sustainable manner; work to minimize the use of water in operations when feasible; measure and report on our use of water, along with the related risks and opportunities to our business; adopt practices to minimize our impacts on water supplies, including ensuring that water discharged from our facilities meets or exceeds permit requirements, minimizing discharge to the greatest degree possible; prepare for water-related emergencies; and abide by applicable water related laws, regulations and permit requirements. Additionally we are committed to continue to work with our stakeholders including water agencies, government and businesses to support joint energy and water efficiency programs.</p> <p>The policy is publicly available at http://www.sempra.com/about/governance/corporate-policies.shtml</p> <p>In addition to the Company-wide policy, certain operating companies, such as SDG&E and SoCalGas, have their own Environmental Excellence Policy, which express their commitment to reducing freshwater consumption and preserving water quality through the design and operation of their facilities. Refer to the corporate sustainability report for details on performance related to water reduction goals established at these utilities.</p>
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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	<p>Sempra's Board takes an active role in providing oversight of sustainability through its Safety, Sustainability and Technology (SS&T) Committee. This includes reviewing business strategies on safety and reliability, system modernization, and electrification and decarbonization, while overseeing efforts that mitigate the impact of Company operations on the environment. We rigorously track performance on environmental, social and governance-related topics and issues and incorporate many elements of sustainability into our risk management approach.</p> <p>The SS&T Committee is composed of six non-employee directors, and is responsible for: assisting the Board in overseeing the Company's risk management programs and performance related to environmental, health, safety, cybersecurity and technology matters; assisting the Board on environmental, health and safety laws, regulations and developments at the global, national, regional and local level and evaluating ways to address these matters as part of the Company's business strategy and operations; assisting the Board on cybersecurity programs and issues; and review and evaluation of technology developments that advance the Company's overall business strategy; and reviewing with management and, where appropriate, making recommendations to management and the Board of Directors regarding the company's policies and practices with respect to environmental (including water), health, safety and cybersecurity matters.</p> <p>The SS&T Committee is briefed frequently by the Company's chief sustainability officer. In 2019, the SS&T Committee held four meetings. Water-related issues fall under the purview of this committee given their high relevance for the energy industry and Sempra Energy. With utilities operating in California, where there is significant environmental regulation and exposure to both climate and water related risks and opportunities, it is critical that these issues are monitored and managed at the highest level.</p>

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

<p>Row 1</p>	<p>Scheduled - some meetings</p>	<p>Monitoring implementation and performance Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives</p>	<p>Through the Sustainability, Safety and Technology Committee, the Board reviews business strategies to mitigate the impact of Company operations on the environment, including climate change response and other sustainability matters. The Committee also reviews and evaluates water-related matters. During 2019, the Committee held four meetings, including a specific briefing focused on the Company’s corporate sustainability report and data contained therein, including water (specifically water withdrawal, use and goals), environmental performance, greenhouse gas emissions, the Company’s approach to climate change and related risks and opportunities, as well as sustainability reporting trends and investor interest in environmental, social and governance issues. Water-related issues may be discussed at other meetings as part of reviews related to overall strategy, innovation and operating company performance.</p>
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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



Annually

Please explain

Sempra Energy's Chief Sustainability Officer is responsible for the organization's management of issues related to sustainability, including the annual effort related to the corporate sustainability report. In addition to any other briefings that may occur as issues arise, the Safety, Sustainability and Technology Committee is briefed by the Chief Sustainability Officer, Vice President of Sustainability, or the Director of Corporate Sustainability on the contents of the annual corporate sustainability report, including performance related to water, particularly overall water use, sources of water, and water-related goals.

The Chief Sustainability Officer is responsible for implementation of the Sempra Energy Water Policy.

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?

Sempra Energy's energy and climate-related positions indirectly affect water. There are times when the Company has directly focused on water, particularly as it impacts certain facilities. Consistency of direct and indirect activities seeking to influence policy is achieved through a centralized



management approach housed in Sempra’s external affairs department, which works closely with external affairs groups across the Company’s operating companies, helping to ensure that the approach is consistent across operating companies and geographies. Sempra works with representatives across the Company to develop positions on issues that affect multiple operating companies, including water related topics. This collaborative approach allows for the creation of public policy positions that can be consistently advocated in a coordinated fashion. Sempra directly engages with our operating companies on a continual basis on environmental issues, legislative and regulatory matters and regularly attends meetings with other relevant departments. This presence allows the team to monitor activities related to environmental issues such as water and so that they are consistent with the Company’s overall strategy.

In addition, all lobbying efforts and political spending plans and decisions are coordinated, and decisions reviewed and approved by senior management in accordance with applicable political laws and reporting obligations.

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)

📎 Sempra Energy 2019 Annual Report - Water-related risk response.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
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<p>Long-term business objectives</p>	<p>Yes, water-related issues are integrated</p>	<p>16-20</p>	<p>Given the intricate connection between energy and water, it is an area that receives special attention. Water is integral to many energy-related processes, including the cooling of power generation facilities. The facilities that we build and operate require securing a long-term water supply. Therefore, when planning for these facilities, which are the basis for our long-term business objectives and include power generation, LNG terminals and other natural gas infrastructure, these water issues are considered up front for the life of the facility, in an effort to ensure that the asset will operate as expected over this time period. As an example, during the building of the Palomar natural gas-fired generating facility, the issue of long-term water supply was addressed through the decision to purchase reclaimed water from the city of Escondido, California.</p> <p>16-20 years was chosen as facilities are expected to be operational for at least this amount of time.</p>
<p>Strategy for achieving long-term objectives</p>	<p>Yes, water-related issues are integrated</p>	<p>16-20</p>	<p>The business planning and risk management processes play a key role in determining our strategy and focus areas for the future. Risks ranging from strategic, operational, financial, regulatory, safety, to environmental, such as climate-related changes in weather, decreasing water supply and strain on the electric grid, have been considered in the development and implementation of our business plan. This has influenced our capital expenditure budget going forward.</p> <p>Given the role that water plays in our operations, the permitting of our power plants and those of our suppliers requires securing a long-term supply and completing an impact mitigation plan. In addition, our power generation facilities were designed to minimize water use - so many are air-cooled or use brackish or recycled water. We continually analyze the operations of our existing facilities versus water requirements and have taken steps to try to manage this issue and protect water availability.</p> <p>For new facilities where water is a critical component of operations, it is often our practice to exceed code requirements for water use. Therefore, the ability of water quality and quantity issues to affect the success of these projects is considered and factored into our overall planning and strategy process.</p> <p>16-20 years was chosen as facilities are expected to be operational for at least this amount of time.</p>



Financial planning	Yes, water-related issues are integrated	5-10	As part of our 5-year planning process, we evaluate the status of all our existing and planned facilities. This process would include any projected expenditures related to water that may be necessary to execute on our strategy.
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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)

17

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

Water-related OPEX (+/- % change)

-12

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

Please explain

2019 capital expenditures for water-related projects have recorded an increase in comparison to the previous reporting period. These capital expenditures were primarily due to water treatment projects (legionella testing) throughout the various SoCalGas locations designed to ensure safe water supply to SoCalGas facilities, and the construction of two treatment plants at IEnova (Transportadora del Norte). The decrease in water OPEX is mainly due to the sale of our midstream storage assets as well as our South American operating companies.

We expect capital expenditures to increase in 2020 as a result of new facilities and assets entering into operations at IEnova and an approved

pathogen management program at SoCalGas, while operating expenditures will remain the same or be slightly lower.

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	<p>Sempra's SDG&E and SoCalGas businesses completed scenario analysis, including water-related impacts, focused on mid-century exposure, in line with energy infrastructure planning horizons and because energy systems are likely to change significantly by 2100.</p> <p>The scenario analysis included the identification of potential impacts of sea level rise and coastal hazards (i.e. tidal inundation and coastal erosion) on the electric system, and potential impacts of all climate-related hazards (coastal hazards, wildfire, extreme heat, inland flooding, and landslides/mudslides) on the natural gas system.</p> <p>Analysis like this allows our companies to better plan for future capital projects and determine what work is necessary to improve our infrastructure's ability to withstand any sea level rise that occurs. For example, plans are currently being made to develop maps that will be integrated into the SDG&E GIS system to highlight at-risk infrastructure and inform new construction.</p>

W7.3a

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

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?



	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify RCP 4.5 and RCP 8.5	SDG&E and SoCalGas have evaluated the impact of rising seas on electric and natural gas infrastructure. On the electric side, it was determined that a significant number of assets and services are exposed to coastal hazards related to climate change. Areas of concern for the utility by mid-century are located in low-lying areas around bays and estuaries and on the coastline adjacent to erodible cliffs and dunes. The most significant direct impacts could occur from damage to substations near the San Diego and Mission Bays. If inundated with sufficient water to damage equipment, these substations could go out of service until flooding recedes and repairs can be made, potentially disrupting service to thousands of customers. Other direct impacts could come in the form of increased maintenance or repair costs, rather than widespread service disruptions. Natural gas infrastructure is likely to experience limited impacts in the form of increased repair/maintenance needs or localized disruptions. The cumulative impacts of increased costs could not be quantified in this study, but could potentially be significant given the large number of assets potentially exposed.	<p>Immediate adaptation actions on the electric side identified through this study for SDG&E are:</p> <ul style="list-style-type: none"> a. Enhance coastal storm prediction and response; b. Identify signposts and thresholds that can be used to determine when the need for an adaptation decision is approaching or reached; c. Consult with regional stakeholders to identify opportunities to improve community-wide resilience; and d. Adjust cost-benefit analysis techniques to account for unique features of climate change; e. Develop maps that will be integrated into the SDG&E geographic information system to highlight at-risk infrastructure and inform new construction; f. Partnered with the Scripps Institution of Oceanography to install a sensor west of the substation determined to be the most at risk, which will monitor and generate wave models, allowing for more detailed projections of coastal flooding. <p>Immediate adaptation measures identified through this study for SoCalGas are:</p> <ul style="list-style-type: none"> a. Integrate climate change hazard maps into planning & operations; b. Identify signposts and thresholds that can be used to determine when the need for an adaptation



			<p>decision is approaching or reached;</p> <p>c. Consult with regional stakeholders to identify opportunities to improve community-wide resilience; and</p> <p>d. Adjust cost-benefit analysis techniques to account for unique features of climate change.</p>
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W7.4

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

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

Water is critical to our businesses, particularly in their LNG and power generation operations. We recognize water quantity and quality is increasingly a global concern and given the intricate connection between energy and water, we believe it deserves special attention from energy companies. For these reasons, we have made significant progress in minimizing our use of fresh water, particularly in water-stressed areas, and in 2019, 92% of the water withdrawn for our operations was returned to source. At this time, water-related risks are managed by working with local water agencies and by integrating climate-related water risks (including the potential impact of both droughts and floods) into construction and business resumption plans, however, we continue to monitor and assess these risks on an ongoing basis.



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 Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Sempra Energy's Water Policy states our Company-wide commitment to adopt practices that mitigate our impacts on water supplies and work to ensure that water discharged from our facilities meets or exceeds permit requirements, minimizing discharge to the greatest degree possible. Sempra additionally has a goal to measure and report on our use of water, along with related risks and opportunities to our business. Targets are set at the operating company and facility levels given the distinct operating conditions, risks, and impacts of each one on water resources. For example, targets are set at our California utilities, SoCalGas and SDG&E, where water stress is a key concern. These targets are set and monitored at each utility, and reported to the corporate sustainability team at the corporate-level.

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 consumption



Level

Site/facility

Primary motivation

Reduced environmental impact

Description of target

Reduce facility water consumption compared to 2018 levels (SDG&E utility).

Quantitative metric

% reduction per business unit

Baseline year

2018

Start year

2018

Target year

2019

% of target achieved

4.85

Please explain

Decreased consumption by 4.85% as compared to 2018.

Target reference number

Target 2

Category of target

Water consumption

Level

Site/facility

Primary motivation

Reduced environmental impact

Description of target

Reduce facility water consumption by 20 percent less than baseline year of 2010 (SDG&E facilities).

Quantitative metric

% reduction per business unit

Baseline year

2010

Start year

2019

Target year

2019

% of target achieved

15

Please explain

Compared to the baseline year of 2010, water consumption decreased by 15% compared to 2010 target by 2020.

Target reference number

Target 3



Category of target

Water consumption

Level

Site/facility

Primary motivation

Reduced environmental impact

Description of target

Reduce facility water consumption by 3 percent as compared to 2018.

Quantitative metric

% reduction per business unit

Baseline year

2018

Start year

2019

Target year

2019

% of target achieved

5.65

Please explain

Achieved a combined 5.65% reduction in facility water usage in the bases, branch offices, headquarters, and storage facilities.

W8.1b

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

Goal

Promotion of water data transparency

Level

Company-wide

Motivation

Corporate social responsibility

Description of goal

Sempra Energy publishes an annual corporate sustainability report which highlights our company's performance and progress on environmental, social, and governance metrics. This report discusses our companies use of water and our efforts to minimize fresh water, particularly in water stressed areas.

Baseline year

2018

Start year

2019

End year

2019

Progress

The 2019 corporate sustainability report, published in May 2020, includes a water section which discusses the importance of water resource in our business, water used and water sources, our efforts to minimize fresh water in our power generation operations, and our environmental compliance performance (including water related issues, if applicable).

W9. Verification

W9.1

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

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

W10. 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.

This response contains statements that are not historical fact and constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on assumptions with respect to the future, involve risks and uncertainties, and are not guarantees of performance. Future results may differ materially from those expressed in the forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of August 25, 2020. We assume no obligation to update or revise any forward-looking statement as a result of new information, future events or other factors.

In this response, forward-looking statements can be identified by words such as “believes,” “expects,” “anticipates,” “plans,” “estimates,” “projects,” “forecasts,” “should,” “could,” “would,” “will,” “confident,” “may,” “can,” “potential,” “possible,” “proposed,” “target,” “pursue,” “outlook,” “maintain,” or similar expressions, or when we discuss our guidance, strategy, goals, vision, mission, opportunities, projections or intentions.

Factors, among others, that could cause our actual results and future actions to differ materially from those described in any forward-looking statements include risks and uncertainties relating to: California wildfires and the risk that we may be found liable for damages regardless of fault and the risk that we may not be able to recover any such costs from insurance, the wildfire fund established by California Assembly Bill 1054 or in rates from customers; decisions, investigations, regulations, issuances of permits and other authorizations, renewal of franchises, and other actions by (i) the Comisión Federal de Electricidad, California Public Utilities Commission (CPUC), U.S. Department of Energy, Public Utility Commission of Texas, and other regulatory and governmental bodies and (ii) states, cities, counties and other jurisdictions in the U.S., Mexico and other countries in which our companies operate or do business; the success of business development efforts, construction projects and major acquisitions and divestitures,

including risks in (i) the ability to make a final investment decision and completing construction projects on schedule and budget, (ii) obtaining the consent of partners, (iii) counterparties' financial or other ability to fulfill contractual commitments, (iv) the ability to complete contemplated acquisitions, and (v) the ability to realize anticipated benefits from any of these efforts once completed; the impact of the COVID-19 pandemic on our (i) ability to commence and complete capital and other projects and obtain regulatory approvals, (ii) supply chain and current and prospective counterparties, contractors, customers, employees and partners, (iii) liquidity, resulting from bill payment challenges experienced by our customers, including in connection with a CPUC-ordered suspension of service disconnections, decreased stability and accessibility of the capital markets and other factors, and (iv) ability to sustain operations and satisfy compliance requirements due to social distancing measures or if employee absenteeism were to increase significantly; the resolution of civil and criminal litigation, regulatory inquiries, investigations and proceedings, and arbitrations; actions by credit rating agencies to downgrade our credit ratings or to place those ratings on negative outlook and our ability to borrow at favorable interest rates; moves to reduce or eliminate reliance on natural gas and the impact of the extreme volatility and unprecedented decline of oil prices on our businesses and development projects; weather, natural disasters, accidents, equipment failures, computer system outages and other events that disrupt our operations, damage our facilities and systems, cause the release of harmful materials, cause fires and subject us to liability for property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), may be disputed by insurers or may otherwise not be recoverable through regulatory mechanisms or may impact our ability to obtain satisfactory levels of affordable insurance; the availability of electric power and natural gas and natural gas storage capacity, including disruptions caused by failures in the transmission grid, limitations on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures; cybersecurity threats to the energy grid, storage and pipeline infrastructure, the information and systems used to operate our businesses, and the confidentiality of our proprietary information and the personal information of our customers and employees; expropriation of assets, the failure of foreign governments and state-owned entities to honor the terms of contracts, and property disputes; the impact at San Diego Gas & Electric Company (SDG&E) on competitive customer rates and reliability due to the growth in distributed and local power generation, including from departing retail load resulting from customers transferring to Direct Access, Community Choice Aggregation or other forms of distributed or local power generation, and the risk of nonrecovery for stranded assets and contractual obligations; Oncor Electric Delivery Company LLC's (Oncor) ability to eliminate or reduce its quarterly dividends due to regulatory and governance requirements and commitments, including by actions of Oncor's independent directors or a minority member director; volatility in foreign currency exchange, interest and inflation rates and commodity prices and our ability to effectively hedge the risk of such volatility; changes in trade policies, laws and regulations, including tariffs and revisions to or replacement of international trade agreements, such as the newly effective United States-Mexico-Canada Agreement, that may increase our costs or impair our ability to resolve trade disputes; the impact of changes to U.S. federal and state and foreign tax laws and our ability to mitigate adverse impacts; and other uncertainties, some of which may be difficult to predict and are beyond our control.



These risks and uncertainties are further discussed in the reports that Sempra Energy has filed with the U.S. Securities and Exchange Commission (SEC). These reports are available through the EDGAR system free-of-charge on the SEC's website, www.sec.gov, and on the company's website, www.sempra.com. You should not rely unduly on any forward-looking statements.

This response may include market, demographic and industry data and forecasts that are based on or derived from third-party sources such as independent industry publications, publicly available information, government data and other similar information from third parties. We do not guarantee the accuracy or completeness of any of this information, and we have not independently verified any of the information provided by these third-party sources. In addition, market, demographic and industry data and forecasts involve estimates, assumptions and other uncertainties and are subject to change based on various factors, including those discussed above. Accordingly, you should not place undue reliance on any of this information. This response also contains links to third-party websites that are not hosted or managed by Sempra Energy or its family of companies. We are not responsible for, nor do we recommend, endorse or support, any information contained on any such third-party websites.

Sempra North American Infrastructure, Sempra LNG, Sempra Mexico, Sempra Texas Utilities, Oncor and Infraestructura Energética Nova, S.A.B. de C.V. (IEnova) are not the same companies as the California utilities, SDG&E or Southern California Gas Company, and Sempra North American Infrastructure, Sempra LNG, Sempra Mexico, Sempra Texas Utilities, Oncor and IEnova are not regulated by the CPUC.

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	Senior Vice President, Corporate Affairs and Chief Sustainability Officer	Chief Sustainability Officer (CSO)

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)].

No



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