Welcome to your CDP Water Security Questionnaire 2021

W0. Introduction

W0.1

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

Founded in 1952 by the then governor of Minas Gerais, Juscelino Kubitschek de Oliveira, Companhia Energética de Minas Gerais (Cemig) operates in the areas of generation, transmission, sale and distribution of electricity, energy solutions (Cemig SIM) and distribution of natural gas (Gasmig). The group consists of the holding company Companhia Energética de Minas Gerais (Cemig), the wholly-owned subsidiaries Cemig Geração e Transmissão S.A. (Cemig GT) and Cemig Distribuição S.A. (Cemig D), totaling 185 Companies, 14 Consortia and two FIPs (Private Equity Interest Fund), present in 25 Brazilian states and the Federal District. From its inception, the organization has endeavored to innovatively and sustainably bring welfare to the regions it operates in. This decision helped make it the largest energy distributor in terms of power lines and networks, and one of the largest energy generation and transmission organizations in Brazil. In addition to generation, transmission and distribution of power, Cemig also operates in the natural gas trade and distribution segment by means of Gasmig, which is the exclusive distributor of piped natural gas throughout the state of Minas Gerais. Also Cemig holds a 22.6% interest in the capital of Light S.A., in which it participates in the control block, and also holds a 21.68% interest in the capital stock of Transmissora Aliança de Energia Elétrica S.A., Taesa, thus granting it control of the company.
Cemig is a publicly traded company controlled by the Government of the State of Minas Gerais (51%), with its shares traded in São Paulo, in B3 S.A. (Brazil Bolsa Balcão), in the New York Stock Exchange (NYSE), and in Madrid, in the Latin American Securities Market (Latibex). The Company's consolidated net operating revenue was R$ 25.23 billion in 2020, according to a mainly renewable-energy-source-based matrix. Cemig's power generation complex installed capacity is 6,054 MW, 98.07% of which come from hydraulic generation plants, 1.90% from wind generation, and 0.02% from solar generation. It is important to stress that, by late 2019, UTE Igarapé, the Company's only thermoelectric plant, was shut down, making Cemig's generation complex 100% renewable. The organization has nearly 4,927 km of transmission lines. In the area of

electricity distribution, it is responsible for the management of the largest power distribution network in Latin America, over 545 thousand km in length. At the end of 2020, Cemig had 5254 employees.
Thanks to its commitment to socio-environmental responsibility principles, its economic-financial strength, and technical excellence, the organization is internationally acknowledged as a benchmark in sustainability in its industry, and is positioned as one of the major vectors of consolidation in the Brazilian electricity sector. Cemig has been included in the Dow Jones

Sustainability Index (DJSI World) for 21 years, and is the only company in the electricity industry in the Americas to be included in that list. It is also in the B3 Corporate Sustainability Index (ISE) for the 16th consecutive year, and was selected for the 11th time to be included in the Carbon Efficient Index (ICO2) created in 2010 by B3 and BNDES.
In 2020, Cemig was listed among the leading companies in climate change and water security management in Latin America, under the Climate Change and Water Security Programs, thanks to the quality of the information disclosed to investors and the global market. Recognition was granted by CDP Latin America. This is the ninth consecutive year that CDP has awarded the Company. The selection took into account the level of detail in the responses regarding criteria such as risk management, commitment to mitigations, and initiatives to reduce greenhouse gas emissions. The best results point to a high level of transparency in the disclosure of information related to the topic, providing investors with consistent content on climate change management and water security.
Mission: To provide clean and accessible energy integrated solutions to society in an innovative, sustainable and competitive way.
Vision: To be among the three best integrated electric power groups in Brazil regarding governance, financial health, asset performance and customer satisfaction.

W-EU0.1a

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

Electricity generation
Transmission
Distribution
Other, please specify
Natural gas storage, transmission and 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	0	0	0
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	5,937.77	98.07	21,371.68
Wind	115.22	1.9	326.01
Solar	1.42	0.02	1.14
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	6,054.41	100	21,698.83

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, 2020	December 31, 2020

W0.3

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

Brazil

W0.4

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

BRL

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

No

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Not very important	Direct Use: Cemig's generation plants are predominantly hydroelectric power plants encompassing over 3,500 km² of reservoirs, amounting to 98% of the Company's installed capacity. Thus, availability of water is vital to keep the generation of energy from being impaired. The amount of water available is sensitive to climatic variations, the consequences of the exploitation of other natural resources, is greatly affected by human actions, and is subject to regulations. In the future (2021-2040), Cemig will continue to depend heavily on water, as the company will continue with over 90% of its installed capacity in hydropower plants. However, the Company is reducing its dependence on water by diversifying investments in its power generation matrix, expanding the participation of Distributed Generation projects, and encouraging the purchase of wind, solar and biomass energy. Indirect use: Water consumption by Cemig's suppliers is not relevant to the point of being considered in this context.
Sufficient amounts of recycled, brackish and/or produced water available for use	Not very important	Not very important	Direct Use: Most of Cemig's power generation does not use water consumptively. Its operations and administrative activities have basically low consumption, and the water recirculation rate is considered negligible in these operations. In 2017, Cemig held the Ideia Iluminada Contest, which aimed at fostering solutions geared at reducing fuel consumption, raising efficiency in energy and water consumption, and reducing the production of waste. Of the 44 projects submitted by Cemig employees, the winner was a system for using rainwater for consumption in the Company's

			main building in Vila Mariana neighborhood, in the city of Governador Valadares. The project opened in December 2018. Also, brackish water is not used by Cemig and the Company does not produce water. Thus, the direct use importance was rated as not very important. Indirect Use: Recycling percentage in operations of the Company's suppliers is considered negligible. Also, brackish water is not used by the Company's critical suppliers, and they do not produce water. Thus, the classification of the important of indirect use was not considered very high, and in the future, no chance in that consumption pattern is expected.

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%	Cemig monitors water collection by source (public utility supply, artesian well, and surface catchment) in all of its operations and administrative buildings. Monitoring of this water aspect is made on a monthly basis, the total volume collected at its facilities being recorded. In 84% of these facilities, monitoring is performed using hydrometers installed in the water catchment system. In the other facilities - around 16% - this monitoring is carried out by measuring consumption, based on an estimate of 150 litres per employee per day. In addition, daily monitoring of the water levels of the main reservoirs of the UHEs and the flow in the main rivers that make up Cemig's operations' water network is carried out.
Water withdrawals – volumes by source	100%	Cemig monthly monitors water withdrawal associated with administrative consumption, that is, that which occurs at the company's various facilities. In 2020, 68% of the water came from public or private supply networks, 16% from surface catchment and 16% from artesian wells.

		In 84% of these facilities, monitoring is performed using hydrometers installed in the water catchment system. In the other facilities - around 16% - this monitoring is carried out by measuring consumption, based on an estimate of 150 litres per employee per day. In addition, daily monitoring of the water levels of the main reservoirs of the UHEs and the flow in the main rivers that make up Cemig's operations' water network is carried out.
Water withdrawals quality	100%	In line with the guidelines of the Company's Biodiversity Policy, with premises to establish more efficient strategies for biodiversity conservation and comply with state and federal resolutions, Cemig carries out a Water Quality Monitoring. The water quality of Cemig's reservoirs is regularly monitored along a network that includes 42 reservoirs and 166 physical, chemical, and biological data catchment stations on the major watersheds of Minas Gerais. The monitoring happens upstream and downstream from the dams, so that the Company can identify and quantify whether the watercourses are being impacted in any way. This monitoring acts as an assessment of the quality of the projects' effluent management, aiming at adjusting the parameters of the effluents to those set by the legislation in force. Monitoring and analysis, and monitoring are made semi-annually via the collection of physical, chemical and biological data on groundwater and surface water.
Water discharges – total volumes	100%	Cemig is responsible for the generation of two classes of liquid effluents: (i) administrative effluents from sanitary uses in building facilities and (ii) thermal effluents from the cooling processes of equipment in hydroelectric generation. All administrative effluent generated by Cemig are monitored on a monthly basis. The total volume of sanitary effluent generated is estimated according to the Brazilian standard NBR 7229, which considers that 80% of the water consumed is disposed of as effluent. The thermal effluent from hydroelectric generation, on the other hand, is discharged

		directly into the water body together with the water that passes through the turbines. As water consumption in power generation and cooling equipment in hydroelectric plants is not consumptive, there is no need to measure the volume of water discharged into the tailrace system. In this process, only the quality and temperature of the water that is discharged into the water body are monitored.
Water discharges – volumes by destination	100%	Cemig is responsible for the generation of two classes of liquid effluents: (i) administrative effluents from sanitary uses in building facilities and (ii) thermal effluents from the cooling processes of equipment in hydroelectric generation. All administrative effluent generated by Cemig are monitored on a monthly basis. The total volume of sanitary effluent generated is estimated according to the Brazilian standard NBR 7229, which considers that 80% of the water consumed is disposed of as effluent. The thermal effluent from hydroelectric generation, on the other hand, is discharged directly into the water body together with the water that passes through the turbines. As water consumption in power generation and cooling equipment in hydroelectric plants is not consumptive, there is no need to measure the volume of water discharged into the tailrace system. In this process, only the quality and temperature of the water that is discharged into the water body are monitored.
Water discharges – volumes by treatment method	100%	All Cemig's sanitary effluent is treated, with approximately 68% being sent to conventional treatment systems, via the public collection network; 32% is sent to septic tanks located inside Cemig's facilities. The effluent sent to the local concessionaires is monitored daily by them. The effluent sent to septic tanks, on the other hand, is monitored at different intervals (annually or every two years, depending on the facility). Effluents from the generation and the cooling of equipment at hydroelectric power plants are directly discharged into water bodies.

		Occasional water quality degradation can occur in an insignificant volume when compared to the river flow, which eliminates the need for effluent treatment as they present concentrations below the parameters of the current legislation. The effluent is monitored by annual audits: an external audit, carried out by the ABNT certifying body, and two internal audits.
Water discharge quality – by standard effluent parameters	100%	The quality of effluents sent to septic tanks is monitored an annual basis (in more than 90% of the facilities) or every six months (around 10% of the facilities). Collection is carried out by a contracted company, which sends the samples to laboratories, which issue quality reports on the samples. The monitored parameters include: pH, temperature, sedimentable materials, DB and COD. The volume and environmental impact of this effluent is low, considering the current legislation. For effluents from HPPs, Cemig monitors the water quality both upstream and downstream from the dams, so that the Company can identify if the water courses are being impacted in any way. The main monitored parameters include: temperature, turbidity, phosphorus, nitrogen and oxygen. The effluent from the water and oil separator tank is also monitored (annually or semi-annually, depending on the facility). The main monitored parameters include: temperature, pH and mineral oils.
Water discharge quality – temperature	100%	In Generation, Cemig monitors the quality of water in the reservoirs, including water temperature. In 57% of the plants, the water temperature is monitored every six months, while for 43% of the plants it is monitored quarterly. The monitoring is made upstream and downstream from its operations, so that the Company can identify if the watercourses are being impacted in any way. This monitoring acts as an assessment of the Company's effluent management quality, aiming at adjusting the parameters of the effluents to those set by the legislation. The temperature of the sanitary effluent sent to septic tanks is also monitored annually (73%), semiannual (17%) or quarterly

		(10%), depending on the facility. Due to its characteristics, it has low polluting potential, considering the current legislation. The temperature of the sanitary effluent destined to local concessionaires, it its turn, is monitored by the concessionaires on a daily basis.
Water consumption – total volume	100%	For administrative consumption, based on monthly monitoring of water intake from different sources (public/private network, underground source and surface catchment), Cemig manages to monitor 100% of water consumption. Regarding discharge, monitoring of the effluent sent to septic tanks is carried out annually (73%), semiannually (17%) or quarterly (10%). The effluent sent to local concessionaires is monitored daily. All the water used in hydroelectric power generation, in its turn, is rated as non-consumptive, so it is not considered water consumption.
Water recycled/reused	Not relevant	Cemig adopts procedures for recycling a small percentage of water, which is considered not relevant in view of the total volume consumed by the Company. In some Cemig facilities, such as in Valadares/MG, part of the rainwater collected is reused for car washing. Initiatives like this are discreet and the total volume of water is insignificant in relation to the total volume consumed. Currently, Cemig's energy matrix is mostly made up of hydroelectric power plants, where water consumption is non-consumptive and does not require the use of recycled water. For this reason, water recycling is currently not relevant for Cemig. As there is no expectations of changes in energy generation and water consumption patterns, this scenario should not alter in the short and medium term.
The provision of fully-functioning, safely managed WASH services to all workers	100%	The provision of water, sanitation and hygiene services meets required standards in force and is managed to ensure safe water consumption and usage by all employees in all company facilities. Water from all the company's drinking fountains is analyzed quarterly to verify compliance with the water quality and freshness

		standards laid down by Ministry of Health Ordinance No. 05 from 09/28/2017, Attachment XX, which determines microbiological criteria to be met by water samples collected during quarterly monitoring.

W-EU1.2a

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

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	100%	In the operation of its hydropower plants, Cemig adopts operating measures that always seek to match minimum streamflow of rivers and environmental and multiple-use restrictions. In addition to specialized systems that monitor compliance with operating and environmental restrictions, for each hydroelectric plant there is an Operating Instruction that determines the technical, environmental and operating parameters, in order to standardize operating procedures from the planning stage to the daily operation scheduling and real-time operation of the projects. Cemig also has a department dedicated to the management of water resources, which, through participation in the National and State Water Resources Councils, River Basin Committees, Technical Councils, and Working Groups, together with representatives of public authorities, other users of resources and the organized civil society, carries out integrated management initiatives for watershed it has projects at, seeking to ensure the best use of water for power generation, without impacting other uses of the hydrographic basin.
Sediment loading	100%	Cemig monitors sediment loading at 86 stations located in its hydropower plants, where water samples are collected and analyzed by an accredited laboratory. These analyses allow the Company to assess the useful life of the reservoirs.

Other, please specify	Not relevant	N/A

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	219,516,821	Higher	The following criteria for rating variations were used: Almost the Same = 0% to 10%; Major/Minor = 11% to 55%; Much Greater/Much Less = above 55%. The total catchment volume in 2020 amounted to 219,516,821 megalitres, with 219,516,629 megalitres corresponding to the volume going into the reservoirs and 192 megalitres associated with the catchment of water for administrative purposes in the company's other operations. Compared to the previous year, the total catchment volume was 15% higher. This difference is mainly associated with the greater volume of water going into Cemig's reservoirs. This was due to the better hydrological conditions verified in 2020, compared to 2019, despite the volume being well below the historical average. In 2021, that volume tends to be lower, due to a worsening in hydrological conditions. However, in the future (2022-2040), that volume is expected to suffer significant variations, thanks to an improvement in hydrological conditions. In climate change scenarios, there is no assertive indication regarding change in water availability in the regions where Cemig's main plants are installed.
Total discharges	221,013,464	Higher	The following criteria for rating variations were used: Almost the Same = 0% to 10%; Major/Minor = 11% to 55%; Much Greater/Much Less = above 55%. The total discharge volume in 2020 amounted to 221,013,464 megalitres, with 221,013,310

			megalitres corresponding to the volume going out of the reservoirs and 154 megalitres of effluents generated by the company's administrative operations. Compared to the previous year, the total discharge volume was 14% higher. This difference is mainly associated to the greater volume of water in the reservoirs and a greater production of energy to meet the requirements of the Brazilian Electricity System. In 2021, that volume tends to be lower, due to a worsening in hydrological conditions. However, in the future (2022-2040), that volume is expected to suffer significant variations, thanks to an expected improvement in hydrological conditions. In climate change scenarios, there is no assertive indication regarding change in water availability in the regions where Cemig's main plants are.
Total consumption	-1,496,643	Much lower	The following criteria for rating variations were used: Almost the Same = 0% to 10%; Major/Minor = 11% to 55%; Much Greater/Much Less = above 55%. In 2020, total consumption was negative, like in 2019, due mainly to the need of emptying the reservoirs in both years. The 40% difference in consumption in relation to the previous year is justified by the more significant decrease in reservoir water volumes in 2020 due to systemic requirements. In 2021, smaller catchment volume is expected, as well as an increase in the need for emptying the reservoirs to meet the country's energy consumption needs. In the future (2022-2040), that volume is expected to suffer significant variations, as an operation for recovering the amounts stored in hydropower plant reservoirs will be necessary. In climate change scenarios, there is no assertive indication regarding change in water availability in the regions where Cemig's main plants are installed.

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	Higher	WRI Aqueduct	UHE Emborcação is owned by Cemig and located in the Paranaíba River Basin, which has been under great pressure from other users of that system, basically for irrigation purposes, so this is increasing consumptive use withdrawals. Impact estimates for UHE Emborcação in the next guaranteed power output revision - scheduled for 2022 - amount to 2.0% of the plant's guaranteed power output. This is only due to the increase in consumption upstream.

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	219,516,660	Higher	Total surface water volume collected in 2020 by Cemig amounted to 219,516,660 megalitres. Most of the collected volume - 99.99999% - is associated to power generation. Total affluent volume from Cemig's plants in 2020, in proportion to its equity share in the

				projects, was 219,516,629 megalitres. In 2019, this value amounted to 190,719,661 megalitres. The 2020 figure was higher than 2019 due to the better hydrological conditions on that year. This volume variation is related to the variability in rainfall in the period. We stress that not all collected water is consumed, since it is used to generate energy in hydroelectric plants. The water energy potential is leveraged, without consuming it. Besides catchment associated to hydropower plants, there is also catchment of surface water for administrative consumption in some Company facilities, which amounts to 31 megalitres (0.000014% of the total surface water volume collected in 2020).
Brackish surface water/Seawater	Not relevant			Catchment of brackish surface water and/or sea water is not relevant to Cemig's operations. Most of the company's water catchment is associated with hydroelectric power generation, with water coming from water bodies. The water collected for administrative consumption, on the other hand, comes from local supply concessionaires, artesian wells or direct surface catchment. As there is no expectations

				of changes in energy generation and water consumption patterns, this scenario should not alter in the short and medium term.
Groundwater – renewable	Relevant	30.1	Lower	Ground water catchment using artesian wells is carried out in some Cemig facilities. This collection is only for administrative consumption purposes, in regions where there is no possibility of accessing the public water utility network and ground water is available. In 2020, the volume of water from this source amounted to 30.1 megalitres, less than the volume observed in 2019 (52.2 megalitres). The drop in consumption is mainly associated with a change in the work regime, with part of the team being sent to work at home, due to the pandemic associated with Coronavirus. With the return of in-office activities, the volume is expected to return to 2019 levels in the short term. As there is no prospect of changes in the Company's water consumption patterns, the volume of ground water catchment should not change in the medium term.
Groundwater – non-renewable	Not relevant			Cemig does not use non-renewable groundwater in its operations Thus, that source is not relevant for the Company. Besides, this source is not expected to become relevant.

Produced/Entrained water	Not relevant			Cemig does not produce water in its operations. Thus, that source is not relevant for the Company. Besides, due to the nature of Cemig's business, that source is not expected to become relevant.
Third party sources	Relevant	130	Lower	Almost all Cemig facilities use water from the Public supply network in the several counties where the Company operates. This consumption is measured by the local sanitation utility and charged directly to Cemig via monthly invoices. In 2020, the volume of water from this source amounted to 130 megalitres, less than the volume observed in 2019 (171.8 megalitres). The drop in consumption is mainly associated with a change in the work regime, with part of the team being sent to work at home, due to the pandemic associated with Coronavirus. As there is no prospect of changes in the Company's water consumption patterns, the volume of water collection from local concessionaires should not change in the medium term.

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	221,013,310	Higher	The total volume of discharge in water bodies in 2020 amounted to 221,013,310 megalitres. This volume is from use of water in hydroelectric plants for power generation, equipment cooling, and any spillway manoeuvres. The discharged water returns to the stream in the same chemical conditions as it was collected. This is a very relevant volume for the company, as most of the electricity generated comes from hydropower plants (98% in 2020). A higher volume than that of last year was noticed (193,230,785 megalitres), due to the more intensive rainfall regime in 2020. In 2021, that volume tends to be lower, due to a worsening in hydrological conditions. However, in the future (2022-2040), that volume is expected to suffer significant variations, thanks to an expected improvement in hydrological conditions.
Brackish surface water/seawater	Not relevant			Discarded brackish surface water and/or sea water is not relevant to Cemig's operations. As there are no expectations of changes in energy generation and water discharge patterns, this scenario should not alter in the short and medium term.
Groundwater	Relevant	49.51	Higher	About 32% of Cemig's sanitary effluents are sent to septic tanks, with the remainder going to local concessionaires. In relation to the company's total discharge volume, the amount is negligible, representing less than 1% of the total. Compared to last year, the volume increased by about 19%. The increase is justified by the

				improvement in the company's data collection and management. As there are no expectations of changes in energy generation and water discharge patterns, this scenario should not alter in the medium term.
Third-party destinations	Relevant	104.04	Lower	Excluding facilities that resort to on-site treatment through the use of septic tanks, all Cemig facilities sent their administrative waste to be treated by local concessionaires. This volume corresponds to around 68% of the total sanitary effluents generated. This volume is estimated based on a calculation that considers that 80% of the water consumed is converted into sanitary effluent. In relation to the company's total discharge volume, the amount is negligible, representing less than 1% of the total. In 2020, the total volume was 24% lower than in 2019. The decrease is related to a change in the work regime, with part of the administrative team being sent to work at home, due to the pandemic associated with Coronavirus. With the return of in-office activities, the volume is expected to return to 2019 levels in the short term. As there is no expectations of changes in energy generation and water discharge patterns, this scenario should not alter in the medium term.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant				Cemig is responsible for the generation of two classes of liquid effluents: (i) administrative effluents from sanitary uses in building facilities and (ii) thermal effluents from the cooling processes of equipment in hydroelectric generation. Regarding administrative effluents, 68% is sent to local concessionaires and 32% to septic tanks, which is considered as primary treatment. On the other hand, the thermal effluent returns to the water body without the need for an on-site treatment, because even if there are occasional

					water quality degradations, the amount in relation to the volume of water that passes through the turbines is negligible. In other words, it eliminates the need for effluent treatment, as it displays a concentration lower than the parameters of current legislation.
Secondary treatment	Not relevant				Cemig is responsible for the generation of two classes of liquid effluents: (i) administrative effluents from sanitary uses in building facilities and (ii) thermal effluents from the cooling processes of equipment in hydroelectric generation. Regarding administrative effluents, 68% is sent to local concessionaires and 32% to septic tanks, which is considered as

					primary treatment. On the other hand, the thermal effluent returns to the water body without the need for an on-site treatment, because even if there are occasional water quality degradations, the amount in relation to the volume of water that passes through the turbines is negligible. In other words, it eliminates the need for effluent treatment, as it displays a concentration lower than the parameters of current legislation.
Primary treatment only	Relevant	49.51	This is our first year of measurement	61-70	In 2020, the volume of Cemig's sanitary effluent sent to septic tanks amounted to 49.51 megalitres. Such treatment is configured as Primary. At Cemig Generation, 100% of the

					sanitary effluent was sent to septic tanks. At Cemig Transmission, it was 47% (with the remainder going to local concessionaires). Regarding Cemig Distribution, the entire sanitary effluent is destined for the local concessionaires. Regarding all Cemig facilities, around 60% of them sent their sanitary effluent to this type of treatment. The quality of sanitary effluents is monitored quarterly (10%), semi-annually (17%) and annually (73%), depending on the facility.
Discharge to the natural environment without treatment	Relevant	221,013,310	Higher	41-50	Total affluent volume from Cemig's plants in 2020 amounted to 221,013,310 megalitres. This volume is from use of water for power

					generation, equipment cooling, and any spillway manoeuvres. This water is discharged in the stream in the same chemical conditions it was collected under. In the case of Cemig Transmission and Distribution, just like in administrative buildings, there is no untreated effluent discharge into the environment. As the total volume reported refers only to facilities associated with hydroelectric generation, which represents 98% of Cemig's power generation, around 48% of the company's total facilities send water to the water body under the conditions presented.
Discharge to a third	Relevant	104.04	This is our first year of	31-40	In 2020, the volume of

party without treatment			measurement		Cemig's sanitary effluent sent to local concessionaires amounted to 104.04 megalitres. In other words, this volume was allocated to a third party without the need for on-site treatment. At Cemig Distribution, all sanitary effluent is sent to local concessionaires. At Cemig Transmission, it was 53% (with the remainder going to septic tanks). In relation to Cemig Generation, the entire sanitary effluent is sent to septic tanks, characterized as primary treatment. In relation to the total of its facilities, around 40% of them are served by a sewage collection network and subsequent treatment by local

					concessionaires.
Other	Not relevant				N/A

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
219.51	Total water withdrawals	MWh	This is our first year of measurement	Cemig's generating complex is predominantly made up of hydroelectric plants, which produce energy without consuming water, as the water that passes through the turbines returns in its entirety to the water body. Until 2019, Cemig monitored the water intensity indicator only for thermoelectric plants, which were shut down in that same year. As of 2020, Cemig began to monitor the ratio between total water catchment and the electricity generated by hydroelectric plants. This year, the indicator was monitored by the Cemig sustainability team and the Energy Planning Department, which had the support of the team responsible for the operation of the hydroelectric plants to obtain the data associated with the calculation, namely the volume of water entering into the reservoir and net energy generation. In 2020, the total volume inflowing to Cemig's hydroelectric plants amounted to 219,516,629 megalitres. The energy generated by such plants amounted to 12,549,147 MWh, resulting in an intensity indicator equivalent to 17.49

				megalitres/MWh. In the coming years, a reduction in the indicator is expected, which may reflect in greater efficiency in generation, together with less water catchment. This information will be useful to assess the proposal of measures to increase efficiency by hydroelectric electricity generation, as well as measures to raise awareness about water catchment. The benchmarks for the indicator, as well as the measure of success, will be determined after a significant amount of data has been collected. The year 2020 was, therefore, the pilot year for the implementation of the indicator, which will be continuously monitored and may undergo adjustments. As this is the first year of monitoring, its performance in relation to the previous year was not evaluated. If the indicator points to a possible reduction in the efficiency of generation, the team responsible for the operation of the hydroelectric plants will be called upon to cross-assess this indicator with the performance of the other indicators associated with the operation, such as those that assess the correct operation of generation machinery and equipment.

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?

In line with the guidelines of the Company's Biodiversity Policy, which premise is to establish more efficient strategies for biodiversity conservation and comply with state and federal resolutions, Cemig carries out a Water Quality Monitoring. This monitoring acts as an essential tool in the identification and gathering of information for the assessment and control of environmental impacts in aquatic ecosystems in all stages of its undertakings - from the design of the project to its operation. Also, Cemig has a Service Instruction – IS62 that rates minimum environmental requirements.

The water quality of Cemig's reservoirs is regularly monitored along a network that includes 47 reservoirs and more than 200 physical, chemical, and biological data collection stations on the major watersheds of Minas Gerais. Collections for water quality monitoring generate a volume of information that is analyzed and stored in an extensive database called Siságua.

Water quality indexes are applied to assess degradation condition of water resources. These indexes aim at simplifying, quantifying, analyzing, synthesizing, and communicating data obtained during the monitoring. To translate and help communication with the stakeholders, Cemig uses the Water Quality Index - IQA, which it makes available at the Siságua System.

The creation of the IQA was based on an opinion survey among specialists in water quality, who pointed out the variables to be assessed, their relative weight, and the condition with which each parameter is presented, according to a rating scale. This index takes nine evaluation parameters into account (pH, BOD, thermotolerant coliforms, total nitrogen, total phosphorus, temperature, turbidity, total residue, dissolved oxygen) and IQA is calculated by the weighted product of the water quality for these variables.

Cemig holds information campaigns for aspects that may interfere with water quality and energy generation, such as on the golden mussel, cyanobacteria, aquatic macrophytes, reservoir silting, ferro-bacteria, and others. One of the most relevant cases that pose risks to the health of the population is the presence of cyanobacteria in streams, because of their capacity to produce toxins. In relation to macrophytes, Cemig has monitoring programs in reservoirs impacted by eutrophication in order to assess the need to remove these plants and minimize their impacts on power generation. In hydroelectric reservoirs, the uncontrolled growth of macrophytes causes problems in the turbines, forcing frequent discharges using the spillways to remove the plants, thus wasting water and decreasing power production.

The ROA - Environmental Occurrence Report procedure is also carried out; this is an internal form of Cemig used to report and record environmental events at the Company's facilities. With regard to possible occurrences of water pollution, the ROA is completed by the operation team to report situations of leakage of lubricating oils and other toxic products in the water, seeking to point out the causes and actions taken to stop the problem. After the ROA is completed, it is sent to the areas of interest. Another important contribution of Cemig to spread knowledge about the water quality in its reservoirs is the constant improvement- via Research and Development Projects - R&D - of methodologies for the understanding and measurement of

pollutants present in the water. Currently, there is a research project (R&D 610) for the development of passive samplers for the detection of emerging contaminants, defined as “toxic products that are not removed or eliminated by traditional water treatment processes for human consumption”. We can define passive sampling as a set of extraction methods that allows the monitoring of different environmental pollutants over the long term. This study will include identification and quantification of pesticides at ultra-trace level to assess contamination of marginal lagoon waters and the São Francisco River.
In this regard, Cemig also operates in the value chain, demanding that suppliers comply with legal requirements and norms related to pollution and water quality, in line with the International Convention on Oil Pollution Preparedness, Response and Cooperation, signed in London on November 30, 1990; Law No. 9,966, which provides for the prevention, control and inspection of pollution caused by the discharge of oil and other harmful or dangerous substances into water bodies under Brazilian jurisdiction; and COPAM Normative Deliberation No. 10, dated 16.Dec.86, which establishes norms and standards for water quality and discharge of effluents into water bodies.
The Company also asks its suppliers to answer an evaluation questionnaire, which includes pollution prevention measures, with questions that guarantee the status of suppliers in terms of preventing the spillage of hazardous substances (oil, gas, and liquids).

W-EU3.1a

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

Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Hydrocarbons	Water contamination by lubricating oils, greases and other products may occur during equipment maintenance in hydroelectric power generation operations. In substations of the energy transmission and distribution system there is equipment with insulating oil inside. Any leakage of this oil may contaminate the streams.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Community/stakeholder engagement Emergency preparedness Management procedure under development	The major risk of negative impact from Cemig's water pollution is the presence of oil in the waters of UHEs. All operating procedures within the Plant are conducted based on service instructions and quality standards. Emergency Action Plans (PAE) include guidelines to contain leakages, like the use of sawdust and absorbing pads. Any type of incident related to contamination or leakage is recorded and consolidated in an Environmental Occurrence Report - ROA. In 2020, at Cemig GT hydropower plants, SPEs and Consortiums, 9

			occurrences of oil spills were recorded in 6 facilities, namely: UHE Emborcação (1), UHE Itutinga (2), UHE Três Marias (2), PCH Pai Joaquim (1), PCH Poço Fundo (2) and PCH Rio de Pedras (1). In all, 1,871 litres of oil were spilled, with 4 events of oil spills in water (1,006 litres) and 9 events of oil spills on floors or the ground (865 litres). As for oil spillage in water, there was no instance of that in the power transmission and distribution system substations. The success of management procedures to avoid potential impacts from pollutants is measured by varying the number of occurrences and the volume of spills. In 2019, there were 16 occurrences of oil spills in 8 facilities, which amounts to a 56% reduction for the year 2020, with 9 events in 6 facilities. However, the spill volume increased by 43% in 2020 compared to 2019, when oil spill events totalled 1,265 litres.

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 in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management

Tools and methods used

Water Footprint Network Assessment tool
COSO Enterprise Risk Management Framework
ISO 31000 Risk Management Standard
Other, please specify
The SAP RM (Risk Management) software

Comment

Cemig has a risk management policy that directs not only Cemig D and Cemig GT companies, but also all wholly-owned subsidiaries, and is approved by the Board of Directors. It also has a risk management software - SAP RM (Risk Management) - that allows the risk mapping process to be carried out continuously, as the updating of information, checks and assessments of controls and action plans are communicated by the holders of each activity within the system.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Enterprise Risk Management
Other

Tools and methods used

COSO Enterprise Risk Management Framework
ISO 31000 Risk Management Standard
Other, please specify
The SAP RM (Risk Management) software

Comment

Cemig has procedures to verify compliance with environmental aspects by suppliers and the existence of risks associated with contracting. The Company conducts inspections and audits in its supply chain. These audits are carried out based on prioritizing criteria to identify the most critical suppliers, and only those were included in the identification of water risks.

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management

Tools and methods used

COSO Enterprise Risk Management Framework
ISO 31000 Risk Management Standard
Other, please specify
The SAP RM (Risk Management) software

Comment

In the Company's value chain, the scenarios analysed for water risks are those where impacts relating to regulatory changes and in the pricing structure may happen. Those impacts are the most relevant for the operation of its projects. In order to monitor them, Cemig participates in Water Resources Councils and Watershed Committees, Technical Councils, Working Groups, and also works with Industry Associations, monitoring the regulatory and tariff scenario, contributing to decision-making regarding regulation of water uses in the watersheds and their impacts.

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	Cemig is aware of the importance of water resources for the maintenance of its business and for society. So, it has established a Water Resources Policy to define the

		principles that guide Company actions related to the theme. In carrying out its activities, Cemig undertakes to adopt practices of rational, integrated and sustainable use of water resources, prevention and defense against critical hydrological events - both from natural origin and from the inappropriate use of natural resources - and considering the needs of current and future generations. Cemig has internal procedures and tools to estimate future changes in water availability at the local level. Weather and climate forecast models, meteorological radar, Storm Location System, Hydrometeorological Telemetry System and mathematical models of hydrological simulation are used, enabling the analysis of rainfall variability and streamflow series, as well as decision-making in the periods of floods and droughts Also, Cemig has a department dedicated to the management of water resources, which, via water planning, adopts operational measures in its hydroelectric plants aimed at calculating the optimal generation of each, thus ensuring the best use of water for generation without impacting other uses of the river basin. Each existing hydroelectric plant has an Operating Instruction defining its technical and operational parameters. Cemig operates a hydrometeorological network that monitors 372 variables, 178 focused on rainfall monitoring, 104 for watercourse levels and discharges, 53 for monitoring reservoir and river levels, and also 37 focused on climatological stations that monitor temperature, air humidity, wind speed and direction, solar radiation and atmospheric pressure.
Water quality at a basin/catchment level	Relevant, always included	Water quality can also directly influence the operations of hydroelectric plants and Cemig's relationship with its stakeholders. To minimize the risk associated with water quality in its reservoirs, Cemig regularly monitors a network covering the main hydrographic basins of the State of Minas Gerais at over 200 data collection points that, in addition to the physical and chemical parameters laid down in Brazilian legislation, also monitor biological groups such as phytoplankton, zooplankton and zoobenthos. The water quality in Cemig's reservoirs is regularly monitored along a network including 42 reservoirs and over 180 data collection stations. In addition, sediment monitoring is carried out at 86 stations located in its hydroelectric plants, where water samples are collected and analysed by an accredited laboratory. All data produced is stored in the SISÁGUA database, which is part of the Instituto Mineiro de Gestão das Águas (IGAM,

		or Minas Gerais Water Management Institute) database. SISÁGUA enables adequate and uniform spatial and temporal assessment, so that the data obtained can be used by the company in all its facilities and by partners. The monitoring method is the measurement or verification of water quality and quantity parameters. Monitoring - ongoing or periodic - of the condition and quality control of the water body is carried out in accordance with National Environment Council - CONAMA Resolution 357 of 2005 and according to CONAMA Resolution 274 of 2000, which lay down levels for bathing water quality standards, to ensure the necessary conditions for primary contact recreation, such as swimming, water skiing, and diving. Statewide, the joint COPAM-CERH-MG Normative Resolution from 1/2008 must also be complied with.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Cemig considers this aspect as relevant as, by the end of 2019, 98% of its energy matrix came from water sources (82 hydroelectric plants, 40 UHEs, 35 PCHs and 7 CGHs). That is why Cemig monitors and follows up on conflicts with stakeholders through its active participation in Water Resources Councils, Watershed Committees, Technical Councils, and Work Groups, that include several watershed users and other stakeholders. Conflicts over use priority and the impacts caused to the watersheds are discussed and decided upon in such venues, with the participation of bodies that manage water resources. Cemig participates in 5 federal watershed committees and 20 state watershed committees. The company also monitors the news published in the several communication channels; it also receives demands during periods of flood or drought and works to settle any conflicts with communities located in watersheds it has hydroelectric projects in. Cemig coordinates the Proximidade Program, certified by ISO 9001, which is committed to working with the major stakeholders, such as the government, civil defense, fire brigade, military police, water resources and environment management bodies, watershed committees, municipal authorities, community associations, class representatives, large users, and various communication media, which allow for the identification of water-related conflicts with other users and fosters social development in communities surrounding the plants. Stakeholder engagement is carried out in watersheds where potential conflicts are detected.

Implications of water on your key commodities/raw materials	Relevant, always included	Cemig considers this aspect as relevant as 98% of its energy matrix came from water sources (82 hydroelectric plants, 47 Hydro Power Plants – HPPs and 35 Small Power Plants - SPPs). In this context, water is Cemig's major raw material. Cemig monitors the amount of water available in rivers and its plants in real time through 262 telemetry stations belonging to the Telemetry, and Hydrometeorological Monitoring System (STH). In order to monitor water conditions in the basis it is present in, Cemig operates a hydrometeorological network with 583 monitoring spots, 232 of which are rainfall, 224 for discharges in streams, 74 for monitoring reservoir and river levels, and 53 climatological stations that monitor rainfall, temperature, air humidity, wind speed and direction, solar radiation, and atmospheric pressure. This monitoring makes it possible to analyse trends and estimate the frequency of events that may impact Cemig's operations, in addition to specifying the necessary measures to mitigate them, providing feedback for risk management tools. The tool employed is SISAGUA.
Water-related regulatory frameworks	Relevant, always included	Cemig considers this aspect as relevant, as 98% of its energy matrix comes from water sources - 82 hydroelectric 40 UHEs, 32 PCHs and 10 CGHs). That is why Cemig actively participates in all water resource deliberative and regulatory venues, both at the federal and state levels, working on the drafting of policies and guidelines and, at the same time, monitoring regulatory trends, which are a major input for the elaboration of impact estimates on the Company's projects at the local level. Estimates of potential regulatory changes include alterations in the rules for granting concessions, financial compensation, charging mechanisms and pricing structure. Charges for large hydroelectric plants are already regulated and no regulatory changes in the short and medium term are expected; as for Small Hydroelectric Plants, water use is considered exempt of charges under the current legislation. For the use of untreated water in administrative areas and for thermoelectric generation, the several Hydrographic Basin Committees are implementing their respective collection mechanisms. The tool used to monitor regulatory aspects is CONDOR - an internal regulatory monitoring system.
Status of ecosystems and habitats	Relevant, always included	Cemig monitors the presence of invasive species, such as the golden mussel mollusk, which can lead to incrustations in pipes, pumps and equipment.

		The monitoring tool is the Cemig Reservoir Water Monitoring and Quality Control System - SISAGUA.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	All Cemig employees receive water, sanitation and hygiene services. At all facilities, water drinkability control for human consumption is carried out according to Ministry of Health Ordinance 05 of 28/Sep/2017, which lays down microbiological criteria to be met by water samples collected during quarterly monitoring.
Other contextual issues, please specify	Not considered	N/A

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	An unfavorable hydrology scenario reduces hydroelectric generation in Brazil and, therefore, companies are unable to meet 100% of the volume planned in the agreements (guaranteed power output). Thus, the National Power System Operator (ONS) must engage thermal plants to meet part of the national demand. The greater the water deficit, the greater the chances of the Company having to buy energy in the short-term market to meet the requirements of the contracts. The impact of the materialization of this risk for that stakeholder will depend on the trade and risk management strategies adopted by Cemig, which may become actual in the form of higher energy rates to an energy supply crisis. Thus, because they are directly impacted by the materialization of risk, customer engagement is important. To engage its customers, Cemig carries out the Energy Efficiency Program to disseminate the concept of responsible use of electricity, in addition to advertising campaigns with energy saving tips. This engagement is ongoing and covers all the company grant area.
Employees	Relevant, always included	In 2020, the volume of water used for administrative purposes was 172,708.05m³. This amounts to 100% of the total water volume used by the Company consumptively, which shows the importance of its employees to assessing water risks. The use of water for administrative purposes showed a reduction of 26% in relation to 2019 due to the pandemic caused by COVID. By the annual publication of Sustainability Reports, Cemig engages its employees in gathering

		information, compiling and disclosing data on the company's water consumption and catchment. In addition, communications are sent to its employees via the Cemig Online platform, covering a variety of topics, including the company's water performance.
Investors	Relevant, always included	An unfavorable hydrology scenario reduces hydroelectric generation in Brazil and, therefore, companies are unable to meet 100% of the volume planned in the agreements (guaranteed power output). Thus, the National Power System Operator (ONS) must engage thermal plants to meet part of the national demand. Cemig considers this aspect as relevant as 98% of its energy matrix came from water sources (82 hydroelectric plants, 40 UHEs, 32 PCHs and 10 CGHs). The greater the water deficit, the lower the energy generated at these plants, forcing the Company to purchase energy in the short-term market to meet contractual requirements. Trading in the short-term market produces a higher cost for Cemig's power generation and this scenario will always impact the Company's earnings and, consequently, the interest of investors. That is why they must be engaged in risk assessments. The impact of materialization of this risk for that stakeholder will depend on the energy trade and risk management strategy adopted by Cemig. As a way of engaging with investors, Cemig holds meetings and conferences where it presents the level of storage in the reservoirs and the possible strategies for buying and selling energy.
Local communities	Relevant, always included	In order to operate its reservoirs, Cemig mapped the major agents in communities upstream and downstream of the plants, always proactively reporting on situations of severe floods and droughts. These situations directly affect communities and, therefore, it is important to engage them in water risk assessments. The Proximidade Program was created in order to boost ties between communities, the Company, and local Civil Defense teams. Therefore, the form of engagement with communities is through the Proximidade Program, which, in 2019, held 8 meetings covering 9 plants and 24 municipalities under the subject “Emergency Action Plan Preparation - Readiness and Emergency Culture”, moving forward with the 2018 meetings.
NGOs	Relevant, always included	Cemig always seeks to protect local communities as a whole. The direct channel between NGOs and the Company is through the Proximidade Program and Cemig's participation in water resources venues, where such organizations play an important role in representing civil society. NGOs participate actively and

		strategically in the drafting of laws and regulations of the National Water Resources Policy and the National Water Resources Management System. NGOs also participate in technical discussions between the main collegiate bodies that draft rules and lay down guidelines, such as the National Water Resources Council (PNRS), the State Water Resources Council (CNRS), the Federal and State Watershed Committees, the Technical Councils, and working groups, especially those dealing with the development of strategic plans for water resources and the regulation of Concessions and charging for water use. Therefore, the way to engage with NGOs is through Proximidade Program.
Other water users at a basin/catchment level	Relevant, always included	The use of water for the purpose of generating electricity is subject to the regulatory environment, the procedural order of the hydrothermal matrix of the National Interconnected System (SIN) being the responsibility of the National Power System Operator (ONS). Necessarily, the multiple uses of water by other users of the watershed must be taken into account in the operation and management of the reservoirs that Cemig uses for energy generation. This implies multiple environmental and safety restrictions. In periods of severe drought, as the one in the 2013 to 2017 period, the monitoring and forecasting of reservoir levels, as well as constant engagement with public authorities, civil society and users, were paramount in ensuring energy generation together with maintaining the other uses of water. Engagement is carried out via the Proximidade Program, where company specialists notify the operating conditions of the reservoirs, and by participation in watershed committees. As a benchmark for engagement with users, we can mention the management of UHE Três Marias reservoir (396 MW), which in 2011-2018 was subject to restrictions due to the low rainfall rate. The management policy adopted by Cemig, the National Power System Operator (ONS) and the National Water Agency (ANA) ensured the feasibility of the Jaíba Irrigation Project (a grain and vegetable producer center in the São Francisco Watershed region). All decisions to provide for this important project are made by a committee led by ANA, with the participation of ONS, Cemig, Chesf and the Watershed Committee, and several other institutions, during meetings held every two weeks.

Regulators	Relevant, always included	Cemig participates in the National Water Resource Council, State Water Resources Council-MG, Watershed Committees, Technical Councils, and Working Groups, Class Associations (ABRAGE), public hearings where the Watershed Master Plans, resolutions, bills, normative deliberations, and regulations for granting and charging for the use of water resources are discussed, drafted and approved. In these venues, the expertise of its specialists is used to act in the drafting of policies and guidelines for the regulation of water uses in watersheds. These policies and guidelines are laid down by regulatory bodies and directly impact Cemig's business, which makes the engagement of this stakeholder important. The engagement method consists of holding meetings to present technical information on reservoir management.
River basin management authorities	Relevant, always included	Cemig participates in the Water Resources and Watershed Committees, Technical Councils, Work Groups and works with Industry Associations (ABRAGE, APINE and ABRAGEL), which provide complete monitoring of the regulatory and tariff scenario, thus justifying the importance of engaging these stakeholders. In these venues, the Company establishes a dialogue with these local players, exposing the expected scenarios and assessing the possible impacts that changes in the occupation and use of water resources may cause to the Company's activities. The engagement method consists of holding meetings to present technical information on reservoir management.
Statutory special interest groups at a local level	Relevant, always included	Cemig participates in the Water Resources and Watershed Committees, Technical Councils, Work Groups and works with Industry Associations (ABRAGE, APINE and ABRAGEL), which provide complete monitoring of the regulatory and tariff scenario, thus justifying the importance of engaging these stakeholders. In these venues, the Company establishes a dialogue with these local players, exposing the expected scenarios and assessing the possible impacts that changes in the occupation and use of water resources may cause to the Company's activities. The engagement method consists of holding meetings to present technical information on reservoir management.
Suppliers	Relevant, always included	The Company carries out the geographic mapping of its critical suppliers, identifying whether they are located in areas subject to water stress. It was found out that all of these suppliers are located in Brazil, so they are not exposed to water stress. Additionally, Cemig runs audits at their critical suppliers, where it can identify non-conformities in relation to the use of the water resource. These non-conformities impact Cemig, due to its joint

		responsibility for the impacts of its supply chain. Therefore, it is important to engage suppliers. The engagement method is via face-to-face audits at suppliers' facilities.
Water utilities at a local level	Relevant, always included	Cemig maintains a grant control tool for all Company facilities in order to always monitor the validity of certificates, aiming at the continuity of water supply for local activities. Due to the high relevance of the potential impact of this non-continuity, it is important to engage local water supply companies in this process. The engagement method consists of holding meetings to present technical information on reservoir management.
Other stakeholder, please specify	Not considered	N/A

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.

Corporate risk management enriches the management dialogue by adding perspectives to a strategy's strengths and weaknesses in the event of a change of context, in addition to assessing the strategy's alignment with the organization's mission and vision.
Risk management planning takes into account factors that may pose risks to the health and safety of employees, suppliers, customers, the general population and the environment. Eventually, opportunities are identified and developed according to the Company's objectives and business plans, especially regarding process efficiency. The risks inherent to Cemig's business activities are assessed by their probability of occurrence and by their impact on the various businesses in the value chain.
Based on the guidelines laid down in its Risk Management Policy, Cemig has put together a risk management program that allows for the mapping and assessment of both strategic risks and those arising from operational processes. This program is coordinated by the Risk Management and Internal Controls Management Department, which provides technical support to the several areas of the Company. The objective is to provide information to Top Management so they can make decisions regarding the most relevant risks and opportunities.
In order to do that, Cemig has put together a risk management process that aims to plan, identify, analyze, treat and monitor the mapped risks. At first, the Company ranks the risks identified as (i) process risks, which are those related to operations and are limited to the activities of each of the processes; (ii) macro-process risks, the impacts of which include different processes and departments of the Company; and (iii) Top Risks, which are macro-process risks that can directly impact the Company's strategy.
The Top Risks, as well as treatment recommendations made by the Corporate Risk Monitoring Committee - CMRC, are communicated to Top Management.
When a Top Risk is mapped for the first time at Cemig, the following steps must be followed:
1) Planning - alignment between risk management and the Company's strategic objectives;

2) Identification - understanding of the scope, causes and impacts of the risk;
3) Analysis - an estimation of the probability of the risks occurring, as well as the potential damage caused by the impacts identified in the previous step;
4) Treatment - a survey of all actions and controls for risk mitigation, as well as the mitigating effect of these actions on the mapped impacts;
5) Monitoring - monitoring of mitigation initiatives and risk validation with their owner.
In order to address one of its major water risks and aiming at guaranteeing the safety of the dams operated and maintained by Cemig, the Company employs a methodology supported by the best national and international practices. This methodology also complies with Federal Law 12,334/2010 (updated by Federal Law No. 14,066/2020), which lays down the Brazilian National Dam Safety Policy and its associated regulations (Aneel Normative Resolution No. 696/2015).

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?

Cemig defines strategic risks as those related to the Company's objectives and vision, or to strategic decisions that risk not achieving the planned success. These risks are classified based on the financial impact should they materialize, using the loss of net revenue as the measurement metric. Risks with considerable financial impact are those that can cause a significant adverse effect on the business, affecting the financial condition and the results of operations. Cemig assesses the financial impact of all its strategic risks prioritized by the Board of Directors, she so-called Top Risks (therefore, all Top Risks can be considered as significant impacts on Cemig's businesses). Financial impacts of risks can be classified in 6 levels. These levels range from very low (requires interventions within the company's governance and the board deliberation level) to catastrophic (the company will have difficulty recovering within 5 years, the impact is very comprehensive, and is irreversible). In that assessment, the financial impacts range from R$ 0-15 million (first impact range) to over R$ 1 billion (final impact range) and, thus, the financial impact of each risk is estimated. That indicator is good for the entire Company. Besides the financial impact, the Top Risk identification and review process assesses the possible impacts of each risk on the aspects of image and reputation, environmental and compliance. These aspects were defined with the support of the areas related to the matter and validated by the Corporate Risk Follow-Up Committee, which represents Cemig's boards.
Cemig rates its risks and opportunities in scales according to their financial impacts, intangible impacts, probability of occurrence, and relevance for the Company, with percentage estimates

distributed along the ranges. Risks are prioritized based on that classification, resulting in a matrix of exposure to risks/opportunities. Besides that, the “financial impacts” variable used to define the risk/opportunity position in the exposure matrix is updated with information after the control and adopted measures. Considering this, the system calculates the inherent risk/opportunity (that is, without management actions) cost/return, the residual risk/opportunity (after controls are implemented), and the planned residual risk/opportunity (after measures are implemented). This allows for prioritizing of decision-making based in a solid financial analysis of scenarios with and without risk/opportunity management. Currently, this analysis covers only direct company operations.

One of the risks assessed with potential financial impact is directly related to water availability. In 2020, the hydrological regime in Brazil was more favorable than in previous years, when there was a period of rain scarcity between 2012 and 2019. DSP (Difference Settlement Price) is directly affected by the hydrological regime, reaching superior levels during droughts. In 2020, the Southeast Region average DSP was equivalent to R$ 101.57/ MWh , some 50% below the 2019 average DSP (R$ 227.10/MWh). Despite the worsening in hydrology and storage throughout the year in the Southeast, generation surpluses in the North in the first semester and in the Northeast in the second, contributed to keeping the price lower. Thus, the GSF (Generation Scaling Factor) showed an average value lower than in 2020, when compared to 2019, with an average value of 0.83 in 2020, against 0.91 in 2019.W4.1b

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	1	1-25	In order to guarantee its production of electric energy in the long term, and thus preserve its business plan, a hydroelectric project has a sanctioned streamflow for the right to use water resources. This sanctioned streamflow is part of the Watershed Water Resources plan, which establishes the streamflow percentage intended for each use for each type of user in the watershed. Recently, the Paranaíba River watershed has been under great pressure by irrigation users due to an increasing streamflow of consumptive uses for irrigation. Besides other hydroelectric plants located in the basin, there is UHE Emborcação, which belongs to Cemig. Every time consumptive uses increase upstream in the basin, hydroelectric plants downstream may suffer loss of guaranteed power output in periodic reviews, with a direct impact on their revenues. Due to the increase in consumptive use upstream of UHE Emborcação, the

			estimates of impact on the next guaranteed power output review, scheduled to take place in 2022, are of about 2.0% of the plant's guaranteed power output.

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

Brazil

Rio Paraiba

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

Estimated impact on UHE Emborcação guaranteed power output in the next review due to the increase in upstream collection for irrigation is around 10 MW in average. This figure corresponds to less than 1% of Cemig's guaranteed power output and would cause financial impacts in Cemig's overall revenues of less than 1%.

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

Brazil

Other, please specify

In all watershed Cemig has hydroelectric generation projects

Type of risk & Primary risk driver

Physical

Severe weather events

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Climate change can cause changes in rainfall patterns and produce extreme rain and drought events, as well as changes in their geographic distribution. There may also be a change in average amount of rainfall, thus altering the volume of water that gets to the hydropower plant reservoirs. As Cemig's power production comes mainly from hydraulic sources, these changes may cause a decrease in its generation capacity. This reduction affects Cemig D's and GT's businesses at the same time.

PLD (Differences Settlement Price) and GSF (Generation Scaling Factor) are directly impacted by the hydrological conditions in Brazil. The average PLD in the Southeast in 2020, which was Relevant to Cemig D, was R$ 101.57/MWh, about 50% below the average PLD in 2019 (R$ 227.10/MWh. Despite the deterioration in hydrology and storage throughout the year in the Southeast region, the generation surpluses in the North region in the first half of the year and in the Northeast region in the second half helped to keep the price lower. Thus, the GSF (Generation Scaling Factor) showed an average value lower than in 2020, when compared to 2019, with an average value of 0.83 in 2020, against 0.91 in 2019, and affects Cemig GT's operations.

Timeframe

Current up to one year

Magnitude of potential impact

High

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

150,000,000

Potential financial impact figure - maximum (currency)

500,000,000

Explanation of financial impact

Cemig operates in the energy generation and distribution sectors; in order to define financial impact, it is necessary to make up a possible scenario combining negative factors that can affect energy purchases of the distribution companies and the operation of the generation companies, including (i) an adverse period in terms of rainfall, resulting

in high spot prices; (ii) seasonalization of the MRE guaranteed power output, allocating large volumes of energy in a certain period of the year, resulting in very low MRE adjustment factors.
In this scenario, the factors reflect a significant increase in the expenses of the distributors with energy purchase, causing a big mismatch in the company's cash flow. The risk of a mismatch in Cemig Distribution's cash flow and of reduced hydroelectric energy production (Cemig GT) is considered high, according to the Company's Risk Management Policy. In order to rate the risk as high in the Company's risk matrix, the first phase is Identification, when the causes and impacts of the risk are identified. In the next phase, Analysis, the risk was classified as Impact 4.High (worst case scenario), in a six level impact scale (1. Does not apply up to 6. Catastrophic) of the Risk Matrix. For each impact scale level, a potential financial impact amount is determined, based on Cemig's Corporate Risk Matrix. The impact value range defined for level 4. High risks was 150-500 million. That is why the minimum value of the financial impact of the risk posed amounts to R$ 150 million and the maximum value, to R$ 500 million.

Primary response to risk

Use risk transfer instruments

Description of response

The Company's Board constantly manages its energy purchase contracts to mitigate the risk of exposure to the short-term market (STM). Monitoring of the Generation Scaling Factor (GSF), which relates hydraulic generation to the seasonal physical guarantee of the plants, provides an outlook the exposure of hydroelectric players to the short-term market. Exposure caused by GSF is mitigated along the year by the Company risk management and renegotiation of hydrological risk. In Brazil, the hydrological risk that affects generation agents is shared among all agents subject to centralized dispatch by the National Power System Operator (ONS) by means of a financial instrument called Energy Reallocation Mechanism (MRE). Cemig's hydroelectric plants are subject to that risk sharing and transfer mechanism. Regarding Cemig's risk management, the company has a Top Risk known as “Loss of guaranteed power output”. An Energy Planning team is responsible for: Assess the evolution of regulatory aspects since the last review of guaranteed power outputs; Assess the progress of themes after the last review; Quantify the possible impacts; and Mitigate the risks through contributions to public inquiries, whether sent by the company itself or via associations representing the generator utilities.

Cost of response

15,587,894

Explanation of cost of response

Current management cost is associated with the remuneration of an electric energy planning, purchase and sale team (70 people). The cost is recurrent and these employees act on this risk and in other processes related to the trade of energy.

Country/Area & River basin

Brazil

Other, please specify

In all watershed Cemig has hydroelectric generation projects

Type of risk & Primary risk driver

Physical

Severe weather events

Primary potential impact

Reduced revenues from lower sales/output

Company-specific description

Undesirable impacts on reservoirs due to siltation, which could occur more quickly or (in an optimistic scenario) more slowly, depending on how the change in precipitation and hydrological levels occur in each reservoir. Cemig monitors reservoir silting in several ways, including mapping changes in the shape of reservoir beds due to sedimentary deposits, monitoring of reduction in the volume of reservoirs, reservoir life studies, and monitoring of sedimentation volume. One of the impacts associated with the silting up of Cemig's reservoirs is the reduction in the generation capacity of its hydroelectric plants, which, in extreme cases, may provide less energy than their guaranteed power output. When there is a reduction in energy generation by several hydroelectric plants that are connected to the National Interconnected System (SIN) and subject to centralized dispatch by the National Power System Operator (ONS), thermoelectric plants are called into play. As they have a higher operating cost, they lead to an increase in the price of energy in the short-term market, which may affect the revenue associated with the sale of energy by Cemig.

The reservoirs that currently present the most critical situation in terms of silting up are: Rio de Pedras SHPP (9.28 MW), Salto Grande HPP (102 MW).

Timeframe

More than 6 years

Magnitude of potential impact

Medium

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

31,645,000

Potential financial impact figure - maximum (currency)

111,331,080

Explanation of financial impact

The cost of the financial impact is associated with the reduction or disturbance in the capacity to of Cemig's hydroelectric plants to generate electricity, which can also be caused by the accumulation of sediments in the reservoir. This impact is calculated as 0.5% of Cemig GT's net operating revenue in 2020 (R$ 6,329,000,000), an amount that totaled a potential financial impact of R$ 31,645,000.

Primary response to risk

Other, please specify

Acompanhar a carga de sedimentos sendo lançada no corpo d'água

Description of response

This risk is managed through a series of actions such as mapping the change in the reservoir bed morphology due to sediment deposit, monitoring the decrease in the volume of reservoirs, studying the useful life of the reservoirs, and monitoring of sediment input. Sediment monitoring is carried out at 86 stations located in its hydropower plants, where water samples are collected and analysed by an accredited laboratory. The result of sediment and granulometry measurements are stored in the company's databases. This monitoring process makes it possible to analyse trends and estimate the frequency of events that may impact Cemig's operations, in addition to specifying the necessary measures to mitigate them.

Cost of response

1,744,368

Explanation of cost of response

Total response cost is annual and includes the maintenance of equipment and meteorological teams, the maintenance of the telemetry and hydrometeorological monitoring system (STH), as well as sediment monitoring services in 86 stations located in the hydroelectric plants.

Country/Area & River basin

Brazil

Other, please specify

In all watershed Cemig has hydroelectric generation projects

Type of risk & Primary risk driver

Regulatory

Regulatory uncertainty

Primary potential impact

Increased operating costs

Company-specific description

Charges for use of water for large hydroelectric plants is already regulated, there are no regulatory changes expected in the short and medium run. For Small Hydroelectric Plants, charging for the use of water is considered exempt pursuant current legislation.

A regulatory change suspending the exemption from charging for the use of water for PCHs, plants with installed power less than 30MW, would cause an additional cost for Cemig's generating complex. Altogether, Cemig has 32 PCHs, amounting to 3% of the company's nameplate capacity. With the increase in the cost to make the PCHs operational through the potential tax increase, the risk would lead to a potential financial impact on the company's direct operations, thus increasing the cost of energy generation operations.

Timeframe

More than 6 years

Magnitude of potential impact

Low

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,351,984

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Financial impact refers to the estimate for levying of taxes on Small Hydroelectric Plants (PCHs). For large hydroelectric plants, that figure is calculated using the equation (7.00% x generated energy in MWh x TAR).
Reference Updated Tariff (TAR) for 2020 is R$ 79.62/MWh, a 1% variation against 2019(/ MWh) (R$ 77,38/MWh).
This calculation was used to estimate the potential financial impact of a possible taxation on the PCHs, resulting in a total amount of 1,351,984. The financial impact is considered as of little significance to the Company.

Primary response to risk

Engage with regulators/policymakers

Description of response

Cemig's efforts to manage regulatory change risks is through participation in the National Water Resource Council, State Water Resources Council-MG, Watershed Committees, Technical Councils, and Working Groups, Class Associations (ABRAGE), public hearings where the Watershed Master Plans, resolutions, bills, normative deliberations, and regulations for granting and charging for the use of water resources are discussed, drafted and approved. In these venues, the expertise of its specialists is

used to act in the drafting of policies and guidelines for the regulation of water uses in watersheds.
In tandem, the company has a relationship and sectorial regulation supervisory board that monitors regulatory changes and calls on a water resource management team whenever the theme is relevant.
Estimates of potential regulatory changes include alterations in the rules for granting concessions, financial compensation, charging mechanisms and pricing structure.

Cost of response

384,818

Explanation of cost of response

Costs to manage that regulatory change risk are associated to the remuneration of the water resource management team and the institutional relation and sectorial regulation team.

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

Brazil
Other, please specify
In all Cemig hydropower plants

Stage of value chain

Use phase

Type of risk & Primary risk driver

Reputation & markets
Changes in consumer behavior

Primary potential impact

Reduced revenues from lower sales/output

Company-specific description

Unfavorable hydrological scenarios lead to constant increases in energy price, which, associated with the country's adverse economic scenario, increases the risk of default by consumers or theft of energy. In indirect Cemig operations, that change in consumer behavior may cause impacts in Company revenues, with default directly impacting Cemig D cash/ The company needs to pay the energy bill from the generators, regardless of whether it receives payment from final consumers; the transmission service; charges in the electricity sector and Pis/COFINS and ICMS taxes levied on energy.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-high

Likelihood

Virtually certain

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,510

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The financial impact is related to revenue loss and, consequently, pressure on Cemig Distribution's cash flow from the risk of not covering the system maintenance and operation costs. The financial impact refers to the year 2020 and is amounts to the total accounts receivable outstanding from energy customers, sellers and transportation concessionaires. The amount of accounts receivable is disclosed in Cemig Form 20F, on page 22.

Primary response to risk

Direct operations

Other, please specify

Engagement with consumers

Description of response

In order to mitigate that risk, the Company uses several communication and collection tools to inhibit an increase in defaults. The measures adopted include telephone calls, sending of e-mails, SMSs, collection letters, blacklisting of defaulting customers, judicial collection, and cutting of the power supply. In 2020, the Company removed over 1,100 power hogs and carried out several fighting actions, such as 484 thousand inspections in the whole state of Minas Gerais. A 58% increase in the number of inspections in relation to 2019 resulted in a R$ 90 million increase in Cemig's revenue.

Cost of response

15,399,093.93

Explanation of cost of response

The costs involve remuneration of the team responsible for gaging default and the whole cost with the action plan and the measures to reduce commercial losses. In 2020, Cemig deployed the Contingency Management Plan for Mitigation of Defaults, because

of an increase in defaults caused by the Covid-19 pandemic. The restrictive measures affecting collection mechanisms, like power cuts, laid down by Normative Resolution No. 878/2062 and Federal Law No. 14,015/20, also increased the challenges faced by the Company in the face of the defaults. The Plan includes the intensification of measures to mitigate default risks, with a specific campaign to negotiate with customers, including those with a momentary impediment to suspend the supply of energy and intensify individualized actions for habitual collection, as well as diversification of the payment methods available to consumers.

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

Products and services

Primary water-related opportunity

New R&D opportunities

Company-specific description & strategy to realize opportunity

The opportunity is related to the expansion and development of Cemig's distributed generation. With that strategy, Cemig reduces its exposure to risks related to oscillations in energy purchase due to adverse hydrological scenarios and guarantees revenues with the new distributed generation service portfolio. In 2019, Cemig SIM was created, the result of a synergy between Cemig Geração Distribuidora and Efficientia. The company has been working since then in providing distributed generation services by deploying solar farms throughout the State of Minas Gerais. It also offers solutions in energy efficiency, energy storage and electric mobility.

To serve and expand its base of approximately 2,000 customers, Cemig SIM acquired, in 2020, a 49% interest in seven special purpose companies (SPE), geared to DG using a photovoltaic solar source. An investment of approximately R$ 55 million was made in 19 photovoltaic plants (UFV) and 32 MW of power. With the connection of the 19 generating units, Cemig SIM 2020 with a total installed capacity of 42 MW in miniDG. In 2020, the energy generated and offset to Cemig SIM customers reached an amount of 35.9 GWh, which amounts to a reduction in the emission of 2,660 tons of CO2 into the atmosphere. Cemig S!M plans to continue expanding its installed capacity in 2021. It will also extend its services, hitherto restricted to the commercial and industrial market, to the residential market.

Estimated timeframe for realization

More than 6 years

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

15,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The financial impact is related to the growth estimate of the distributed generation market in the state of Minas Gerais via projects to be deployed by Cemig.

With the connection of the 19 generating units, Cemig SIM 2020 with a total installed capacity of 42 MW in miniDG. In 2020, the energy generated and offset to Cemig SIM customers reached an amount of 35.9 GWh, which amounts to a reduction in the emission of 2,660 tons of CO2 into the atmosphere.

In 2020, CEMIG SIM traded 3,962.15 MWh/month from 10 photovoltaic generation plants (UFVs Bonfinópolis, Brasilândia, Corinto, Janaúba, Lagoa Grande, Lontra, Manga, Mato Verde, Mirabela, and Porteirinha), totaling, in 2021, 6,618.54 MWh/month since it was opened in 2019, adding 2,024 new home and business customers.

Type of opportunity

Other

Primary water-related opportunity

Other, please specify

Relationship with the community

Company-specific description & strategy to realize opportunity

The Proximidade Program, carried out by Cemig, seeks to foster closer relationships and social development in the communities surrounding reservoirs. In addition, it publicizes Cemig's environmental actions carried out in the reservoirs of dams close to the hydroelectric plants.
In that Program, meetings are held with the community where specialists give objective lectures to clarify operational aspects of the plants to the population. Other issues, such as dam safety and safe coexistence with the electrical system, are also among the

topics covered.
In 2020, pursuant Aneel Normative Resolution No. 696/2015, external PAE specific to the 42 Cemig dams were prepared, which are liable to cause impacts in the life dynamics of 122 municipalities.
During the “Proximidade Workshops – PAE” held throughout 2020, the above-mentioned PAEs were presented, as well as the Proximity risk management application, which has already been made available.
As the PAEs are constantly updated, the COMPDEC coordinators have a link to access the documents, which will always be available in their most up-to-date version.

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)

21,510.57

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The financial impact was estimated by calculating the cost of spontaneous media and of each favorable news to the Proximidade Program by considering advertising in newspapers, websites, radio, TV and other media. In the year 2020, the costs of news and advertising related to the Proximidade Program for Cemig reached a total of R$ 21,510.57.

Type of opportunity

Resilience

Primary water-related opportunity

Increased resilience to impacts of climate change

Company-specific description & strategy to realize opportunity

In 2020, Cemig maintained a partnership (established in 2019) with the São Francisco River Watershed Committee (CBHSF) to develop a project to recover the marginal lagoons of the São Francisco River, in Minas Gerais. It is an innovative, challenging, and unique effort aimed at improving the quality of the river water and the biodiversity. The Project main objective is to assess the ecological integrity of the marginal lagoons considered as priorities for the preservation of the biodiversity of the São Francisco

River, associated with the operation of Três Marias Hydroelectric Plant (UHE). The project aims to replenish the marginal lagoons and proposes actions in partnership with communities in its influence area to foster the conservation and recovery of these environments. The project provides for a study on the adjustments required to the discharges of UHE Três Marias during the rainy season as an alternative to the periodic flooding of the marginal lagoons of the Upper São Francisco.

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)

3,052,704.29

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The financial impact considered for the opportunity is related to the amount spent by Cemig on the GT 610 R&D project for the recovery of the marginal lakes of the São Francisco River, named “Ecological integrity of marginal lakes for the conservation of the biodiversity of the São Francisco River”. The total amount spent to carry out the project activities in 2020, was 3,052,704.29

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)

UHE Emborcação

Country/Area & River basin

Brazil
Rio Paraiba

Latitude
-18.451111

Longitude
-47.993888

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
Hydropower

Total water withdrawals at this facility (megaliters/year)
12,226,754

Comparison of total withdrawals with previous reporting year
Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
12,226,754

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
12,721,576

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water
12,721,576

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)

-494,822

Comparison of total consumption with previous reporting year

Higher

Please explain

Inside Emborcação plant, water is collected for three purposes. 1. The water is taken directly from the river for energy generation, so all the water collected is returned to the river. 2. The water is collected directly from the river to cool the generation equipment, so all the water collected is returned to the river. 3. The water is collected from an underground source and supplied by the municipal utility for administrative consumption; so, 80% of the collected water is discarded in the utility network. In 2020 the plant generated more energy thanks to the great streamflow of Paranaíba River; hence, the increase in water catchment (river inflows or inflow to the plant) and also in the plant discharge (river outflow). Negative consumption means the reservoir depleted (reduced its storage level) throughout the year.

W5.1a

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

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

River inflow data are submitted to several consistency stages by the ONS hydrology team, so as to obtain consistent hydropower plant operation data and feed the process of obtaining each generation project's streamflow series data, which in turn will feed the operation planning models.
The data were verified in the scope of the external audit of the 2020 Annual and Sustainability Report, conducted by Bureau Veritas Certification Brazil (Bureau Veritas). The verification scope covered the Global Reporting Initiative Standards and Principles for
Sustainability Reports regarding the GRI Standards, including the electricity sector Supplement. Bureau Veritas developed a set of interviews and evidence checks, verifying information from the various GRI indicators and topics.

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

The data were verified in the scope of the external audit of the 2020 Annual and Sustainability Report, conducted by Bureau Veritas Certification Brazil (Bureau Veritas). The verification scope covered the Global Reporting Initiative Standards and Principles for
Sustainability Reports regarding the GRI Standards, including the electricity sector Supplement. Bureau Veritas developed a set of interviews and evidence checks, verifying information from the various GRI indicators and topics.

Water withdrawals – quality

% verified

76-100

What standard and methodology was used?

The company has an Environmental Management System (ISO 14001) and Quality Management System (ISO 9001) that check the standards of drinking water for human consumption.

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

River inflow data are submitted to several consistency stages by the ONS hydrology team, so as to obtain consistent hydropower plant operation data and feed the process of obtaining each generation project's streamflow series data, which in turn will feed the operation planning models.
The data were verified in the scope of the external audit of the 2020 Annual and Sustainability Report, conducted by Bureau Veritas Certification Brazil (Bureau Veritas). The verification scope covered the Global Reporting Initiative Standards and Principles for
Sustainability Reports regarding the GRI Standards, including the electricity sector Supplement. Bureau Veritas developed a set of interviews and evidence checks, verifying information from the various GRI indicators and topics.

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

The company has an Environmental Management System (ISO 14001) and Quality Management System (ISO 9001) that check the treatment systems and release conditions of effluents at company units. The discharge conditions must meet DN COPAM/CERH-MG 1/2008, which provides on the classification of water bodies and environmental guidelines for their pigeonholing, as well as laying down the conditions and standards for effluent release, among other provisions.

Water discharges – volume by treatment method

% verified

76-100

What standard and methodology was used?

The company has an Environmental Management System (ISO 14001) and Quality Management System (ISO 9001) that check compliance with legal requirements. The discharge conditions must meet DN COPAM/CERH-MG 1/2008, which provides on the classification of water bodies and environmental guidelines for their pigeonholing.

Water discharge quality – quality by standard effluent parameters

% verified

76-100

What standard and methodology was used?

The company has an Environmental Management System (ISO 14001) and Quality Management System (ISO 9001) that check the treatment systems and release conditions of effluents at company units. The discharge conditions must meet DN COPAM/CERH-MG 1/2008, which provides on the classification of water bodies and environmental guidelines for their pigeonholing..

Water discharge quality – temperature

% verified

76-100

What standard and methodology was used?

The company has an Environmental Management System (ISO 14001) and Quality Management System (ISO 9001) that check the treatment systems and release conditions of effluents at company units. The discharge conditions must meet DN COPAM/CERH-MG 1/2008, which provides on the classification of water bodies and environmental guidelines for their pigeonholing.

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

River inflow data are submitted to several consistency stages by the ONS hydrology team, so as to obtain consistent hydropower plant operation data and feed the process of obtaining each generation project's streamflow series data, which in turn will feed the operation planning models.

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
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs	Cemig is aware of the importance of water resources for the maintenance of its business and for society. So, it has established a Water Resources Policy in order to define the principles that govern the Company's actions on the theme. The Policy, approved by the Executive Board, applies to all of the Company's operations. When carrying out its activities, the Company undertakes to adopt practices of rational, integrated and sustainable use of water resources, prevention and defense against critical hydrological events, both of natural origin and resulting from the undue use of natural resources, considering the water availability and current and future generation needs.

		Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change Other, please specify Actions focused on water conservation and preservation of water sources, safe management of their reservoirs, climatological and quantitative monitoring of water, and water and sedimentometric quality	That policy has the following principles: Water Resource Management, Water Resource Conservation, Participation in Public Administration and compliance with the Legislation for Water Resources, Safe Reservoir Management, Water Weather and Quantitative Monitoring, Water Quality and Sediment Monitoring, Relations with Stakeholders, and Development Survey.

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
Chief Operating Officer (COO)	The position that is at the highest level of direct responsibility for water issues in the company is that of Cemig GT's Director, who is responsible for managing the processes and activities of generation and transmission of electricity. Like the other directors, he is part of Cemig's Executive Board, being co-responsible for managing the Multiannual Business Plan, which presents the company's actions and strategies over a 5-year period. Issues related to water risk are included in this Plan, and are

	discussed with the Company's CEO, the highest level of the Executive Board, which, in turn, reports directly to the Board of Directors. The members of the Board of Directors are elected by the General Meeting of Shareholders, considered a group belonging to the Company's management. They elect their Chief Executive Officer and approve the job attributes of the Directors, which include cooperating with the Chief Executive Officer in carrying out his duties and replacing him in cases of absence, leave, vacancy, impediment or resignation. The Chief Executive Officer's duties include coordinating and managing the Company's work, and coordinating the preparation, consolidation and implementation of the Company's Long-Term Strategy and Multi-Year Business Plan. The responsibility for water issues was assigned to the Chief Operating Officer (COO) of Cemig GT, since the supervisory boards that deal directly with these matters are subordinated to that department. The current Director of Cemig GT has over 31 years of experience in the area of power generation and transmission. He is a member of the Board of Directors of the ONS and of the Board of Directors of Transmission Companies.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans	Cemig has a Sustainability Committee composed of members of the Executive Board. The various action plans laid down by the Committee include those associated with the low diversification of its power matrix. Currently, more than 98% of the electricity generated by the company comes from hydroelectric plants, whose operation is highly dependent on the hydrological regime. The risk portrayed is discussed at Sustainability Committee meetings throughout the year and this topic is taken annually to Cemig's Board of Directors by the Operations Director (Cemig GT's Director), and by an annual review of the strategic planning.

		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	

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 Operating Officer (COO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The person with the highest level of direct responsibility for water at Cemig is the Director of Generation and Transmission, who reports directly to the CEO. As water is the main raw material for power generation, the Director of Generation and Transmission and his team daily monitor and assess water risks using the level of the Company's reservoirs, and monitor weather forecasts. The most relevant information on the matter is presented weekly at the Executive Board meetings, and monthly at the Board of Directors meetings.

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

Other, please specify

Risk Monitoring Committee

Responsibility

Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

This committee is responsible for advising the Executive Board in the fulfillment of the duties related to the management of corporate risks by monitoring them and recommending mitigation actions. We can highlight the following duties: Promote the discussion of strategic and operational issues in the Corporate Risk Management Process; Continuously monitor the scenario the Company operates in and its corporate risk matrix, in order to identify major risks and recommend priority mitigating actions to be presented to the Executive Board; Continuously monitor the scenario the Company operates in and its corporate risk matrix, in order to identify the main risks and recommend priority mitigating actions to be presented to the Executive Board; Recommend guidelines and procedures to be adopted in the Corporate Risk Monitoring Process for approval by the Executive Board.

W6.4

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

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	The variable remuneration (PLR) of the Directors is linked to the Company result indicators. Since 2012, the PLR paid to the Officers is conditioned to the achievement of individual corporate goals laid down by the Board of Directors according to the Company's strategy. Specifically for managers, superintendents and directors, starting in 2020, a basket of indicators is considered, deployed from the corporate strategic indicators. Thus, in 2020, ISUSTENT had a 5% weight in the PLR of the DCS director (Communication and Sustainability Deputy Board - DPR/CS), just like EIMRGF had a 5% weight in the PLR of the DGT director (Generation and Transmission Board). In the case of DCD (Cemig Distribution Board), DEC had a 10% in the PLR of the director, in place of the IPTD.

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain

Monetary reward	Board/Executive board Other C-suite Officer Generation and Transmission Board; Communication and Sustainability Board	Supply chain engagement Other, please specify Energy Impacted by the Guaranteed Power Output Decrease Mechanism	In Brazil, energy provided by National Interconnected System (SIN) is the benchmark for national supply. The Ministry of Mines and Energy (MME) grants each plant a certificate corresponding to the maximum amount of energy it can sell, called Guaranteed Power Output. The EIMRGF indicator tracks the total amount of energy (MWh) impacted by the Guarantee Reduction Mechanism, considering the Guaranteed Power Output of all generation projects included. It is valid for hydroelectric plants dispatched centrally and with participation of CEMIG GT in the operation and/or maintenance processes. The verified values and the result projections of this indicator reflect the performance of the operational availability of each plant (directly related to the affluent flow), in an accumulated period of 60 months, compared to a reference value for this availability, defined by ANEEL. This result can be up to 10% of the Director of Generation and Transmission's variable remuneration. To receive this benefit, the indicator must be <28,000 Mwh. For PLR 2020/21, the target was reset to <= 5,776 MWh. Cemig also uses ISUSTENT, an indicator that assesses its performance in sustainability indices such as the ISE, CDP and Dow Jones Sustainability Index, which include management and engagement with suppliers as one of their critical themes. ISUSTENT had a 5% weight in the PLR of the Communication and Sustainability Board in 2020.
Non-monetary reward	Other, please specify Employees	Other, please specify Efficiency project or goal - direct operations	In 2017, Cemig held the Ideia Iluminada Contest, which aimed at fostering solutions geared at reducing fuel consumption, raising efficiency in energy and water consumption, and reducing the production of waste. Of the 44 projects submitted by Cemig employees, the winner was a system for using rainwater for consumption

			in the Company's main building in Vila Mariana neighborhood, in the city of Governador Valadares. The project opened in December 2018. And its results were disclosed in an internal publication as a way of acknowledging the effort carried out.

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, funding research organizations

Yes, other

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Cemig participates in all deliberative and regulatory venues for water resources on both the federal and state level. With its performance focused in Minas Gerais, Cemig is a member of 21 Watershed state and 4 federal committees. Thus, Cemig influences the drafting of policies and guidelines and, at the same time, monitors regulatory trends, an important subsidy for estimating impact estimates on the Company. Cemig works intra- and intersectoral articulation in Water Resource Venues so as to preempt, minimize, or neutralize water policies that do not comply with the Electricity Industry and the company. Cemig has a Water Resource Policy that guides the performance of the company and its employees. Furthermore, there are normative instructions that aim to ensure the alignment of activities carried out with the policy guidelines. Also, there is a Code of Conduct that guides and disciplines the conduct of those who act on behalf of the company. Such topics are the target of internal training, covering 100% of the workforce. In case of inconsistencies regarding the guidelines and instructions, the company has a complaints channel. Complaints are classified and dealt with, and disciplinary action is taken when the deviation is proven. This way, the employees who participate in these forums are specialists in water resources and are prepared to represent the company's interests, ensuring consistency between the company's actions and its discourse.

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)

cemig-h-4t_2020_reapresentacao.pdf

https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/2ad54e07-276a-9b18-f4b8-b1b3f1481dd7?origin=2

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	16-20	The main drivers of Cemig's business strategy are defined in the context of (i) the business plan for the following fiscal year and (ii) the updated long-term strategy with analysis of risks and opportunities for at least the next five years. The current strategic plan is designed for two timeframes, 2025 and 2040, considered as medium and long term, and is related to balanced growth, both through new projects and through mergers and acquisitions. The main commitments, in this regard, are sustainable growth and the addition of value for shareholders in the long term, aiming at expanding the installed capacity through a low-risk portfolio. One of the guidelines is the recovery of its capacity to generate energy from renewable sources (hydroelectric, wind and solar). For situations of water stress, Cemig's long-term business objectives include the importance of diversifying energy sources to minimize the impact on energy supply. Therefore, the expansion of solar and wind energy generation has been important, and the installed solar capacity of Cemig S!M reached, in 2020, 42 MW in miniGD, and will continue to be expanded, aiming at the diversification of the company's energy sources. Since Cemig's main source of generation is hydroelectric power, the strategy of buying incentivized energy (wind and solar) through auctions is also noteworthy.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	The major drivers of Cemig's long-term business strategy are defined for the 2040 timeframe: In this line of action, the strategy to expand the installed capacity of existing plants stands out. The company has an area dedicated to analyzing scenarios, risks and opportunities and market trends that is responsible for preparing the strategic planning. The company's

			strategic planning considers aspects of eco-efficiency and environmental management, establishing goals to reduce water consumption throughout the company and increase production efficiency through energy planning. Water-related risks and opportunities, such as extreme hydrological events, dam failure, inefficiency in adapting to the impacts of climate change, establishment of investment plans for operational vulnerability improvements, etc., are classified and prioritized in exposure matrices by the Corporate Risk Monitoring Committee and presented to the Executive Board. The long term strategy includes the recovery of generation capacity by acting as an energy trader in the free market and also via participation in energy auctions, in addition to taking advantage of solar and wind energy opportunities.
Financial planning	Yes, water-related issues are integrated	16-20	The Brazilian electricity system has undergone transformations with direct implications for Cemig. Thus, there is a financial planning in which water issues, such as unfavorable future hydrological scenarios, the expansion of the energy matrix based on wind and solar sources, and the consequent reduction of hydroelectric generation, are integrated in order to mitigate the risks of loss of hydroelectric generation capacity, considering the long term. One of the strategies adopted by Cemig was the financial planning to diversify its energy matrix through the purchase of renewable energy from solar and wind sources. In this way, the company is planning to expand its operations and offer new products and services, aiming to prepare itself for a new hydrological and climatic context, in addition to expanding its customer base.

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)

-44

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

-76

Water-related OPEX (+/- % change)

10

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

-14

Please explain

For 2020, the variation in the value of CAPEX compared to 2019 refers mainly to investments in new features of the Proximidade application, which manages and facilitates communication with communities about risks and warnings of dam breaches at hydroelectric plants; and the acquisition of meteorological radar equipment and parts, and acquisition of the ECMWF weather forecasting model. The variation in the OPEX value refers to expenses with the recovery of the storm location system in 2020, various maintenance in the network, and expenses with Emergency Action Plans. Regarding future trends, an increase in investment is expected in 2021 due to the implementation of the Emergency Action Plan (with the completion of streamflow propagation studies and the carrying out of a socioeconomic register of the population in the self-rescue zones of the dams); and continued modernization of the STH. Variatons remain significant due to adjustments and compliance with industry regulatory demands.

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	Based on the Corporate Risk Management System, Cemig analyzes scenarios and determines the degree of financial exposure to risks, considering the probability of occurrence and its impact, and lays down control measures for the following risks: reservoir silting, forecast weather deviations, loss of PCH physical security, and decreased water availability with impacts on trade. The company also invests in research projects and weather forecasting tools that can impact its business. Acquisition of a weather radar and inclusion in R&D projects GT 0552-Evaporation of the Reservoir of UHE Funil Reservoir: Characterization of the Water Footprint and Strategic R&D Project No. 010/2008 "Effect of Climate Change on the generation of electricity" stand out.

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	RCP 2.6 Other, please specify RCPs 4.5; 6.0; 8.5	The result of Strategic R&D Project 010/2008 "Effect of Climate Change on Electricity Generation" indicates an increase in air temperature in all regions of Brazil and a reduction in rainfall, mainly in the Amazon and Northeast Region and an increase in the South Region. For hydrology simulation, the MGB-IPH distributed hydrological model was used, developed to represent the processes of rain turning into runoff in large-scale watersheds. Two generating centers were considered: Existing Generating Center (PGE), which are the existing plants, and Future Generating Center (PGF), the set of plants expected to start operating in the year 2030. The calculation of assured energy (EASS) was made for the 2040, 2070 and 2100 timeframes. Future 01 (2011-2040), Future 02 (2041-2070), Future 03 (2071-2099). Another project developed by Cemig was R&D GT 0552 - Evaporation of the Funil hydroelectric plant reservoir: Water Footprint Characterization. Three UHEs installed in cascade were evaluated and the following impacts were considered: reduction/increase in	The company has an area specialized in water resources management and a risk management area. These two areas are responsible for identifying water risks, qualifying and quantifying impacts and defining actions to minimize risks. The following control measures were established: real-time monitoring of the amount of water available in rivers and plants using 262 telemetric stations belonging to the Telemetry and Hydrometeorological Monitoring System (STH); sediment monitoring at 86 stations in its hydroelectric plants, where water samples are analyzed by an accredited laboratory. In 2020, Cemig operated a hydrometeorological network that monitors 372 variables, 178 focused on rainfall monitoring, 104 for watercourse levels and discharges, 53 for monitoring reservoir and river levels, and 37 focused on climatological stations. Some responses to the possible water impacts have already been implemented and will remain in place during the time scale defined by the scenario analysis. One of them will be to increase the efficiency of the weather forecasting system via the GT0607 R&D project, which expands

		energy production potential, impact on the water footprint, possible interruptions in the production of electricity due to low water availability. Climate change impacts on runoff simulation considered scenarios RCP 4.5 and RCP 8.5, simulated by the Eta-HadGEM2-Es and Eta-MIROCC5 regional climate models.	the availability of environmental monitoring data for water quality in the reservoirs' surroundings and will use the Três Marias Reservoir as a case study. By 2027, Cemig will implement a new PDD (Distributor Development Plan), which will be put together to solve deficiencies and monitor the implementation of mitigation actions to adapt to the impacts of climate change.

W7.4

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

Row 1

Does your company use an internal price on water?

Yes

Please explain

Since 1990, the electric energy generation industry pays a tax called Financial Compensation for the Use of Water Resources for Hydropower Generation (CFURH), established by Law 7,990 of 1989. Cemig, as the whole industry that uses water to produce hydropower, was charged for the use of the water resource defined and implemented for his hydropower plants even before the Watershed Committees for the rivers they are deployed at were established. Collection for hydropower plants with nameplate capacity over 30 MW was established and stared for all state and federal watersheds in August 2000, with enactment of Law 9,984. It is also important to mention ours is the only sector subject to annual updating of amounts charged by the restatement and review of the Reference Updated Tariff (TAR). In 2020, the amount was R$ 79.62/MWh, with a 1% variation in relation to 2019 (R$77.38/MWh).

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	Targets are monitored at	To direct the establishment of responsibilities, commitments, goals and objectives, Cemig has a Water Resource Policy, whose major directives are the adoption of practices for

	Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	the corporate level Goals are monitored at the corporate level	rational usage, prevention and defense against critical hydrological events, both of natural origin and resulting from the inappropriate use of natural resources, considering the current and future generation requirements and water availability. Cemig considers the multiple uses of water by other users of the watershed when deciding on the operation and management of its reservoirs, which implies in multiple environmental and safety restrictions. The Sustainability Management is responsible for assessing, proposing and monitoring water use and consumption goals and other topics related to the water issue. The goals proposed by that area are presented to the Sustainability Committee, and validated by the Board. After approved by the Executive Board, they are entered into the Sustainability Plan. Monitoring is made via articulation with other areas of the company, mainly areas of operation and planning. The results are verified annually and, when necessary, the targets are reviewed and updated.

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

Company-wide

Primary motivation

Recommended sector best practice

Description of target

Reduce, by 2020, the Company's water consumption by 4%, based on consumption in 2011.

Quantitative metric

% reduction in total water consumption

Baseline year

2011

Start year

2012

Target year

2020

% of target achieved

100

Please explain

Cemig's water consumption occurs in the operational and administrative areas linked to hydroelectric generation, transmission, and electricity distribution.
Since the goal was established in 2012, Cemig has been following a path of reducing consumption quite sharply. This reduction has been verified every year, and in 2020,, a 93.24% reduction was achieved in relation to 2011.
This is the result of measures such as changing processes, managing consumption of facilities and acting more quickly in correcting leaks, in addition to implementing new equipment that reduces consumption.

Target reference number

Target 2

Category of target

Water use efficiency

Level

Business activity

Primary motivation

Increased revenue

Description of target

Reduce, by 2025, the Company's administrative water consumption by 6%, based on consumption in 2019.

Quantitative metric

% reduction in total water discharge

Baseline year

2019

Start year

2020

Target year

2025

% of target achieved

32.3

Please explain

Cemig's water consumption occurs in the operational and administrative areas linked to hydroelectric generation, transmission, and electricity distribution. Administrative consumption takes place at the company's various facilities and can come from public utility supply, surface catchment, and artesian wells (underground collection). In 2020, after reaching the goal laid down in 2012, Cemig defined a new goal for the reduction of its administrative water consumption, moving on with its reduction efforts that were achieved during the past two years. Following the results achieved in previous years, in 2020, there was a 32.03% reduction in administrative water consumption compared to 2019, confirming the achievement of the target scheduled for 2020, which was 228,633.47 m³.

Target reference number

Target 4

Category of target

Water pollution reduction

Level

Other, please specify

Hydropower Plants

Primary motivation

Reduced environmental impact

Description of target

Meet, in 2020, 100% of the environmental constraints associated to all hydropower plants in operation, having 2019 as a basis. That goal is adopted by the company on an ongoing basis, and is updated and monitored annually..

Quantitative metric

Other, please specify

Percentage of compliance with environmental constraints laid down by the environmental bodies with jurisdiction over hydropower generation plants

Baseline year

2019

Start year

2019

Target year

2020

% of target achieved

100

Please explain

Cemig annually monitors compliance with the environmental constraints laid down by the competent environmental agencies for all of the company's hydroelectric plants. The corporate goal is to meet 100% of the conditions for all plants.
The quality of water associated with hydroelectric power plants is an aspect considered in the environmental constraints. One of the actions to meet these constraints is the preparation of Environmental Plans for the Conservation and Use of the Surroundings of the Artificial Reservoir (PACUERA). Such plans aim at proposing actions that reconcile the anthropic use observed in the surroundings of the reservoir. One of the proposed actions is the deployment of ETEs in the area surrounding the reservoir, which contributes to reducing water pollution and meeting constraints.
In 2020, 100% of the environmental constraints were met. One of the plants that had a PACUERA elaborated that year was UHE Nova Ponte and the company has 40 PACUERAS.

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

Brand value protection

Description of goal

Annually disclose information relating to management and use of water by Cemig.
To measure this objective, Cemig monitors its performance in the evaluation of the annual report to the CDP Water Security questionnaire and uses, as an indicator, the progress of the score obtained in the same in the years reported. The range of scores varies from A (the highest score) to F (the lowest score).
As the transparency criterion is part of the final report score, Cemig always seeks to obtain the highest possible score (A score), that is, the higher the better: the higher the score obtained, the greater the compliance with transparency of information.
Obtaining the maximum score contributes to achieving the proposed objective.
In addition, it allows Cemig to be part of the main existing sustainability indexes and ratings. This result is also relevant for the company, which will be able to increase its market value and attract more investors.
In order to reach the A score, Cemig has engaged the water management team to

establish the best management practices. Also, it has a partnership with a consulting company specializing on the subject to support the CDP reporting process.

Baseline year

2014

Start year

2016

End year

2020

Progress

Goal progress is solely tracked by CDP Water Security scores. Cemig answered the questionnaire for two years as an exercise, no submission. As of 2016, the questionnaire begun to be submitted.
In 2017 and 2018 the company was included in the A– category. In 2019 and 2020, the Company was awarded the maximum score (A score), showing progress in the actions taken and success in disclosing information related to water management and use.

Goal

Engaging with local community

Level

Site/facility

Motivation

Risk mitigation

Description of goal

By force of law No. 12,344/2010 and Resolution 696 of the Brazilian Electricity Regulatory Agency – Aneel, Cemig must prepare Emergency Action Plans – PAEs. Engagement with stakeholders should be included in one of the Plan's stages. All communities located in the area covered by the dams must be involved in this engagement stage.
The success of the target depends on the preparation of 100% of the required External PAEs. When that is reached, it will ensure compliance with law 12,344/2010 and the dissemination of information concerning the risk of flooding caused by normal floods and by possible events of dam failure. Ensuring the engagement of the local community on this issue is of paramount importance, as it enables the dissemination of a culture of readiness for flood situations along the rivers where Cemig's plants are installed.

Baseline year

2015

Start year

2016

End year

2020

Progress

In 2020, Cemig completed the preparation of 24 External Emergency Action Plans (External PAEs) for the company's 42 dams, thus completing 100% of the external PAEs provided for, as determined in a Normative Resolution.
The dams belonging to Cemig impact the dynamics and routine of 122 different municipalities. In some cases, the same municipality is covered by two PAEs, as it has two dams operating in its territory.
In 2020, workshops were held where the PAEs and the “Proximidade” risk management application were addressed. This application is part of Cemig's communication strategy and includes warnings and alarms associated with emergencies arising from dam breaches.
In 2020, a pilot dissemination action was carried out for the PAEs of PCHs Cajuru and Gafanhoto, involving two municipalities. Studies on the propagation of flood-inundation areas for scenarios of dam rupture and exceptional flood events were discussed. In addition, meeting points and escape routes were presented. Also, the registration of the population mapped as being in a risk area in the self-rescue zone via the Proximity application was made.

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Business

Motivation

Reduced environmental impact

Description of goal

Improve the monitoring of reservoir water quality through the use of satellite images. This goal will be made possible through the development of a R&D project, and its success is linked to the development of the study called “Intelligent Monitoring of Water Quality in Hydroelectric Reservoirs through the Development of a Photogrammetric Algorithm”.
The scope of the study proposes increasing the availability of environmental monitoring data on the quality of water around reservoirs, as well as increasing the accuracy of the data. Therefore, algorithms will be developed for processing high-resolution images obtained by unmanned aerial vehicles (UAVs) in combination with satellite images and data traditionally obtained in the field. Três Marias Reservoir-MG is expected as a case study.
This project is relevant, as 98% of the electricity generated by the company comes from hydroelectric plants and the monitoring of water quality is an important variable to ensure operation and avoid environmental sanctions.

Baseline year

2019

Start year

2019

End year

2023

Progress

The project started in 2019, with the development of the first studies and definitions of work plans. The project's progress will be measured from the delivery of the desired results, the project's success indicators being:
i) Development of algorithms to assess water quality and reservoir surroundings, from multispectral images;
ii) Application of methodologies for calibration and validation of algorithms for analyzing water quality and the reservoir surroundings;
iii) Optimization of the monitoring network, considering location of the stations, frequency of monitoring, and the most important parameters for the characterization of water quality in the study region, using multivariate statistical analyzes;
iv) Application and validation of statistical tools for the integration of water quality monitoring historical series to meet the various purposes of the network, such as the analysis of the evolution of water quality trends, the identification of critical pollution areas and verification of effectiveness the management of water quality recovery actions;
v) Development of protocols for automation and optimization of water quality monitoring processes, combined with traditional methods.
In 2020, the project achieved the following results: (iii); (iv) and (v). Despite being completed, items (iv) and (v) are also in constant updating status.

W9. Verification

W9.1

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

Yes

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain

W0 Introduction	Cemig's profile was verified.	ISAE 3000	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas' internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of

			information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.
W1 Current state	Data for industrial water, consumption water, and effluents were verified.	ISAE 3000	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas' internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future

			interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.
W3 Procedures	Information in the item “Water Resources” were verified within the verification scope of the 2020 Sustainability Annual Report	AA1000AS	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published

			information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas' internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.
W4 Risks and opportunities	Information in the item "Risk Management" were verified within the verification scope of the 2020 Sustainability Annual Report	AA1000AS	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered

			by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas' internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.
W6 Governance	Information in the item "Water Resources" were verified within the verification scope of the 2020 Sustainability Annual Report	AA1000AS	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including

			the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas' internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full

			analysis of the Green House Gas (GHG) emission inventory.
W7 Strategy	Information in the item “Strategy” were verified within the verification scope of the 2020 Sustainability Annual Report	AA1000AS	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas’ internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities; • Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations:

			• Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.
W8 Targets	Information in the item “Strategy” were verified within the verification scope of the 2020 Sustainability Annual Report	AA1000AS	Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Companhia Energética de Minas Gerais S.A. (CEMIG) to carry out an independent verification of its 2020 Sustainability Report (hereinafter, RAS). The scope of that verification adopted standards and principles of the Global Reporting Initiative for Sustainability Reports, including the Supplement for the electricity sector and refers to account rendering of the period from January 01 to December 31, 2020. The verification included the following activities: 1. Interviews with those responsible for material themes and the Report contents; 2. Analysis of documentary evidence provided by CEMIG for the period covered by the Report (2020); 3. Assessment of the systems used to compile data; 4. Analysis of activities of engagement with stakeholders carried out by CEMIG; 5. Assessment of the methodology used to determine the material topics forming the basis of the Report, considering the sustainability context and scope of published information. The verification level adopted was Limited, according to requirements of ISAE 30002 standard, incorporated into Bureau Veritas’ internal verification protocols Any evaluation of information related to the following was excluded from that verification: • Out-of-reported-period activities;

			• Positioning statements (statements of opinions, beliefs, objectives, or future interventions) by CEMIG; • Precision of economic-financial data contained in that Report, taken from financial statements and verified by independent auditors; • That verification was subject to these limitations: • Exactitude and Reliability were verified through sampling, solely in light of information and data related to material themes presented in the Report; • information presented in the Report were verified specifically against the GRI Balance principle; • Although energy and emission indicators have been verified, we did not run a full analysis of the Green House Gas (GHG) emission inventory.

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.

Water is the strategic resource Cemig's business depends on, since, with the shutdown of UTE Igarapé, 100% of the power generated in 2020 came from hydroelectric power plants. The company acknowledges its role in conserving this resource and the potential impacts of its activities on water availability.

Given that, Cemig takes a series of actions that enable the management and prevention of possible impacts related to water availability on business, and invests in practices that place it in a situation of greater security given the several possible scenarios, using modern techniques and equipment, such as the Storm Location System, a Telemetry, and Hydrometeorological Monitoring System, mathematical models of hydrological simulation and weather and climate forecasting.

Currently, Cemig operates a hydrometeorological network that monitors 372 variables, 178 focused on rainfall monitoring, 104 for watercourse levels and discharges, 53 for monitoring reservoir and river levels, and also 37 focused on climatological stations that monitor temperature, air humidity, wind speed and direction, solar radiation and atmospheric pressure. These stations are distributed throughout strategic locations in the states of Minas Gerais, Goiás, Rio de Janeiro, Espírito Santo and Santa Catarina, and their data are received in real time at the Company's headquarters in Belo Horizonte

The water quality of Cemig's reservoirs is regularly monitored along a network that includes 47 reservoirs and more than 200 physical, chemical, and biological data collection stations on the major watersheds of Minas Gerais. These collections generate a volume of information that is analyzed and stored in an extensive database called Siságua. Siságua allows for analysis of time and space development of reservoirs and their surroundings, and its features allow for a differentiated management structure. By producing fast, accurate and useful information, the system supports a more efficient management of water reservoirs.
In order to move forward, fill gaps, expand the approaches adopted in the assessment and monitoring of streams and bring innovation to technologies to support the management of water resources, Cemig's Water Quality Center carried out several Research and Development (R&D) projects throughout 2020. In 2020 the GT0656 - Individual Notification Device (DIN) in case of Dams Emergencies project was started. The project includes the development of software packages, communication infrastructure and, unlike the current sirens, which are exposed to theft and vandalism, the devices (DIN) will include functionalities for integration with the user's environment, favoring availability and reliability, which are vita for this type of system. For investments in R&D, this project is classified under the ANEEL themes as “Management of Basins and Reservoirs”. Cemig invested a total of R$ 675,286.00 in 2020 for the development of this project.
Finally, due to its business, Cemig has an active participation in decision-making panels and forums dedicated to dealing with issues related to water resources. The Company is also present in the technical discussions of the main collegiate bodies for drafting rules and establishing guidelines, such as the National Water Resources Council (CNRH) (via ABRAGE), the State Water Resources Council (CERH), the Federal and State Watershed Committees, Technical Councils and working groups, with an emphasis on those dealing with the preparation of water resource master plans, the regulation of the Grant and the Charge for the Use of Water Resources. Cemig represents the users of water resources for hydroelectric power generation in the State Minas Gerais State Water Resources Council (CERH/MG), 4 watershed committees under the Federal Government regulation, and 20 watershed committees in rivers under state regulation.

W10.1

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

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

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate’s Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	25,227,625

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	BR	CMIGACNOR6

SW1.1

(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

No, CDP supply chain members do not buy goods or services from facilities listed in W5.1

SW1.2

(SW1.2) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	Yes, for all facilities	

SW1.2a

(SW1.2a) Please provide all available geolocation data for your facilities.

Identifier	Latitude	Longitude	Comment
Edifício Sede (Júlio Soares)	19	43	Nesse Edifício ocorre o maior consumo administrativo de água. O consumo de água em 2020 foi de 172.708 m3, sendo uma média de consumo por empregado de 32,87(m3/empregado). Informações adicionais sobre consumo de água no capítulo: CONSUMO DE ÁGUA E EFLUENTES, páginas 147 a 176 do Relatório Anual e de Sustentabilidade 2020, disponível no link:

			https://www.cemig.com.br/wp-content/uploads/2021/05/ras-2020.pdf

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

Requesting member

Caixa Econômica Federal

Category of project

Promote river basin collective action

Type of project

Invite customer to collaborate with other users in their river basins to reduce impact

Motivation

A Cemig participa de vários Comitês de Bacias no Estado de Minas Gerais e promove medidas preservação desse recurso e matém um diálogo permanente com as comunidades afetadas. Através do Programa Proximidade a empresa leva informações sobre Plano de Atendimento de Emergências e assuntos específicos relacionados a gestão das hidrelétricas. A parceria com a CAIXA seria de grande ajuda para fomentar as ações em prol da conservação dos recursos hídricos.

Estimated timeframe for achieving project

2 to 3 years

Details of project

Participar de projetos de conservação de matas ciliares e preservação de nascentes no Estado de MG.

Projected outcome

Promoção da conservação dos recursos hídricos, melhoria do relacionamento com as comunidades afetadas e preservação da biodiversidade

Requesting member

MRV Engenharia e Participações

Category of project

Promote river basin collective action

Type of project

Invite customer to collaborate with other users in their river basins to reduce impact

Motivation

A Cemig participa de vários Comitês de Bacias no Estado de Minas Gerais e promove medidas preservação desse recurso e matém um diálogo permanente com as comunidades afetadas. Através do Programa Proximidade a empresa leva informações sobre Plano de Atendimento de Emergências e assuntos específicos relacionados a gestão das hidrelétricas. A parceria com a MRV seria de grande ajuda para fomentar as ações em prol da conservação dos recursos hídricos

Estimated timeframe for achieving project

2 to 3 years

Details of project

Participar de projetos de conservação de matas ciliares e preservação de nascentes no Estado de MG.

Projected outcome

Promoção da conservação dos recursos hídricos, melhoria do relacionamento com as comunidades afetadas e preservação da biodiversidade

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services.

Product name

Intensidade hídrica das usinas hidrelétricas em m3/MWh

Water intensity value

219.51

Numerator: Water aspect

Water withdrawn

Denominator

Energia gerada em MWh

Comment

Até 2019, a Cemig monitorava o indicador de intensidade hídrica apenas para as termelétricas, que foram desativadas nesse mesmo ano. A partir de 2020, a Cemig passou a monitorar a relação entre a captação total de água nas usinas hidrelétricas e a energia elétrica por elas gerada.
Em 2020, o volume total afluente às usinas hidreléticas da Cemig foi equivalente a

219.516.629 megalitros. Já a energia gerada por tais usinas foi equivalente a 12.549.147 MWh.

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	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below

I have read and accept the applicable Terms