

# Welcome to your CDP Climate Change Questionnaire 2022

## C0. Introduction

### C0.1

#### **(C0.1) Give a general description and introduction to your organization.**

Founded in 1952 by the then governor of Minas Gerais, Juscelino Kubitschek de Oliveira, Company Energética de Minas Gerais (Cemig) operates in the areas of generation, transmission, marketing and distribution of electric power, energy solutions (Cemig SIM) and natural gas distribution (Gasmig). The group is constituted by the holding Company Energética de Minas Gerais (Cemig), by wholly owned subsidiaries Cemig Geração e Transmissão S.A. (Cemig GT) and Cemig Distribution S.A. (Cemig D), totaling 162 companies, 9 consortiums and two FIPs (Funds of Investment in Participations), resulting in assets present in several Brazilian States and in the Federal District. Since its foundation, the organization undertook the role of bringing collective wellbeing to regions where operates, in an innovativa and sustainable form. With this composition, Cemig holds the position of largest energy trader for free clients of the country and is one of the largest generator groups. Gasmig is exclusive dealer of piped natural gas in the entire state of Minas Gerais. Furthermore, Cemig GT has 45% participation in the total share capital of Aliança Geração de Energia S.A, Aliança Geração, and, also detains 21.68% participation in the share capital of Transmissora Aliança de Energia Elétrica S.A., Taesa, granting it the control of the company.

With the mission of supplying integrated solutions of clean and accessible energy to the society, innovative, sustainable and competitive, Cemig is an publicly-held company, controlled by the State Government of Minas Gerais (51%), having its shares negotiated in São Paulo, at B3 S.A. (exchange and OTC), in Nova York, at New York Stock Exchange (NYSE) and in Madrid, at Mercado de Valores Latino-Americanos (Latibex). The consolidated net operational revenue of the Company reached R\$ 33.65 billion in 2021, based on a matrix which main energy source are renewable resources. The generator station of Cemig has 5,755 MW installed capacity, of which 97.29% refers to hydraulic generation; 2.71%, wind power generation; and 0.01%, solar generation. It is important to highlight that, at the end of 2019, UTE Igarapé, only thermoelectric of the Company, was shutdown, making the power generation complex of Cemig 100% renewable. The organization has almost 4,937 km of transmission lines. In the electric power distribution area, is responsible for the management of the largest electricity distribution network in Latin America, with over 564 thousand km of extension. At the end of 2021, Cemig counted with 5025 employees.

For its commitment with principles of socioenvironmental responsibility, its economical-financial soundness and technical excellence, the organization is internationally recognized as reference in sustainability in its area of operation and is ranked as one of the main consolidation vectors of the Brazilian electric sector. Cemig has been part of the Dow Jones Sustainability Index (DJSI World) for 22 years, being the only company in the electric sector of the Americas to be recognized in the list. Participates also, for the 17th consecutive year, of Corporate Sustainability Index (ISE) of B3, and was selected for the 12th time to be part of the Efficient Carbon Index (ICO2), created in 2010 by B3 and by BNDES.

In 2021, Cemig was listed among the leader companies in management of climate changes in Latin America, by Climate Change Programs, for the quality of information disclosed to the investors and to global market. The recognition was granted by CDP Latin America. This is the tenth consecutive year that CDP awards the Company. The selection considered the level of details of the responses regarding criteria such as risk management, commitment with mitigation and initiatives to reduce emission of greenhouse gases. The best results indicate a high transparency level in the disclosure of information related to the theme, providing to the investors consistent content over management in climate changes.

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	No

## C0.3

**(C0.3) Select the countries/areas in which you operate.**

Brazil

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

BRL

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

## C-EU0.7

**(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.**

### Row 1

#### Electric utilities value chain

Electricity generation

Transmission

Distribution

#### Other divisions

Gas storage, transmission and distribution

## C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	CMIG4 (BVMF)
Yes, a Ticker symbol	CIG (NYSE)

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

#### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Chief Sustainability Officer (CSO)	The person that is in the highest level of direct responsibility for the theme of climate changes in Cemig is the Deputy Director of Corporate Communication and Sustainability, who directly reports to the Presidency of Cemig, with the Presidency the highest level of Executive Board, which, on its turn, reports directly to the Board of Directors.  The Administration of Cemig consists in the Board of Directors and Executive

	<p>Board. The members of the Board of Directors, elected by General Shareholders Meeting, elect the Managing Director, the Deputy Director and nominate the Executive Board. The Executive Board, structure where is located the Deputy Director of Communication and Sustainability, is considered a group belonging to the Company's administration.</p> <p>The functional attributions of the Deputy Director of Corporate Communication and Sustainability, defined and approved by the Board of Directors, are to collaborate with the Managing Director in the exercise of their functions and substitutes it case of absence, leadership, vacancy, impediment or waiver. The current Deputy Director of Corporate Communication and Sustainability took office at Cemig on June 2021, having worked as communication director at Bandeirantes Group in 2020.</p> <p>Among its several attributions are, for example, approval of technical standard and normative instructions necessary for corporate sustainability development, climate changes and social responsibility, aligned with the strategic drivers and with sectorial regulation.</p> <p>In 2020, the Deputy Director approved the participation of Cemig in the project ACP-DDP. ACT (Assessing low-carbon Transition Indicative) is the only methodological framework with sectorial methodologies that assesses how the strategies and actions of the company contribute for the purpose of reducing GEE emissions of Paris Agreement (below 2°C), and DDP (Deep Decarbonization Pathways Project Initiative) aims to help the governments and non-state actors to make choices that put economies and societies on track to reach carbon neutral by the second half of the century.</p>
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## C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> </ul>	<p>Analysis and guidance of business strategy and plans: In the formulation of their strategy, Cemig considers the principles contained in the in the document "Commitments with Climate Changes", which contains the operation guidelines of the Company before the theme.</p> <p>Since 2019, Cemig counts also with the Sustainability Plan, aligned with Strategic Planning of the Company and monitored by 50 indicators which performance is assessed at the end of each year, in respect to the previous year. On January 2021, the Board of Directors of Cemig approved the strategic planning review of the</p>

	<p>Setting performance objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p>	<p>Company for the cycle 2021-2030. In this context, one of the actions approved was the expansion in investments focused on the generation of solar and wind power plants as from the approval of investments in two photovoltaic plants of centralized generation (UFV Boa Esperança and UFV Jusante, which are under contracting phase for implementation.</p> <p>In addition, the Corporate Sustainability Committee has as role to propose policies, guidelines, actions, plans and projects, in addition to strategic initiatives, to promote the operation of Cemig in social, environmental, economic dimensions and corporative governance, including issued related to climate change.</p> <p>Analysis and guidance of main action plans: As a strategic deployment, the actions that demand approval or operation of the Board of Management are discussed in meetings, always ruled by guidelines contained in the document “Commitments with Climate Changes”, considering the scope of the objectives and goals regarding climate changes.</p> <p>Analysis and guidance of annual budgets: The Management Board considers the budgetary needs for the execution of action plants that guarantee the effective implementation of the strategy regarding climate changes – objectives, goals and programs – and promotes its periodical monitoring.</p> <p>Definition of performance objectives: The Company counts with indicators for business monitoring and assessment, among them DEC (interruption equivalent duration by consumer unit) and the FEC (Interruption equivalent frequency by consumer unit), which supply measurable data about interruptions in power supply. These indicators are used by Cemig Distribution to assess the service quality and, in case of Cemig Generation, are related to climate, since the physical structure and hydroelectric power generation capacity are exposed to climate risks.</p> <p>Supervision of main capital expenses, acquisitions and disinvestments: It is up to the Board of Directors to approve the Annual Budgets and deliberate, by proposal of the Executive Board, about investment projects, disposal of assets, among others.</p>
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## C1.1d

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	An analysis of the curriculum of members is made for verification of competences of board members for climate issues, including assessment of experiences, education and existence of studies published in this thematic.

## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Assessing climate-related risks and opportunities	Quarterly
Environment/ Sustainability manager	Assessing climate-related risks and opportunities	More frequently than quarterly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

The Deputy Director of Corporate Communication and Sustainability leads the Management Board of Corporate Communication and Sustainability and Sustainability Management, area responsible for management of Climate Changes theme and for the Sustainability Plan within the Company. The Deputy Director provided the guidelines and validates the actions regarding this theme. The Deputy Director reports directly to the Presidency of the company, with the Presidency the highest level of the Executive Board, which, on its turn, reports directly to the Board of Directors. This disposition grants the autonomy necessary for the area responsible for the management of guidelines deployment theme of Cemig and in the interaction of the other areas of the company that contribute for the management of this theme.

Within the Management Board of Corporate Communication and Sustainability, the Corporate Sustainability Management gathers the mains responsibilities and attributions associated to matters related to climate. Are examples:

- Follow and monitor institutional and corporate changes related to sustainability, changes climate and social responsibility and, if necessary, suggest changes in guidelines, drivers, indicators, goals and strategic initiatives of the Company;
- Assist in the proposition and approval of technical standards and normative instructions necessary for the development of corporate sustainability, climate changes and social responsibility, aligned with strategic drivers and with sectorial regulation;
- Analyze and prospect tendencies, risks and opportunities in climate adaptation and mitigation area, by means of researches and studies of best national and international practices, as well as perform and make feasible studies about climate risk assessment Company's activities
- Act in the development and structuring of policies, guidelines and corporative procedures related to the climate adaptation and mitigation in partnership with associated areas and aligned with guidelines, drivers, indicators, goals and initiatives of the Company.
- Supply inputs to strategic planning in respect to climate changes and propose drivers about the theme, as well as follow world and local discussion of matters associated to the theme such as regulatory goals, formal and voluntary emissions market, carbon pricing, taxation, etc.
- Perform the quantification of Greenhouse Gas emissions of Cemig and of projects developed by the Company (energy efficiency, substitution of fuels/energy, carbon reduction projects, energy loses in transmission and distribution and others) for compliance with the legislation and requirement of corporate sustainability, in addition to supplying information related to emissions provided from energy acquired by medium and large size clients.

The Corporate Sustainability Committee was formalized in 2019. The Company formalized the creation of their Corporate Sustainability Committee, with the purpose of consolidating the integration of corporate sustainability in the management process, suggesting policies, guidelines, actions, plans and projects, in addition to strategic initiatives focused on its contribution to sustainable development. The Committee is formed by principal representatives and their substitutes of all management boards of the company that have to monitor and anticipate tendencies and practices of market related to corporate sustainability, as well as to themes associated to climate change, proposing actions and initiatives that seize opportunities or that reduce risks of exposure and relevant impacts in the Company. The Committee has advisory nature, but for being linked to the main management boards of the Company, has major influence over decision-making within Cemig.

The Sustainability Management performs the survey and assessment of risks and opportunities of Cemig in face of climate changes, as well as its respective monitoring, acting always jointly with the Corporative Risks Management and other associated areas (Energy Efficiency Management, Management and Control of Measurement and Commercial Losses of Distribution, Energy and Hydraulic Resources Planning Management) in all process phases, by integrated approach that guides risk management of Cemig.

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Provide incentives for the management	Comment
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	of climate-related issues	
Row 1	Yes	<p>Cemig incentivizes the management of issues related to climate through goals and results reflected in monetary compensations, linked to variable remuneration (PLR) of employees. In 2021, PLR started to consider corporative indicators (25%) and specific indicators of areas (75%). In addition, Cemig considered in PLR the quality indicators in the supply of Equivalent Interruption Duration per Consumer Unit and the Indicator of Total Losses in Distribution</p> <p>Also, established the indicator "Approval of New Expansion Projects of renewable energy generation" that will enable the reduction of GHG emissions, with a greater offer of renewable energy for our customers, besides contributing to the reduction of the country's emission factor. ISUSTENT is another indicator that measures the participation of Cemig in the main Sustainability Ratings in Brazil and in the World, with impact in PLR of Sustainability Management and Deputy Director of Corporate Communication and Sustainability .</p>

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Operating Officer (COO)	Monetary reward	Efficiency target	<p>Indicator: quality in the electric power supply. The DEC indicator (Equivalent Interruption Duration per Consumer Unit) is a tool that contributes for effective assessment of actions and initiatives to meet the standards required by the regulator agency and expected by clients. Considering that great part of electric power supply interruptions is caused by trees, windstorms and lightning, which may damage the facilities that transport and distribute power, many initiatives of DEC indicator control are directly related to climate change. In respect to the remediation of impacts caused by trees, the Company prepares itself for more severe weather events, when is elevated the risk degree presented by vegetation.</p> <p>The indicator</p> <p>Cemig counts on the Indicator of Total Losses in Distribution (IPTD), which results from the difference between the total</p>



			<p>energy injected into the distribution system, calculated by the Electric Power Trading Chamber (CCEE), and the total energy consumed by the market. Losses are responsible for 99% of our scope 2 emission.</p> <p>These indicators are linked to variable remuneration of the Company's Distribution Director and all managers and employees.</p>
All employees	Monetary reward	Efficiency target	<p>Indicator: quality of electric power supplied. In addition to the Distribution Director, all employees are rewarded when reached the goal of DEC indicators (Equivalent Interruption Duration per Consumer Unit). DEC is a tool that contributes for the effectiveness assessment of actions and initiatives to meet the standards required by the regulator agency and expected by clients. Considering that great part of electric power supply interruption is caused by trees, windstorms and lightning, which may damage the facilities that transport and distribute energy, many control initiatives of DEC indicator are directly related to climate change. In respect to remediation of impacts caused by trees, the Company is preparing for more severe climate occurrences, when is elevated the risk degree presented by vegetation.</p> <p>Cemig counts on the Indicator of Total Losses in Distribution (IPTD), which results from the difference between the total energy injected into the distribution system, calculated by the Electric Power Trading Chamber (CCEE), and the total energy consumed by the market. Losses are responsible for 99% of our scope 2 emission. These indicators are linked to variable remuneration of all the Company's employees.</p>
All employees	Non-monetary reward	Efficiency project	<p>Designed in 2018, the Movement Program is a permanent incentive program to innovation culture, through the registration of projects with</p>

			<p>potential for value creation for Cemig, presented by the Company's own employees. Its purpose is to stimulate the participation of employees seeking solutions that aim, among others, improvement in corporate sustainability levels, observing the return under economic-financial aspect.</p> <p>In the edition of 2021, Cemig awarded a few important projects:</p> <ul style="list-style-type: none"> <li>- Implementation of an engineering sharing agreement between Cemig GT and subsidiaries;</li> <li>- Anti-Curicaca Device;</li> <li>- Debts and Irregularities Negotiation Remodeling Project;</li> <li>- Medium Voltage Network Spacer between Phase and Neutral.</li> </ul> <p>In 2021 is highlighted also the development project of a software package that authorizes feasibility studies of mini-generation connections distributed in the Company's network. Through this package, the company is contributing for a diversification of energy matrix and to increase the renewable energy to allow generation and distribution connections in wide scale. The project in reference saved over R\$ 80 thousand in expenses, and an increase in productivity occurred of over 1500% in the execution of feasibility studies.</p>
Other, please specify Sustainability Management (DCS/SE)	Non-monetary reward	Other (please specify) Performance in sustainability index	<p>Currently, after the disclosure of the new portfolio of Dow Jones Index of Sustainability, the Sustainability Management team is awarded with a celebration lunch. This lunch is presented as a reward for having maintained Cemig in the index, reaffirming the leadership position of the Company in themes driven by sustainable development, of which climate change has extreme relevance for the Company. Due to Covid-19 pandemic, the celebration was suspended during the year 2020 and 2021, returning in 2022.</p>
All employees	Monetary reward	Efficiency project	<p>Every year, Cemig executes the Program of Energy Efficiency – PEE, which projects enable the reduction of electric power consumption through educational actions and through the substitution of inefficient equipment, modernization of public school lighting, installation</p>

			<p>of solar heating and photovoltaic power generation systems.</p> <p>The PEE projects concluded in 2021, enabled 20,816.08 MWh / year of power savings and over 7 thousand tons avoided of CO2 emission.</p> <p>Every year CEMIG reviews its indicators, such as for example the Financial Accomplishment Index of PEE, which, as from 2021, started to constitute the variable remuneration of the employees.</p>
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## C2. Risks and opportunities

### C2.1

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

#### C2.1a

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	1	This time horizon is in line with the annual periodicity of reviewing the Long Term Strategy, of Multi-Year Business Plan and the Annual Budget of the Company. Currently, also, the administrators and members of the committees shall submit to performance assessment regarding exposure to management acts practiced, contribution to the results in the fiscal period and consecution of objectives established in Multi-Year Business Plan and compliance of Long Term Strategy and Annual Budget.
Medium-term	1	5	This time horizon is aligned to the period covered by the Multi-Year Business Plan of the Company, which reflect the premises of Long Term Strategy and contains the goals of, at least, 5 years including the Annual Budget. The Plano approaches in details, among others: (i) the Company's strategies; (ii) the new investments and business opportunities; (iii) the values to be invested; and (iv) the return and profit rates to be obtained or generated by the Company
Long-term	5	10	This time horizon is aligned to the period covered by Long Term Strategy of the Company (2022-2032). The Long Term Strategy contains the strategic grounds of the Company (mission, vision and values) as well as long term strategic guidelines.

## C2.1b

### **(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

Cemig defines strategic risks as those related to the objectives and vision of the Company, or to strategic decisions that are at risk of not achieving the planned success. These risks are classified based on the financial impact if conducted, having as metrics the measurement of additional costs and the loss of net revenue. Risks with considerable financial impact are those that may cause a significant adverse effect in businesses, affecting the financial condition and the outcome of operations. Cemig assesses the financial impact of all its strategic risks prioritized by the Board of Directors, the called Top Risks. The financial impacts of risks may be classified in 6 levels. These levels vary from very low (require interventions within the company's governance and the deliberation level of the board of managers) to catastrophic (the company will have difficulty to recovering within 5 years; the impact is very comprehensive and irreversible). In this assessment, the financial impacts vary from R\$ 0-15 million (first impact range) to over R\$ 1 billion (final impact range) and, therefore, a financial impact is estimated of each risk. This indicator is applied in the entire Company. In addition to the financial impact, the identification process and review of Top Risks assesses the possible impacts of each risk in image, reputation and environmental aspects. These aspects were defined with the support of the areas related to the matter and validated by the Cooperative Committee of Risks Monitoring, which represents the board of managers of Cemig.

Cemig classifies its risks and opportunities in scales, according to their financial impacts, intangible impacts, occurrence probability and relevance for the Company, with distribution of percentile estimates between ranges. The priority of risks is made based on this classification resulting in a risk exposure matrix. In addition, the variable "financial impacts" used to define the risk position in the exposition matrix is updated with information after control and measures adopted. Considering this, the system calculates the residual risk (after the implementation of controls) and the planned residual risk (after the implementation of measures). This allows to give priority to decision-making based on a solid financial analysis of scenarios with and without risk management/opportunity. Currently, this analysis comprises only direct operations of the company.

## C2.2

### **(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

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#### **Value chain stage(s) covered**

Direct operations  
Upstream  
Downstream

#### **Risk management process**

Integrated into multi-disciplinary company-wide risk management process

### **Frequency of assessment**

Annually

### **Time horizon(s) covered**

Short-term

Medium-term

Long-term

### **Description of process**

The risk management planning considers factors that may present risks to health and to safety of employees, suppliers, clients, population in general and the environment. Eventually, opportunities are identified and developed according to the corporate objectives and plans of the Company, mainly in respect to the efficiency of processes. The risks inherent to the business activities of Cemig are assessed by their probability of occurrence and by their impact in several businesses of the chain of value.

As from the guidelines established in the Risk Management and Internal Controls Policy, Cemig structured a program for risk management, which allows mapping and assessment of both strategic risks, as well as of those arising from operational processes. This program is coordinated by the Management of Risks and Internal Controls, which provided technical support to different areas of the Company. The purpose is to provide information to the Senior Administration for decision making regarding risks and opportunities of greater relevance.

Therefore, Cemig structured a risk management process that aims to plan, identify, analyze, treat and monitor mapped risks. Initially, the Company classifies the risks identified as (i) risks of process, which are related to operations, limited to the activities of each of the processes; (ii) risks of macro processes, which impacts encompass different processes and managements of the Company; and (iii) Top Risks, which are risks of macro processes that may directly impact the strategies of the Company and prioritized by the Board of Directors.

The Top Risks, as well as the treatment recommendations made by the Corporative Risks Monitoring Committee - CMRC, are communicated to the Senior 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 strategic objectives of the Company;
- 2) Identification – understanding the scope, causes and impacts of risks;
- 3) Analysis – risk occurrence probability estimate, as well as of the loss potential caused by the impacts identified in the previous stage;

4) Treatment – survey of all actions and controls for risk mitigation, as well as the mitigation effect of these actions in the impacts mapped;

5) Monitoring – following mitigation initiatives and risk validation with its holder.

In the risk identification activity, the area responsible for risk centralized management and internal controls consults the managers of areas correlated to the themes identified, inclusively those areas that interact with the external stakeholders, such as relations with investors, strategic planning, sustainability and general secretary.

After the outcome of this consultation to the leaderships, a proposal of the risks matrix is presented to CMRC, which represents the Executive Board and brings considerations to the improvements in the matrix.

Afterwards, the matrix is sent to deliberation of the Executive Board, which also improves the product, sending it to the Board of Directors. Additionally, the matrix proposed may be presented to the support agencies of the Board of Directors, such as Audit Committee and Fiscal Board.

As a result of this process, Cemig builds the Matrix of Top Risks, involving the businesses of Generation, Transmission, Distribution, Commercialization, Distributed Generation, Holding as well as common risks to businesses and/or eventual adjustments for its adequacy to Strategic planning in force.

Emphasizes as economic corporative risk, environmental and social prioritized by the Board of Directors:

· Top Risk: Inefficiency in minimization measures and adaptation to impacts of climate change in Cemig

- Description: Refers to the inadequacy in mitigation measures and adaptation to climate changes in long term, arising from the non-implementation or inefficiency of measures necessary to minimize the impacts arising from external climate events.
- Potential impact: “Damages to generation, transmission and distribution infrastructure of electric power, which may cause interruption of these services” and “Loss of revenue and market, due to new solutions of low carbon implemented by competitors”.
- Sample of mitigation action: “Structuring and execution of PDD (Plan for Distribution Development ) 2023 – 2027” and “Program of Research and Development (P&D) Center of Distribution Operations of future (implementation of a software based in visual analytical concepts guided by time and hyper-vision, responsible for providing situational awareness to operators through a graphical interface)”.

To exemplify, this risk “Inefficiency in minimization measures and adaptation of climate change impacts in Cemig” was submitted to all process phases, after being defined as Top Risk. In the Identification phase, some of the causes identified were the complexity

in predicting the frequency and severity of climate risks, the low diversification in the production matrix of electric power (with high dependency of hydraulic resources), regulatory changes, fragility of transmission and distribution lines. Some of the impacts identified were: Loss of market revenue, increase of electric power prices, damages to infrastructure, non-compliance of regulatory risks. In the following phase, of Analysis, the risk was classified as being of Impact “4. High” (worst scenario) considering the six impact ranges (From “1. Not applied” to “6. Critical”) in the Risk Matrix. In terms of occurrence probability (which varies from “1. Unlikely” to “6. Almost certain”), the risk was assessed as “4. Probable”. In the Treatment phase, some actions and controls were surveyed for mitigation, such as participations in associations that follow regulatory changes, structuring and execution of Plan for Distribution Development (PDD), continuous monitoring of weather forecast and fire alerts, among others. Finally, in the Monitoring phase, the risk was validated before the responsible and start and ending dates were stipulated and the responsible for each mitigation measure.

This mentioned risk (Inefficiency in minimization measures and adaptation of climate change impacts at Cemig) considers the suppliers (Upstream) and the clients, society and stockholders (downstream), with exposure estimate in short term (12 months), medium term (60 months) and long term. In addition, follows mitigation controls and actions that involve these parties.

## C2.2a

### (C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Regulatory changes: By means of National Policy about Climate change, the Brazilian government made official its contribution to Paris Agreement, undertaking a volunteer commitment through its Nationally Determined Contribution (NDC): reduce the emission of greenhouse gases (GEE) in 37% below the levels of 2005, by 2025, with subsequent indicative contribution of reducing the emissions of GEE in 43% below the levels of 2005, by 2030. The Company considers that the adjustment to regulatory changes imposed by the government with the purpose of reaching the national goals as the main impact of this risk.  Currently, 100% of the installed capacity of Cemig is provided from renewable sources, predominantly hydroelectric. The strong dependency of hydrologic regime of the country may lead to the necessity of making investments in thermoelectric plants in medium term to supply the electricity demand contracted. If this occurs, the risk of alterations in legislation may be materialized. Cemig seeks to implement mitigation measures of this regulatory impact through the diversification of its generator matrix. The Company has long and



		<p>medium term guidelines (up to 2040) to expand the solar, wind power and natural gas fueled thermal generation.</p> <p>Another form of mitigating the risk is through participation in initiatives such as the Action Platform by Weather of Brazil Network of Global Compact, from UN, which aims the alignment of strategies and operations of companies to the principles of corporative social responsibility and sustainability.</p> <p>Other regulatory risks: With the purpose of proposing measures to stimulate the energy efficiency in the country, the Ministry of Mines and Energy published the National Plan of Energy Efficiency (PNEf). PNEf adopts as goal the reduction of 10% in electric power consumption for the year 2030, regarding the consumption scenario, based on 2004. The Company considers that the demand reduction and supply of electric power by Cemig for its consumers may influence the Company's outcome.</p> <p>One of the forms of mitigating this risk is by the participation in associations such as ABRADÉE, ABRATE, AGRATE and Cigré, in which Cemig is member and that allows a more suitable planning, since is possible to anticipate facts.</p> <p>The risk associated to the current regulation is contemplated in the Top Risk denominated "Inefficiency in minimization measures and adaptation of climate change impacts in Cemig", annually monitored by the Company.</p>
Emerging regulation	Relevant, always included	<p>Carbon Taxation: Through the National Policy about Climate change, the Brazilian government made official its contribution to the Paris Agreement, undertaking a volunteer commitment through their Nationally Determined Contribution (NDC): reduce greenhouse effect gases (GEE) in 37% below the levels of 2005, in 2025, with the subsequent indicative contribution of reducing emissions of GEE in 43% below the levels of 2005, in 2030. The Company considers the creation of a national instrument for carbon pricing that may result in the increase of operational cost, main potential impact of this risk.</p> <p>Currently, the electricity generation matrix of Cemig is 100% renewable. However, the existence of carbon pricing instrument configures a future risk, if Cemig needs to expand electricity generation by fossil fueled thermal generation plants. Considering only the emissions of scope 1 of Cemig in 2021 (12,848 tCO<sub>2</sub>) and an internal price of carbon of US\$ 20, with dollar quotation at R\$ 5.05, an eventual taxation about the emissions would represent an expense of R\$ 1,297,648 a year.</p> <p>Cemig seeks to implement mitigation measures of this impact through the definition of emission reduction goals and establishment of assessment criteria for new acquisitions considering the carbon risk in due diligence operations, immediately minimizing risk probability and magnitude. Another form of mitigating this risk is through the</p>

		<p>participation in Climate Change and Air Quality Work Group, which is part of the Council of Entrepreneurs for the Environment (CEMA) of FIEMG, where are promoted discussions about possible alterations in legislation arising from implementation da National Policy about Climate Change. Cemig in 2021 followed the process of carbon market regulation in Brazil through the participation in GT Fiemg, in official channels of government news and in other social media.</p> <p>The risk associated to emergent regulation is contemplated in the Top Risk called “Inefficiency in minimization measures and adaptation of climate change impacts in Cemig”, which is monitored annually by the Company.</p>
Technology	Relevant, always included	<p>Accelerated Technological Advancement: Cemig considers the market loss, clients and, consequently, revenue as the main potential impact of this risk, which may have its businesses impacted by new technologies in medium and long term if no strategic partnerships are developed or incapable of implementing technologic changes in their services. Cemig seeks to implement mitigation measures of this impact investing in researches, development and innovation, always seeking to continuously improving its processes, reducer its greenhouse gas emissions and be prepared for the effects of climate changes – considering energy alternatives and energy efficiency. The company defined as medium and long term strategy initiative to explore new technologies and opportunities as smartgrid, hybrid generation, energy storage, “electric stations”, digitalization, among others, with the purpose of mitigating this risk and leverage opportunities. As a form to make this strategic initiative feasible, Cemig releases annually P&amp;D notices focused on opportunities mapped.</p> <p>Cemig D, in 2021 invested amounts around R\$ 40 million in projects in the entire concession area, in addition to the availability of another R\$ 140 million in a new process of public calling to be financed along 2022 and 2023. Highlighted in the scope of climate events, the projects: Development of synergistic networks for applications in energy distribution grid; Development of a methodology for evaluating urban trees for the risk of falling using Ground Penetration Radar (GPR); and COD of Future - Hyper-vision integrated space-time situational awareness platform based on artificial intelligence for distribution operation.</p> <p>Cemig Generation and Transmission executed 30 P&amp;D projects, resulting in a R\$ 15.9 million investment, highlighting the projects: Individual Device for Notification (DIN) in case of emergency with dams; Tool for defining futures prices in the optimal composition of the energy purchase and sale portfolio, that are directly related to weather events.</p> <p>On August 2021, was launched Cemig Innovation Challenge 2021. The technologic risk is contemplated in Top Risk “Inefficiency in</p>

		minimization measures and adaptation of climate change impacts in Cemig”, which is monitored annually by the Company.
Legal	Not relevant, included	The legal risks in respect to climate changes were included in the corporative assessment risks associated to climate changes. However, the same were considered not relevant, since in Brazil there is still no specific applicable legislation. Furthermore, Cemig deactivated its only thermal plant (UTE Igarapé) in 2019 despite the concession being valid until August 2024.
Market	Relevant, always included	<p>Cap-and-trade schemes: The establishment of a GEE emissions trade market type cap-and-trade in Brazil may result in the need of greater planning by Cemig in respect to compliance with specific market regulations, especially in relation to the monitoring and verification of emissions.</p> <p>To mitigate this risk, Cemig seeks to identify carbon credit generator projects and long term contracts with verifier and certifier companies, reducing, thus reducing, from now on, the probability of the materialization of this risk for the Company. Furthermore, by assessing the acquisition of undertakings that use fossil fuels, Cemig makes internal analyzes regarding carbon risk and its financial impact for the Company, i.e., the financial risk of the undertaking in a possible future scenario of greenhouse gas emissions pricing in Brazil.</p> <p>The company participates in the Program Benchmark Club of CDP, which enables the improvement of its internal practices and review of its GEE emissions reduction goals. Another form of mitigating this risk is through the participation in the Climate Change and Air Quality Work Group, which is part of the Council of Entrepreneurs for the Environment (CEMA) of FIEMG, where are promoted discussions about possible alterations in legislation arising from implementation da National Policy about climate change, as a creation of a carbon pricing instrument.</p> <p>Cemig D in 2021 followed the regulation process of carbon market in Brazil through the participation in GT Fiemg, or in official government news channels, as well as in other social media.</p> <p>The market risk is contemplated in Top Risk called “Inefficiency in minimization measures and adaptation of climate change impacts in Cemig”, which is annually monitored by the Company.</p>
Reputation	Relevant, always included	<p>Image and reputation: Cemig assesses the impact of image and reputation in all its strategic risks prioritized by the Board of Directors, the called Top Risks. Specially, regarding the image and reputation dimension, the impact of risks may be graded in one of the 6 ranges. These range from very low (possible exposition between employees from the sector, but reversible through actions to be taken by the process manager) until the critical graduation (Commitment of the image, at an international level, before regulatory bodies, financial institutions, customers, society, opinion makers, the market and the</p>

		<p>media).</p> <p>If Cemig needs to expand its energy offer by means of fossil fueled thermal plants, it may be criticized by the society, impacting in the brand value. A worsening may take place in sustainability indicators of Cemig, resulting in company score reduction in questionnaires such as ISE (Corporate Sustainability Index of B3) and DJSI (Dow Jones Sustainability Index). In extreme case, this risk may lead to the inclusion of Cemig in portfolios of these sustainability indexes in a determined year, resulting in drop of market value and deterioration of company reputation before investors.</p>
Acute physical	Relevant, always included	<p>Damages to infrastructure: The occurrence of heavy rains in short time period, followed by windstorms and lightning, may result in physical damages to the facilities transporting and distributing power, leading to the unavailability and increase of Cemig costs, due to reimbursement to consumers due to interruptions in power supply (DEC and FEC indicators). These phenomena are each time more associated to unfavorable microclimate effects, typical of great urban centers. The management methods seek to reduce, in medium term, the magnitude of this risk through preventive adaptation measures, as an urban afforestation management (through pruning), the operation of weather stations and of weather radar, which more accurately foresees the occurrence and intensity of storms, and the emergency plan with allocation of maintenance teams for fast reset of energy supply. In addition, Cemig also promotes works in its distribution system (expansion, reinforcement, restoration and renovation of assets such as substations and distribution lines). For quinquennial investment cycle, which comprise the period from 2018 to 2022, according to the sector regulation, resources were approved for investments above R\$ 6.4 billion, distributed among the different macro projects. In 2021, the Company made investments in an amount of approximately R\$ 1.5 billion.</p> <p>The risk associated to acute physical parameter is contemplated in the Top Risk called "Inefficiency in minimization measures and adaptation of climate change impacts in Cemig", which is annually monitored by the Company.</p>
Chronic physical	Relevant, always included	<p>Change in precipitation standard: Climate changes may cause external events of rain and more pronounced droughts, in addition to changes in its geographic distribution. In addition, there may be changes in medium values of rainfall, modifying the amount of rain that reaches the reservoirs of the plants. Since the electric power production of Cemig is mostly hydraulic, these changes may cause reduction in the generation capacity.</p> <p>The actions made to mitigate this risk are connected to assess the expansion of their operation to other regions in the country, and investment in generation matrix diversification, seeking solutions for</p>

	<p>energy sources such as solar and wind power. In addition, the management of hydrologic risks is made considering the randomness of weather phenomena without considering the effects of climate changes. For such, Cemig counts with a specific and dedicated organizational structure that supports the decision of management committees of existing risks in the Company with the purpose of efficiently treating the corporative risks involving operational, commercial, financial and regulatory aspects of the companies of Cemig group, especially in the sectorial scenario of tariff adjustments and hydrologic restrictions.</p> <p>Changes in average temperature: Increase in average temperatures may occur and alterations in regimes of rains and droughts and, indirectly, potential some risks in the Power Transmission System, because the prolonged drought conditions maximize fire risks. Fire, within the ranges right-of-ways or its surroundings, may cause occurrence of unavailability of transmission lines. To mitigate this risk Cemig continuously inspects and cleans these lanes to maximize safety and availability of transmission functions. In addition, a new monitoring system was, forecast and fire alert, as to subsidize the several areas of Cemig and minimize shutdown risks.</p> <p>Another form rights-of-way of mitigating this risk is through internal projects such as COD of future – integrated space-time situation awareness hyper-vision platform -, and COS that aims to train and mobilize teams to respond to extreme weather events.</p> <p>The risk associated to chronic physical parameter is contemplated in Top Risk “Inefficiency in minimization measures and adaptation of climate change impacts in Cemig”, annually monitored.</p>
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## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

---

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type & Primary climate-related risk driver**

Acute physical

Other, please specify

Increase in severity and frequency of extreme weather events, such hurricanes and floods

### **Primary potential financial impact**

Other, please specify

Increase of operational costs caused by the reimbursement of consumers due to interruptions in power supply

### **Company-specific description**

The occurrence of heavy rains in a short period accompanied by gales and lightning can cause physical damage to the facilities that transport and distribute energy, leading to the unavailability and increase in costs for Cemig, caused by the reimbursement of consumers due to interruptions in power supply.

To assess the effectiveness of actions and initiatives made in respect to energy quality, Cemig uses the DEC indicators (Equivalent Interruption Duration per Consumer Unit) and FEC (Equivalent Frequency of Interruption by Consumer Unit). In the year 2021, approximately R\$ 48 million were paid in compensations to clients of Cemig for violation of individual indicators of electric power supply continuity (DIC, FIC, DMIC and DICRI). This compensation amount was 12.5 lower than in 2020.

These phenomena are each time more associated to the effects of unfavorable microclimate, typical of major urban centers. This type of event may lead to the elevation of indicators that measure quality in power supply. The extrapolation of DEC and FEC indicator limits generate a risk to the Company. The failure to comply with regulatory targets for quality indicators in 2 consecutive years or in the fifth historic year may result in the opening of concession expiry process by Aneel, implicating in risk of concession loss.

In October 2021, a strong windstorm was registered in the Triângulo Mineiro region and was responsible for the outage of 8 Cemig transmission lines, affecting the municipalities of Cachoeira Dourada, Campina Verde, Capinópolis, Carneirinho, Gurinhatã, Ipiáçu, Itapagipe, Ituiutaba, Iturama, Limeira do Oeste, Santa Vitória, São Francisco de Sales and União de Minas, which had their electricity supply interrupted. To solve the problem, a team composed of engineers, technicians and electricians was sent to the site and power was restored after 12 hours of interruption.

### **Time horizon**

Medium-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

Medium-low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate



**Potential financial impact figure (currency)**

59,623,682

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The amount of R\$ 59,623,682.22 corresponds to the following combination of costs: compensation costs (ANEEL penalty) by violation of continuity indicator system by DIC (individual interruption time by consumer unit), FIC (individual interruption frequency by consumer unit), DMIC (maximum duration of continuous interruption by consumer unit or connection point) and DICRI (individual interruption duration occurred in a critical day by consumer unit or connection point). In this case, the amount of R\$ 59,623,682.22 = Remuneration DIC, FIC and DMIC (monthly: R\$ 47,762,513.67 + trimestral: R\$ 4,007,523.91 + annual: R\$ 6,570,145.58) + DICRI Remuneration (monthly: R\$ 1,283.499.06).

**Cost of response to risk**

829,455,374

**Description of response and explanation of cost calculation**

The management methods seek to reduce the magnitude of this risk through preventive adaptation measures in medium term, such as management of urban afforestation by pruning, operation of weather stations and weather radar - which foresees the occurrence and intensity of storms with greater accuracy – and an emergency plan with the allocation of maintenance teams for a fast reestablishment of power supply. In addition, Cemig maintains the Plan for Distribution Development (PDD), which consists in the execution of undertakings linked to electric system and associated to expansion, enlargement and restoration of assets of Cemig D, like substations and distribution lines. In 2021, were invested R\$ 1,520 billion in PDD. Of these investment total R\$ 825 million are considered related to risk mitigation, which are stratified as follows: investment in high voltage expansion and reinforcement (R\$ 348.5 million), renovation of high voltage system (R\$ 586 million), reinforcement of medium and low voltage networks (R\$ 179 million) and change of metering (R\$ 46 million), automation of medium voltage (R\$ 10 million). Therefore, R\$ 825 million = (in 573 million + 13 million + 61 million + R\$ 118 million + 46 million + 10,89 million).

Another associated cost is the maintenance of the meteorology team (3 meteorologists, in the amount of R\$ 432,000),00 and maintenance of the meteorological systems and stations (R\$ 4,023,374.00) - Total cost of risk management=(825,000,000 + 4,455,374.00 )= R\$ 829,455,374

**Comment**

Cemig D defines, through the Plan for Distribution Development – “PDD”, the prioritization of investments to be made by the Distributor, regarding BRR – Regulatory Remuneration Base, and the respective prudent management of resources in the



current tariff cycle, having as purpose the increase of electric power availability continuously, with quality, safety and in the amount required by the clients, promoting social and economic development in the concession area of Cemig D.

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**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Upstream

**Risk type & Primary climate-related risk driver**

Emerging regulation  
Carbon pricing mechanisms

**Primary potential financial impact**

Increased indirect (operating) costs

**Company-specific description**

One of the main emergent regulations related to climate changes in Brazil comprises carbon pricing. Cemig actively participated in the Advisory Committee of Project PMR Brazil, which ended on December of 2020 and had as purpose to discuss the convenience and opportunity of inclusion of Greenhouse gas emissions in the package of instruments destined for National Policy implementation over climate change (PNMC) in the period post-2020. One of the sectors that has been analyzed in this ambit is of fuels. A carbon price applied in fuel sector would imply in an increase in fossil fuel prices.

Today, 56.8% (7,294.18 tCO<sub>2</sub>e) of emissions of Scope 1 of Cemig occur by Diesel consumption, and 12.35% (1,586.24 tCO<sub>2</sub>e) by gasoline consumption.

For diesel, the consumption by own fleet of Cemig GT and Cemig D add to 6.065,31 tCO<sub>2</sub>e (i.e., 83% of diesel emissions of scope 1).

For gasoline, the consumption by own fleet of Cemig GT and Cemig D add to 967,00 tCO<sub>2</sub>e (i.e., 61% of gasoline emissions of scope 1).

A project and tax over emissions in the fuel sector would increase the operation costs of the company.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

2,573,511

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The amount of potential impact refers to additional expense with fuel purchase.

To estimate it, 4 parameters were considered: (i) Greenhouse gas emissions of each fuel type (according to inventory of 2021 of Cemig), where: Diesel = 6.065,31 tCO<sub>2e</sub>.L and Gasoline = 967,00 tCO<sub>2e</sub>.L; (ii) average fuel price in 2021 R\$/L (annual average of ANP); (iii) Internal price of carbon (US\$ 20.00/tCO<sub>2</sub>). (iv) Dollar quotation in 2021: 5.05 R\$/US\$. Therefore, the amount of R\$ 2,573,511.46 = [(6065,31 tCO<sub>2e</sub>.L x 3.492R\$/L x US\$ 20.00/ tCO<sub>2e</sub> x R\$5.05/US\$) + (967.00 tCO<sub>2e</sub>.L x 4.447R\$/L x US\$ 20.00/ tCO<sub>2e</sub> x R\$5.05/US\$)]. Since fuel is an operation expense, it is more sensible for the company, since its increase may not be transferred to the product / consumer due to regulatory definitions.

**Cost of response to risk**

246,979,408

**Description of response and explanation of cost calculation**

To reduce the fossil fuel consumption, some actions are adopted:

1. Cemig has, by guideline, that the that the average date of manufacture of vehicles in its fleet is less than five (5) years, legal period of depreciation fixed by the granting authority. Therefore, the Company annually renovates its vehicle fleet.
2. The Company's fleet is constituted mainly by flex vehicles, the use of ethanol is prioritized for fueling vehicles.
3. To influence in the carbon pricing regulation in Brazil, the company is participating actively in discussion forums about the subject.

The fleet renovation of Cemig represented an investment of R\$ 43,149.707.33 in 2020, with a total cost of R\$ 246,979,408.80 for 5 years duration, in a new contract. Due to scarcity of vehicles and other inputs, there was no investment in fleet renovation in 2021. The investments program will return in 2022 foreseeing the purchase of electric vehicles. The fuel economy will pay off the investment in the medium term and make the company less vulnerable to carbon pricing, among other advantages that a newer fleet can bring.

The emissions by diesel and gasoline consumption of Cemig D and Cemig GT went from 7,591.18 tCO<sub>2e</sub>, in 2020, to 7,032.31 tCO<sub>2e</sub>, in 2021, resulting in a reduction of 7.4% (data from greenhouse case emission inventory of 2021 of Cemig).

**Comment**

Not applicable

## C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

### C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

---

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Other, please specify

Sale of CER in a cap-and-trade system

**Primary potential financial impact**

Other, please specify

Increase in revenue by means of new solutions for adaptation needs (for ex., products and transfer services of insurance risk)

**Company-specific description**

The compliance with regulatory requisites and emergence of new international agreements may create opportunities for Cemig, since the Company, for having an energy matrix predominantly renewable and with low carbon emission, is better prepared than its competitors to adjust to this scenario. In 2021 the Company counted with 67 Hydroelectric Power Plants (UHEs), Small Hydroelectric Power Plants (PCHs) and Hydroelectric Generator Plants (CGHs), 1 photovoltaic plant and 6 wind power complexes, in addition to 18 solar generator farms of Cemig SIM. The total installed capacity was 5,826.7 MW with performance lower than 5% in respect to 2020.

The establishment of a cap-and-trade type emissions trading market in Brazil or in the world, in MDL molds, for example, may cause Cemig to position as an important supplier of emission reduction certificates. This opportunity may lead to an increase in revenue for Cemig.

In 2021, Cemig assessed the sale of carbon credits generated by PCH Cachoeirão, registered in MDL in 03/02/2012 (Cachoeirão CDM Project - JUN1092, Number: 4788). As from an assessment made for the period 03/02/2012 to 31/12/2015, Cemig verified the certification of emission of 163,755 CERs at a price of R\$ 5.29 per unit (equivalent

to US\$ 1.00, considering the exchange rate of 06/May/2021). This way, a revenue is estimated of R\$ 866,263.95. However, the sale was not concluded, because Cemig is not holder of 100% of the undertaking and the other partner did not reach a consensus to executed the sale of carbon credits.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

2,655,992.96

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Cemig has a credit generation potential in MDL scope for the plants Guanhães Energia, PCH Cachoeirão, UHE Santo Antônio e PCH Paracambi. But, for all these cases, Cemig does not hold the operational control and, therefore, the credit management is not exclusive of the company, demanding an agreement with the partners. At Guanhães Energia the credit generation potential is 44,488, with 49% of Cemig; PCH Cachoeirão totals 34,059 credits, with 49% of Cemig; UHE Santo Antônio totals 4,015,196, with 15% of Cemig; and UHE Paracambi totals 33,993 credits, with 49% of Cemig. In 2021, these projects were monitored, corresponding to 657,424 credits of Cemig.

The financial impact was calculated based on the possibility of these credits being negotiated at US\$ 0.80 per credit, with dollar quotation at R\$ 5.05. Therefore, R\$ 2,655.992;96 = [(44,488 credits x 49%) + (34,059 credits x 49%) + (4,015,196 credits x 15%) + (33,993 credits x 49%)] \* US\$ 0.80 / credit \* R\$ 5.05 / US\$.

**Cost to realize opportunity**

450,000

**Strategy to realize opportunity and explanation of cost calculation**

Cemig has qualified professionals in the identification of projects that generate carbon credits and has long term contracts with verifier and certifier companies, increasing therefore, the possibility of improving this opportunity. Cemig already has pro-MDL emission reduction registered in UNFCCC.

In 2021, these projects were monitored (657,424 carbon credits, of Cemig). The costs

associated are those related to monitoring (R\$ 56,250.00 by project) and auditors (R\$ 56,250.00 by project) necessary for validation and trading of credits generated by four projects: Guanhões Energia, PCH Cachoeirão, UHE Santo Antônio e PCH Paracambi. Therefore, R\$ 450,000.00 = 2 x R\$ 56,250.00/project x 4 projects.

### **Comment**

The costs are not annual and will take place when Efficient performed the audits.

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### **Identifier**

Opp2

### **Where in the value chain does the opportunity occur?**

Direct operations

### **Opportunity type**

Resource efficiency

### **Primary climate-related opportunity driver**

Other, please specify

Sale of projects of energy efficiency

### **Primary potential financial impact**

Other, please specify

Increase of revenue for the Company and postponement of investments in energy generation

### **Company-specific description**

In a scenario of greater corporate investments in energy efficiency aiming electric power reduction and, consequently, emissions of greenhouse gases, the subsidiary of Cemig SIM possibly there will be an increase in demand for its services, including the implementation of projects for the use of lighting with LED technology, cogeneration, distributed generation and other energy solution services.

In this context, Cemig SIM may also have an increase in demand for consulting services for the implementation of an Energy Management System based on ISO 50001.

Through its projects, Cemig SIM enables the expansion of the market for new clients of Distributed generation, where Cemig had no clients; as well as the reduction of the need for energy injection in the electrical system with the commercialization of electric energy.

The power generated by the plants of Cemig SIM as well as its energy efficiency projects, in addition to effective energy savings, provide a reduction in the need for energy injection in the electrical system, also being configured as Demand-Side Management projects. With the company creation Cemig Sim started to have 4,000 clients in the sector. In 2021 were injected, by Cemig Sim, 96.8 GWh of power.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

6,840,505.81

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The value of the potential financial impact was made based on the gross operating income of Cemig SIM.

The choice of this value to estimate the financial impact was made because part of the revenue is related to the energy efficiency, which are performed through performance agreements where Cemig SIM contributes the necessary resources and recovers its investment through the savings of these projects.

**Cost to realize opportunity**

1,000,000,000

**Strategy to realize opportunity and explanation of cost calculation**

Cemig SIM was created in October de 2019, resulting from the merger of operations of the companies Efficientia and Cemig GD, to act in the market of distributed generation, energy efficiency and solutions in energy. In addition to the branding and marketing strategy focused in retail and in the digital transformation of electric sector, the organizational culture of SIM, with a strong innovative and technological character, it is being built so that customers are always at the center of decisions.

In 2021, CEMIG SIM traded 4,452 MWh/month provided from 14 fotovoltaic generation plants, located in the municipalities of Bonfinópolis, Brasilândia, Corinto, Janaúba, Lagoa Grande, Lontra, Manga, Mato Verde, Mirabela, Porteirinha, Campo Lindo 1, Campo Lindo 2, Apolo 1 and Olaria 1, in Minas Gerais, totaling 10.935 MWh/month, since was launched in 2019. With investments in innovation and efficiency, the company reached 4,735 residential and commercial clients in the last year.

**Comment**

The costs associated will exist whenever there is opportunity. Cemig has as strategy to reach a strong position in Distributed Generation, focused on the State of Minas Gerais and therefore, planned to invest R\$ 1 billion until 2025, in projects of Distributed Generation as from vertical solar plants (equivalent to 275 MWp), with TIR equivalent to market average – guaranteeing a significant market share of approximately 30% in solar plants in the State.

## C3. Business Strategy

### C3.1

**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

#### Row 1

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##### **Transition plan**

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

##### **Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**

In 2019, was developed the Sustainability Plan of Cemig, in alignment with the Strategic planning and "Top Risks" of the company, which are the macro process risks that may directly impact in Company's strategy.

In 2021 Cemig establishes the Cemig's Strategic Plan. This plan has as its motto "TO FOCUS and WIN", with the ambition:

"To Focus on Cemig D and GT, leading in client satisfaction, safety, and reaching regulatory levels of efficiency, through management with a private, modern, and sustainable logic,"

The plan brought the following ambitions for the year of 2025:

- To add approximately 1 GW of installed capacity (around 450 MWm) with an investment of R\$4.5 billion, focusing on renewable sources and to increase the efficiency of the portfolio;
- Achieve significant position in Distributed Generation, focusing on the State of Minas Gerais, investing R\$1 billion by 2025 in projects to operate in DG of vertical solar farms (equivalent to 275MWp).

In 2021 Cemig elaborated the Adaptation Plan to Climate Change, document that presents some actions recommended by Task Force on Climate-related Financial Disclosures (TCFD) about the disclosure process of potential effects of climate change. In this plan was used an analysis of scenarios to identify the potential implications in businesses and operations of the company. Through this methodology, it was possible to identify the physical and transition risks, their impacts, proposing mitigation and adaptation measures.

In addition to the Sustainability Plan, Cemig is participating in the project ACT-DDP, which aims to elevate the decarbonization ambition level of critical economic sectors, among them the electric power sector. The alliance of innovative methodologies ACT-Assessing Low Carbon Transition and DDP-Deep Decarbonization Pathways will allow to assess the decarbonization strategies of the company in respect to national



decarbonization routes and sectorial consistent with the purposes of Paris Agreement.

The project has as focus:

1. Construction of scenarios and sectorial trajectories of decarbonization;
2. Assessment of decarbonization strategies of local companies in respect to the routes developed;
3. Knowledge transfer and communication on low carbon sectoral transition at the national level;
4. Communication in international level with focus on Latin America.

## C3.2

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative and quantitative

## C3.2a

**(C3.2a) Provide details of your organization's use of climate-related scenario analysis.**

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5°C	Cemig performs annually a risk analysis of its energy generation portfolio, related to climate changes scenarios. For such, we use the scenarios available in the sixth phase of Coupled Model Intercomparison Project (CMIP6), which until the year 2020 the data used were those related to the fifth phase of this project (CMIP5). In the analysis we used two horizons for each project: HOR_01 where the projections related to the concession time of the generation plants are considered and HOR_02 which consider the renovation for 30 years more. Currently, are analyzed the scenarios for the variables rainfall, temperature, humidity, wind speed and longwave radiation for five models: CNRM-CM6-1, HadGEM3-GC31, CAMS-CSM1-0, GFDL-ESM4 and INM-CM5-0. All of these applied to emission scenarios SSPs (Shared Socio-Economic Pathways): SSP1, SSP2, SSP3, SSP4 and SSP5.

			<p>Additionally, were also analyzed the changes in rainfall regimes – since almost the totality of generator plants of Cemig consist of Hydroelectric Power Plants, the changes in the total of rain and its dispersion have impact in some of the company’s activities. Currently assessments are performed of rains for every scenario of IPCC, for all Hydroelectric Power Plants of the company, in order to adapt strategic decisions.</p> <p>Were also considered the changes in wind speed and radiation: although the wind power and solar plants of Cemig are not yet a relevant representative part of the company’s generator matrix, the analysis allows to subsidize the long term operational strategy, as well as the decision of application and identification of new sites. The scenarios of IPCC are used as target to verify if these places will continue to be more suitable or if they will have their performance impacted due to climate changes.</p>
Physical climate scenarios RCP 2.6	Company-wide		<p>With the estimating the impact of climate changes until 2100, the climate physical risk assessment was made of using the analysis of scenarios available in the sixth phase for Coupled Model Intercomparison Project (CMIP6). The Coupled Model Intercomparison Projects (CMIP), makes available the results of models for each one of the IPCC reports and, in this sixth version, will present significant methodological changes regarding the prior ones. In this new version the former of scenarios of greenhouse gas effect concentration effects (RCP2.6, RCP4.5, RCP6.0 and RCP8.5) were substituted by new versions, which consider the socioenvironmental aspects related to public policies regarding greenhouse gas emission effect. Are known as “Shared Socioeconomic Pathways” (SSPs) and divided in 5 “narratives”, that are distinguished from each other according to the relationship between society, economy, demography, consumption and environmental policy: SSP1 (extremely optimist), SSP2, SSP3, SSP4 and SSP5 (extremely pessimist).</p>
Physical climate	Company-wide		<p>With the estimating the impact of climate changes until 2100, the climate physical risk assessment was made of using the analysis of scenarios available in</p>

<p>scenarios RCP 4.5</p>			<p>the sixth phase for Coupled Model Intercomparison Project (CMIP6). The Coupled Model Intercomparison Projects (CMIP), makes available the results of models for each one of the IPCC reports and, in this sixth version, will present significant methodological changes regarding the prior ones. In this new version the former of scenarios of greenhouse gas effect concentration effects (RCP2.6, RCP4.5, RCP6.0 and RCP8.5) were substituted by new versions, which consider the socioenvironmental aspects related to public policies regarding greenhouse gas emission effect. Are known as “Shared Socioeconomic Pathways” (SSPs) and divided in 5 “narratives”, that are distinguished from each other according to the relationship between society, economy, demography, consumption and environmental policy: SSP1 (extremely optimist), SSP2, SSP3, SSP4 and SSP5 (extremely pessimist).</p>
<p>Physical climate scenarios RCP 6.0</p>	<p>Company-wide</p>		<p>With the estimating the impact of climate changes until 2100, the climate physical risk assessment was made of using the analysis of scenarios available in the sixth phase for Coupled Model Intercomparison Project (CMIP6). The Coupled Model Intercomparison Projects (CMIP), makes available the results of models for each one of the IPCC reports and, in this sixth version, will present significant methodological changes regarding the prior ones. In this new version the former of scenarios of greenhouse gas effect concentration effects (RCP2.6, RCP4.5, RCP6.0 and RCP8.5) were substituted by new versions, which consider the socioenvironmental aspects related to public policies regarding greenhouse gas emission effect. Are known as “Shared Socioeconomic Pathways” (SSPs) and divided in 5 “narratives”, that are distinguished from each other according to the relationship between society, economy, demography, consumption and environmental policy: SSP1 (extremely optimist), SSP2, SSP3, SSP4 and SSP5 (extremely pessimist).</p>
<p>Physical climate scenarios RCP 8.5</p>	<p>Company-wide</p>		<p>With the estimating the impact of climate changes until 2100, the climate physical risk assessment was made of using the analysis of scenarios available in the sixth phase for Coupled Model Intercomparison</p>

			<p>Project (CMIP6). The Coupled Model Intercomparison Projects (CMIP), makes available the results of models for each one of the IPCC reports and, in this sixth version, will present significant methodological changes regarding the prior ones. In this new version the former of scenarios of greenhouse gas effect concentration effects (RCP2.6, RCP4.5, RCP6.0 and RCP8.5) were substituted by new versions, which consider the socioenvironmental aspects related to public policies regarding greenhouse gas emission effect. Are known as “Shared Socioeconomic Pathways” (SSPs) and divided in 5 “narratives”, that are distinguished from each other according to the relationship between society, economy, demography, consumption and environmental policy: SSP1 (extremely optimist), SSP2, SSP3, SSP4 and SSP5 (extremely pessimist).</p>
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## C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

### Row 1

#### Focal questions

For the elaboration of the Adaptation Plan to Climate Change of 2021, Cemig assessed focal issues that involved risks and opportunities. Due to the area of operation, the climate changes are listed as one of the main risks and opportunities that may affect the businesses, therefore its weather strategy was built which has as purpose to promote mitigation practices and adaptation to weather risks. Along 2020, the company reviewed the socioenvironmental assessment of suppliers and includes greenhouse gas emissions indicators for assessment of suppliers, in addition, in 2021 a booklet was made available that aims to make its suppliers aware of the importance of identifying climate risks. This initiative is in the initial phase and other projects and partnerships with the aim of promoting the low carbon transition are being studied by the company. the company considered as guidelines for definition of action plans recommended by the Task Force on Climate-related Financial Disclosures (TCFD) about the disclosure processes of potential effects of climate change, being used the analysis of scenarios to identify the potential implications in businesses and company’s operations. Through this methodology was possible to identify the physical risks and transition, its impacts, suggesting mitigation measures and adaptation. Along 2021, Cemig will continue implementing the recommendations of Task Force on Climate-related Financial

Disclosures (TCFD) and mapping of eventual weather risks with categorization of physical risks and transition.

### Results of the climate-related scenario analysis with respect to the focal questions

#### Impacts in Hydraulic Availability

The hydraulic availability in a determined watershed is related to several physical and socioeconomic factors, but certainly the main one is the rainfall regime where the basin is inserted. With the purpose of identifying the impacts of climate changes in this regime the results of the models mentioned above were analyzed for the several time horizon between 2020 and 2100.

An analysis for the watersheds where the plants of Cemig are inserted indicated a different result, while there is a loss in Paranaíba of up to -15 % in all time horizons, there is an increased in Jequitinhonha superior than 10%. A São Francisco bay (in Minas Gerais) there is no significant change. Despite this, in general, there is a decrease as the analysis horizon extends, with all basins showing a decrease in relation to previous periods.

Deeper analyzes are needed to assess the financial impact of these changes in Cemig, because there are several other factors that influence in the gain or loss of profitability of these plants. Additionally, studies are being performed to verify the impact in other atmospheric variables such as air humidity, temperature, wind and surface radiation in plant operation and transmission lines.

In the air temperature case, preliminary analysis show significant increase in all scenarios. This may reflect the frequency of shutdowns caused by fires, which is directly related to temperature and reduced rainfall.

## C3.3

### (C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	With the electric power production being basically hydraulic, Cemig recognize that the risks inherent to weather changes may cause reduction in the generation capacity and significant impact in power supply. Therefore, Cemig, among other risks, acts preventively, monitoring: <ul style="list-style-type: none"> <li>- Change in rainfall pattern: Cemig has a specific organizational structure that supports risk management and decision-making, both in the sale and operation of assets. Cemig also participates in Energy Reallocation Mechanism (MRE), whose purpose is to share the hydrological risks of</li> </ul>

		<p>plants in situations of high inflows and generations, which transfer energy to plants in situations of low inflows and generations.</p> <ul style="list-style-type: none"> <li>- Trees falling during storms: Cemig makes continuously inspections and cleanings in the right-of-way of its transmission lines to maximize the safety and availability of transmission functions and distribution (always limited to the minimum removal of vegetation, avoiding cutting in places where there is no interference with transmission and distribution lines).</li> <li>- Changes in precipitation extremes and droughts: Management methods seek to reduce, in the medium term, the magnitude of this risk through preventive adaptation measures, such as suitable management of urban afforestation by pruning, the operation of weather stations e do weather radar, which more accurately foresees the occurrence and intensity of storms, and the emergency plan with allocation of maintenance teams for fast reset of energy supply.</li> <li>- Changes in consumer behavior: This risk is managed by carrying out a diagnosis of the electrical system for the need for expansion works; monitoring of operating conditions; and for the reprioritization of the works.</li> </ul> <p>Cemig estimates that the magnitude of this impact is medium, and occurs mainly in the years of low affluence in reservoirs. As for the Products and Services, the time horizon considered is from short to medium term according to the new strategic planning that became effective in 2021 to 2030.</p>
Supply chain and/or value chain	Yes	<p>Possible losses resulting from increased intensity of winds, floods, droughts may indirectly affect the operation of the energy business of Cemig, when they impact the supply chain, especially those directly involved in infrastructure deployment/maintenance (transmission and distribution). This way, Cemig constantly monitors its chain of suppliers maintaining a high degree of demand and care based on mapping potential risks and probabilities of occurrence, and tangible and intangible impacts, calculated in financial values, and of a strategic nature for the company.</p> <p>In addition, Cemig seeks to align the suppliers and contracted to its sustainability vision, its commitments and corporate values. Among these corporate values, Cemig integrates in its Supply Policy the Commitments with Climate Changes.</p> <p>Cemig estimates that this impact may occur in the medium term, and that the magnitude of the impact will be low, as the company has a supplier classification system based on social</p>

		<p>and environmental criteria. In 2021, Cemig counted with 1,310 suppliers potentially causer of negative impacts which correspond to 26% of total base of suppliers, from these 339 are classified as high social risk and 154 environmental, 88 are considered high sustainability risk for presenting high risk for both categories.</p> <p>A strategic decision of Cemig influenced by the weather issues is the application of socioenvironmental questionnaire to suppliers (starting in 2019). The questionnaire, called Industrial Technical Assessment must be answered by new suppliers and by those already contracted by Cemig, as a periodical assessment. In the content there are several questions, including some related to environment (monitoring of greenhouse gas emissions and their reduction goals). Furthermore, a climate change booklet was made available at the suppliers portal in the year 2021.</p>
Investment in R&D	Yes	<p>Cemig seeks to implement mitigation measures of this impact investing in research, development and innovation, always seeking to continuously improve its processes, reduce its greenhouse gas emissions and prepare for the climate change effects – considering energy alternatives and energy efficiency.</p> <p>The company defined the medium and long term strategy initiative of exploiting news technologies and opportunities such as smartgrid, hybrid generation, energy storage, “electric stations”, digitalization, among others, with the purpose of mitigating this risk and leverage opportunities. The form to make this strategic initiative feasible, Cemig releases annually P&amp;D notices focused on opportunities mapped.</p>
Operations	Yes	<p>Cemig promotes a series of initiatives that make feasible the accurate management of possible impacts related to climate change on its operation, among them:</p> <ul style="list-style-type: none"> <li>- Hydro-meteorological Monitoring: Preventively, invests in practices that position these in a situation of greater safety before several possible different scenarios, using modern techniques and equipment, such as Storm Locating System, Telemetry System and Hydro-meteorological Monitoring, mathematic models of hydrologic simulation and time and weather forecast.</li> <li>- Dams Safety: The process that aims to guarantee the safety of dams operated and maintained by Cemig uses, in all its stages, a methodology based on the best national and international practices, meeting also Federal Law</li> </ul>



		<p>12.334/2010, which establishes the National Policy of Dam Safety, ad associated regulation (Normative Resolution No. 696/2015 of Nacional Agency of Electric Power – Aneel). In this context, inspection procedures on filed are contemplated, instrumentation data collecting and analysis, elaboration and update of dam safety plans, planning and following of maintenance services, analysis of results and classification of civil structures. Based on the classification of structures, the frequency of safety inspections and the monitoring routine are established. The vulnerability of each dam is calculated automatically continuously and monitored by the Specialist System in Dam Safety (Inspector).</p> <p>- Plan of Distribution Development: The PDD consists in the performance of undertakings linked to electric power system, associated to expansion, reinforcement, reformation and renovation of assets of Cemig D, like substations and distribution lines.</p>
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### C3.4

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Acquisitions and divestments Access to capital Assets Liabilities	<p>For all the elements described, the time horizon is between short and medium.</p> <p>Risk: The electric power generation by Cemig is predominantly hydraulic. In 2021 the Company counted with 67 Hydroelectric Power Plants (UHEs), Small Hydroelectric Power Plants (PCHs) and Hydroelectric Generator Plants (CGHs). Therefore, a reduction in rainfall rates, which could result from climate changes, affect the water volume stores in the reservoirs, leading to a reduction in power generation capacity. That is, the risks inherent to climate change can increase the exposure of generators in the short-term market, due to a significant reduction in energy supply, with an impact of high magnitude.</p> <p>Such a situation may directly affect the Company’s revenue, and even give rise to the possibility of lawsuits for possible losses caused. Accidental interruption of transmission lines, due to extreme weather conditions, may result in reduction in power availability, with direct impact in invoicing, as well as in distribution lines, causing interruption in power</p>

		<p>supply.</p> <p>Opportunity: the increase in average temperatures can lead to an increase in the use of electrical equipment for air conditioning and refrigeration, with an impact on energy demand and an increase in revenue.</p> <p><b>INDIRECT COSTS:</b></p> <p>Risks: The eventual reduction in average rainfall volume due to climate changes may affect the volume of water stored in the reservoirs and, consequently, reduce the power generation capacity by Hydroelectric Power Plants. Therefore, the National Electric System increments power generation with thermoelectric power plants which operational cost is higher, leading the System to operate with higher prices. In addition, with the triggering of thermoelectric plants, there is an increase in the emission of carbon dioxide and other pollutants.</p> <p>In addition, extreme weather conditions can cause malfunctions in transmission lines and substations, causing additional costs of equipment maintenance / reconstruction.</p> <p>Regulatory changes may cause increase in costs if they determine increase in taxation over generation activities, transmission and/or power distribution.</p> <p>Opportunity: the incentive in wind power and/or photovoltaic generation may lead to an increase in the power generation capacity by clean sources and that are independent of hydraulic component, reducing the power dispatch need through thermoelectric plants by ONS and, therefore, reducing the operational costs.</p> <p>The company was impacted in the years by low rainfall, as occurred in 2014 and 2017. As countermeasure the Energy Reallocation Mechanism ("MRE") mitigated a part of the generation variation impact of Hydroelectric Power Plants. When the totality of the plants generates below the requested value, the mechanism reduces the available energy of the plants causing a negative exposure in the short-term market and, consequently, the need to purchase energy at the Price for Settlement of Differences – PLD. In years of very critical hydrology, the power reduction factor available may compromise over 20% of power available of the hydroelectric plants, being, therefore of high magnitude.</p> <p><b>CAPITAL EXPENSES</b></p> <p>Risk: The climate changes determine the need for the Company to make additional investments to maintain and improve the distribution grid. The Plan for Distribution Development (PDD) contributes for mitigation of this risk, in addition to providing assistance to the increase in demand resulting from the vegetative growth of the population. The company considers the magnitude of this impact to be medium, and the expansion</p>
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		<p>and reinforcement works in high, medium and low voltage represents 39.5% of the investments of PDD in 2020.</p> <p><b>ACQUISITIONS AND DISINVESTMENTS</b>                  Opportunity: The uncertainty regarding the level of rainfall and, consequently, the reduction in the ability to guarantee the generation by Hydroelectric Power Plants of Cemig, give rise to the need for diversification of the generator unit of the Company and stimulate the construction /acquisition of wind power or photovoltaic undertakings, technologies which Cemig already has expertise.                  The company considers the magnitude of this impact low, due to the renegotiation of the hydrological risk, in addition, in 2018 the company approved the multi-annual business plan, the initiative to study investments in wind and solar aiming diversification of its generating complex.</p> <p><b>ACCESS TO CAPITAL</b>                  Risk: If generation expansion occurs by non-renewable sources, due to hydric scarcity periods, an increase in greenhouse gas emissions may occur by the Company. Therefore, the performance of Cemig in sustainability indexes in which is part (DJSI, ISE, Oekom, CDP, Sustainalytics, among others) may be negatively influenced.                  Opportunity: Cemig participates in several sustainability indexes and rankings, what contributes to communicate to the market the sustainability practices of the Company, inclusively its actions for mitigation of climate changes effects, and this way facilitate access to capital for investors and the financial market.</p> <p><b>ASSETS</b>                  Risk: Extreme weather events can result in overloading of water reservoirs of Cemig and even damages to the generator units. Cemig seeks to mitigate this risk with investments in dam safety (prevention) and also with the installation of a weather radar (disaster prevention). The magnitude of this impact is low, due to the maintenance services of its plants.                  The occurrence of extreme weather events, such as torrential rains and high-speed winds, can also cause trees to fall and cause damage in the transmission lines and distribution. This risk is mitigated by pruning trees located in critical areas of the lines and reinforcing the transmission lines. The magnitude of this impact is also low, due to the constant maintenance services and mitigation actions mentioned.                  Opportunity: with the purpose of reducing the impact of climate changes, Cemig has as a strategic driver the search for the diversification of its energy matrix; with this, the Company developed expertise in renewable energy generation (mainly wind power and photovoltaic), in addition to</p>
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		<p>being constantly assessing new technologies through its Program of Research and Development. Thus expertise constitutes an asset that may eventually be object of trading in the form of the sale of operational units already installed or even the provision of services.</p> <p>LIABILITIES Risk: The activities of Cemig are capital-intensive. Naturally, the incorporation of generation assets to minimize the impact of climate changes may cause punctual indebtedness of the Company. The magnitude of this impact is high, due to the elevated degree of company indebtedness.</p>
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## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Absolute target

### C4.1a

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

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**Target reference number**

Abs 1

**Year target was set**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

Scope 3

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

Category 1: Purchased goods and services

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 12: End-of-life treatment of sold products

**Base year**

2021

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

12,785.21

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

861,202.58

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

6,407,787.94

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

7,281,775.73

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

99.51

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

69.05

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

68.56

**Target year**

2030

**Targeted reduction from base year (%)**

0

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

7,281,775.73

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

12,785.21

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

861,202.58

**Scope 3 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

6,407,787.94

**Total emissions in reporting year covered by target in all selected scopes  
(metric tons CO<sub>2</sub>e)**

335,233.14

**% of target achieved relative to base year [auto-calculated]**

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

1.5°C aligned

**Please explain target coverage and identify any exclusions**

Cemig defined in 2021 an absolute reduction goal based on science, considering the combined emissions of scopes 1,2 and 3, excluding the emissions of Gasmig, according to guidelines of Manual SBTi. The Sectoral Decarbonization Approach (SDA) method was used aligned to the scenario 1.5 C. The goal consists in the reduction of 69.8% considering the emissions of scope 1, 2 and 3, based on 2021 and target year 2030.

**Plan for achieving target, and progress made to the end of the reporting year**

As actions to reach the goal, the development of the following actions were considered:

- Reduce in 30% the consumption of diesel fleet;
- Start electrification of fleet in 2022;
- Have 100% of fleet using Ethanol or electric vehicle;
- Guarantee 100% renewable generation until 2030, adding 1486 MW average of renewable sources;
- Guarantee 100% of power generated by Cemig with RECs – Renewable Power Certificates;
- Have utmost 8,330,000 MWh of total losses;
- Transfer the own consumption of electric power to Free Market.

**List the emissions reduction initiatives which contributed most to achieving this target**

## C4.2

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Net-zero target(s)

Other climate-related target(s)

## C4.2b

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

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**Target reference number**

Oth 1

**Year target was set**

2018

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Intensity

**Target type: category & Metric (target numerator if reporting an intensity target)**

Resource consumption or efficiency

Other, please specify

Have emission percentile of SF6 of almost 0.66% of mass of SF6 installed

**Target denominator (intensity targets only)**

Other, please specify

Total quantity (kg) of SF6 installed

**Base year**

2018

**Figure or percentage in base year**

0

**Target year**

2022

**Figure or percentage in target year**

0.66

**Figure or percentage in reporting year**

0.36

**% of target achieved relative to base year [auto-calculated]**

54.5454545455

**Target status in reporting year**



Achieved

**Is this target part of an emissions target?**

Yes, it is part of a comprehensive operational efficiency initiative.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

Cemig has a goal, defined in 2018, to maintain the percentage of losses of SF6 (kg of SF6 emission/total installed quantity of SF6) at a maximum of 0.66% until 2022.

In 2021 this goal was reached, with the percentile value of SF6 losses of 0.36%, 45% below the maximum value set.

**Plan for achieving target, and progress made to the end of the reporting year**

**List the actions which contributed most to achieving this target**

To reach the goal, in 2018 was elaborated a SF6 management procedure for Cemig Distribution as a standardization form of estimates of fugitive emissions and management of equipment containing SF6. The company continues to develop SF6 loss mitigation practices, either by eliminating leaks, or by eliminating losses in the maintenance process and investing in more efficient equipment. In the Annual Report of Sustainability of 2021 this indicator is being monitored. Execution of the SF6 management procedure.

## C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

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**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

**Target year for achieving net zero**

2040

**Is this a science-based target?**

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

**Please explain target coverage and identify any exclusions**

Cemig is working towards setting a net zero target. The objective is to formalize an absolutgoal and the commitment is with carbon neutral of Scopes 1, 2 and 3 by MWh until 2040, considering 2021 as base year.

The methodology of SBTi used to define this target was the Absolute Contraction method and the target does not consider emissions of Gasmig (gas ditribution).

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Unsure

**Planned milestones and/or near-term investments for neutralization at target year**

**Planned actions to mitigate emissions beyond your value chain (optional)**

Cemig is working towards setting a net zero target. The objective is to formalize an absolutgoal and the commitment is with carbon neutral of Scopes 1, 2 and 3 by MWh until 2040, considering 2021 as base year.

The methodology of SBTi used to define this target was the Absolute Contraction method and the target does not consider emissions of Gasmig (gas ditribution).

### C4.3

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

### C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	1,263.34
To be implemented*	20	17,498.58
Implementation commenced*	17	7,364.65
Implemented*	29	56,135
Not to be implemented	0	0

### C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

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**Initiative category & Initiative type**

Other, please specify

Other, please specify

Losses Reduction

**Estimated annual CO2e savings (metric tonnes CO2e)**

44,075.68

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Mandatory

**Annual monetary savings (unit currency – as specified in C0.4)**

215,496,600

**Investment required (unit currency – as specified in C0.4)**

1,273,000,000

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Cemig maintains the Plan of Distribution Development - PDD, which consists in the execution of undertakings linked to electric system and associated to expansion, enlargement and restoration of assets of Cemig D, like substations and distribution lines. Through PDD, Cemig foresees a 560 GWh reduction in the total losses (cycle PDD from 2018 to 2022).

In 2021, with the actions to combat losses, it was possible to recover 348,700 MWh x 0.1264 tCO<sub>2</sub>e/MWh, avoiding the emissions of 44,075.68 tCO<sub>2</sub>e (where 0.1264 tCO<sub>2</sub>e/MWh is a network emission Factor).

PDD has a budget of 6.4 billion for this cycle. In 2021, the Company performed an amount of approximately R\$ 1.273 billion, with 503.2 million of investment in high voltage expansion and reinforcement renovation of high voltage system reinforcement of medium and low voltage networks and renovation of low and medium voltage network.

Annual savings were estimated as the energy recovered per year multiplied by the annual tariff, Green Flag:

$348,700,000 \text{ kWh} \times 0.64463 \text{ R\$/kWh} = \text{R\$ } 77,355,600.00.$

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**Initiative category & Initiative type**

Fugitive emissions reductions

Other, please specify  
Escape of SF6

**Estimated annual CO2e savings (metric tonnes CO2e)**

812

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

743

**Investment required (unit currency – as specified in C0.4)**

288,000

**Payback period**

>25 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Considering the goal of 0.66%, we would have an emission of 186.36 kg of SF6, however with the equipment management procedure of SF6, we were able to achieve the intensity goal, in 2021 the emission percentile was 0.35%, equivalent to 150.74 kg of SF6. The annual economy was obtained with the cost estimate avoided in the acquisition of 35.62 kg of SF6, considering the kg price of SF6 of R\$ 20.9, a savings of R\$ 743.20.

The investment required refers to the cost value of the two employees (one senior engineer and one maintenance technician of distribution substations) directly involved in review, disclosure and control of SF6 in the company. In the year we consider the value of 12x (R\$ 17,000 + R\$ 7,000.00) = R\$ 288,000.00

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**Initiative category & Initiative type**

Energy efficiency in buildings

Other, please specify

Illumination, solar water heating, autoclaves, dryers, photovoltaic generation

**Estimated annual CO2e savings (metric tonnes CO2e)**

11,247

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

30,845,181

**Investment required (unit currency – as specified in C0.4)**

223,999,977

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

The amount invested corresponds to initiatives initiated and initiatives already implemented, related to the Energy Efficiency Program of Cemig.

The actions of the Program of Energy Efficiency of Cemig that resulted in emission reduction of scope 3 of the Company in 2021 aimed at:

- Replacement of public school lighting throughout the concession area.
- Replacement of lighting, dryers, autoclaves, surgical lights and installation of photovoltaic plants and solar water heating in public and philanthropic hospitals in the concession area.
- Installation of photovoltaic plants in Support and Protection Institutions for Convicted – APACs.
- Lectures using mobile traveling units for public school students
- Guidance, replacement of light bulbs, refrigerators and showers in quilombola communities within the concession area.
- Financing of selected projects through Public Calls for Energy Efficiency.

The annual monetary savings was calculated considering the value of the Blue tariff outside peak hours and with a green tariff flag

The estimated annual CO2e savings were calculated considering the estimated total annual savings that the initiatives promote and the emission factor of 0.1264 for the year 2021.

For the calculation of avoided emissions, the implementation of 27 energy efficiency projects in 2021 were considered.

## C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	Federal Law N 9.991/2000: establishes that 1% of net operation revenue of the organization shall be directed to financing P&D and energy efficiency programs. Therefore, Cemig created the Intelligent Energy (EI), a program focused on energy efficiency, formed by

	<p>several multi-annual and socioenvironmental projects, which develop energy efficiency actions in low income populations (in compliance with article 1, paragraph V, of Law No. 9.991/2000, included by Law No. 12.212/2010) and in non-profitable and philanthropic institutions.</p>
Internal finance mechanisms	<p>The substitution of vehicle fleet uses resources from Company's Investment Programs. Cemig has, as guideline, that the average date of manufacture of vehicles in its fleet is less than five (5) years, legal period of depreciation fixed by the granting authority. Therefore, the Company annually renovates its vehicle fleet.</p>
Dedicated budget for low-carbon product R&D	<p>The Program of Research and Development (P&amp;D) of Cemig aims to incentive the constant search for innovations and to face the technological challenges of the electricity sector. In this context, Law 9.991/2000 establishes the electric energy distribution, generation and transmission concessionaires and dealers apply, annually, part of their net operational revenue in Program of Research and Development of Electric Power Sector, regulated by Aneel.</p> <p>To guarantee the application of these resources, periodically, Cemig publishes public notices for attracting projects in several lines of action. Among these projects lines related to climate changes, are mentioned: Alternative sources, distributed and decentralized generation; management of watersheds and energy planning; Measurement, invoicing and commercial loses; and Environment.</p>
Dedicated budget for other emissions reduction activities	<p>Within the Program of Dealer Development (PDD), there is budget dedicated for reduction of electric loses of Cemig in the system and initiative for emission reduction of Cemig and National Electric System.</p>
Internal price on carbon	<p>Cemig assesses the risk of carbon emission increase in their energy matrix and the financial impact of this increase by the execution of environmental due diligence and sensibility analysis, regarding the acquisition of new undertakings by decision-making in respect to their business expansion.</p>
Other Distributed generation	<p>In 2012, came into force Normative Resolution Aneel No. 482/2012, which establishes the general conditions for the access of microgeneration and mini-distributed generation to electric power distribution systems through electric power compensation modalities. With this, the Brazilian consumer began to be able to generate its own electric power from renewable sources and supply the excess to the power grid of their location. Consists in innovations that combine financial savings, socioenvironmental awareness and autos sustainability.</p> <p>In general, the presence of small generators near the loads may provide for several benefits for the electric system and concessionaires, among them are highlighted:</p> <ol style="list-style-type: none"> <li>1. The postponement of investments in expansion in distribution and</li> </ol>

	<p>transmission systems;</p> <ol style="list-style-type: none"> <li>2. The low environmental impact;</li> <li>3. The improvement in the voltage level of the grid in the heavy load period;</li> <li>4. The increase of energy efficiency of the source by the reduction of production loses and electricity transmission;</li> <li>5. The diversification of energy matrix; and</li> <li>6. The favoring the creation of new business models applicable to the electricity sector.</li> </ol> <p>Cemig, precursor in the process of distributed generation and aligned with technology development, connected the first microgeneration unit of electric power of Brazil on September 2012, same year in which ANEEL created the Electric Power Compensation System. Since then, Cemig has been leading the market of distributed generation connections in the country.</p> <p>In the period between the publication of the Resolution 482, in 2012, and December 2021, were already connected 122,600 generator units by the Company, totaling 1,498.5 MW installed capacity with distributed generation (which 99.8% from solar source) and placing Cemig as leader in the connections market of distributed generation in the country.</p>
<p>Other RECs</p>	<p>Cemig has been working with Renewable Power Certificates (RECs), having accounted in the inventory of greenhouse gas emission of 2020 and 2021 the RECs issued in these year. The RECs aim to prove that the power is provided by a renewable sources (hydroelectric, wind power, photovoltaic, biomass) and allow to account and trace the energy collateral.</p> <p>As a form of control, one REC that was sold once may not be traded again. All certificates receive a single number for identification and also include several information such as: the renewable source, generation source, the generation date, the quantity traded, the property to which is attributed. In general, each REC is equivalent to 1 MWh. Considering the sale of I-REC and Cemig REC, 2,697.659 renewable power certificates were traded in 2021.</p> <p>Cemig made an investment of R\$ 50,000.00 in the year 2021, with operational costs of I-REC, having issued the certification for client in the same year. In addition to I-REC, Cemig developed their own renewable energy certificate, the CEMIG REC. It meets the international standards, such as GHP Protocol and CDP, and guarantees that the electric power of the Company is renewable, what is made by means of own controls and a methodology proposed by specialized consultancy. With this certificate, companies may guarantee that electric power which they use is provided from renewable sources.</p>



	CEMIG REC started in 2020 as a pilot project, without costs, and currently counts with 18 clients with certificates issued.
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## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

---

### Level of aggregation

Group of products or services

### Taxonomy used to classify product(s) or service(s) as low-carbon

The IEA Energy Technology Perspectives Clean Energy Technology Guide

### Type of product(s) or service(s)

Power

Other, please specify

Hydroelectric, Wind Power and Solar

### Description of product(s) or service(s)

Generation of electric power from renewable source:

Cemig has 100% of its installed capacity of electric power generation provided from renewable sources. By generating renewable power, Cemig substitutes the power generation that would be provided by fossil sources.

### Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

### Methodology used to calculate avoided emissions

Other, please specify

Own Methodology

### Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Not applicable

### Functional unit used

Not applicable

### Reference product/service or baseline scenario used

Not applicable

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Not applicable

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

1,957,958.71

**Explain your calculation of avoided emissions, including any assumptions**

Generation of electric power from renewable source:

- 1- This initiative allows the reduction of Scope 2 of consumers that by electric power directly from Cemig through the Free Market of Electric Power;
- 2- By injecting renewable power in National Electric System, Cemig promotes the reduction of emission factor of this system, benefiting all power consumers connected to the grid. In 2021, were generated 15,490.337.90 GWh of electric power by renewable sources (hydraulic + wind power + solar), considering only the plants that Cemig detains operational control;
- 3- It is estimated that the generation of renewable power in 2021 has avoided the emission of 71,957.958.71 tCO<sub>2</sub> (15,490.337.9MWh\*0.1264tCO<sub>2</sub>/MWh tCO<sub>2</sub>);
- 4- It is assumed that the renewable power generation by Cemig avoided the electric power generation by thermal sources in grid of National Interconnected System. For the calculation of emission reductions, an emission factor from National Electric System (SIN) was used for the year 2021 (0.1264 tCO<sub>2</sub>/ MWh), calculated for greenhouse gas emission inventories by MCTIC (Science, Technology, Innovations and Communication Ministry), multiplied by electricity generated by renewable sources (11,644.6 GWh).

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

8.68

---

**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

No taxonomy used to classify product(s) or service(s) as low carbon

**Type of product(s) or service(s)**

Power

Other, please specify

Distributed generation services

**Description of product(s) or service(s)**

Cemig SIM was launched in 2019 to operate in the share electric power market, through distributed generation as from a new model of partnership, aiming the participation in new projects of photovoltaic solar generation.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify  
Own Methodology

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Not applicable

**Functional unit used**

Not applicable

**Reference product/service or baseline scenario used**

Not applicable

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Not applicable

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

6,752

**Explain your calculation of avoided emissions, including any assumptions**

Cemig Intelligent Solutions in Energy – Cemig SIM

- 1- This initiative allows the reduction of Scope 2 of third parties, since it reduces the consumption of electricity of National Electric System of their clients;
- 2 - This generation type allows consumers to generate their own electric power and, when contract Cemig SIM, start obtaining power credits provided from solar plants of the Company;
- 3 – Cemig SIM has as purpose the expansion of their installed capacity up to 275 MWp until 2025;
- 4 – The electricity generated and compensated of Cemig SIM clients in 2021 reached an amount of 10,935 MWh/month, what correspond to 6,752.79 tCO<sub>2</sub> that are no longer emitted.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.02

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

No taxonomy used to classify product(s) or service(s) as low carbon

**Type of product(s) or service(s)**

Power  
Other, please specify  
Natural gas

**Description of product(s) or service(s)**

Gasmig, subsidiary of Cemig, is exclusive natural gas distributor in the entire territory of Minas Gerais.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify  
Own Methodology

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Not applicable

**Functional unit used**

Not applicable

**Reference product/service or baseline scenario used**

Not applicable

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Not applicable

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

506,868

**Explain your calculation of avoided emissions, including any assumptions**

Natural gas – Gasmig

1- This initiative allows the reduction of Scope 1 of third parties, once allows its clients the consumption of fossil fuel with lower greenhouse gas emission factor;

2- The investment of Gasmig, in 2021 was around R\$ 54.2 million in assets, mainly in the expansion of Natural Gas Distribution Networks (RDGNs) in the State of Minas Gerais;

3 - Gasmig monitors the amount of natural gas supplied to sectors that supplies (residential, commercial, industrial and vehicle), having the Company sold 1,387,514,844 m<sup>3</sup> of gas in 2021. Due to a greater operation in the residential segment its base of clients increased 15.99%, going from 61,414 in 2020, to 71,236 consumer units in 2021

4- In 2021, the natural gas consumed distributed by Gasmig avoided the emission of 506,868 tCO<sub>2</sub>e;

5- The emission reduction estimate was made as from the assumption that, in the absence of natural gas distribution, the industry and thermal plants would consume fuel oil (which corresponded to 94.3% of natural gas consumed in 2021), the vehicles consumed gasoline (2.5%), commercial use, residential would use LPG (2.3%) and the general use and cogeneration would use diesel oil (0.9%).

Using the emission factors, the inferior calorific value and densities of GHG Protocol Brazil, were calculated the emissions with natural gas (actual scenario) and the emissions if fuel oil would be used, gasoline, LPG and diesel oil (base line scenario). The emissions avoided were defined by subtracting the emissions of actual scenario of emissions from the baseline scenario.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

7.3

## C-EU4.6

**(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Cemig does not generate significant emissions of methane in their electric power generation processes, since the emission of methane in Hydroelectric Power Plants is irrelevant, as is indicated in specialized literature. The total emissions of CH<sub>4</sub> of Cemig in 2021 were equivalent to 34,42 tCO<sub>2</sub>e, what represents only 0.27% of total emissions of Scope 1.

However, Cemig manages the potential risk of leakage in their natural gas distribution operations and, therefore, the emission of methane, main gas component. To identify possible natural gas leakages and reduce escape gas volume, considering technical loss of distribution operation, Gasmig monitors the network pressure remotely by data loggers. Additionally, natural gas is artificially scented to facilitate the identification of leaks by the local population and the Fire Department. Gasmig has a 24 h call center by telephone to report detection of leakage signs.

Gasmig counts with a cathodic protection system associated to the polyethylene external lining structure, which provided a mechanical and anticorrosion protection for the pipeline. By preserving the integrity of their gas pipelines, the Company is making efforts to reduce methane emissions from its activities.

## C5. Emissions methodology

### C5.1

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

## C5.1a

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

### Row 1

**Has there been a structural change?**

No

## C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

Change(s) in methodology, boundary, and/or reporting year definition?	
Row 1	No

## C5.2

**(C5.2) Provide your base year and base year emissions.**

### Scope 1

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

48,849

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018.

### Scope 2 (location-based)

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

664,413

**Comment**

For Scope 2 was used year 2017, for being the year defined by the regulatory agent (Aneel) of a new cycle of total losses reduction indicators of electric power.

**Scope 2 (market-based)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

0

**Comment**

The approach based on the market is not used by the Company.

**Scope 3 category 1: Purchased goods and services**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Purchased goods and services were accounted in 2017.

**Scope 3 category 2: Capital goods**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Capital goods acquired were accounted in 2017.



### **Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Fuel-and-energy-related activities (not included in Scope 1 or 2) were not accounted in 2017.

### **Scope 3 category 4: Upstream transportation and distribution**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

20,446

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018.

### **Scope 3 category 5: Waste generated in operations**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Waste generated in operations were not accounted in 2017.

### **Scope 3 category 6: Business travel**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

822

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018.

**Scope 3 category 7: Employee commuting**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

494

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018.

**Scope 3 category 8: Upstream leased assets**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO2e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Upstream leased assets were not accounted in 2017.

**Scope 3 category 9: Downstream transportation and distribution**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

### **Base year emissions (metric tons CO<sub>2</sub>e)**

#### **Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Downstream transportation and distribution were not accounted in 2017.

### **Scope 3 category 10: Processing of sold products**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

### **Base year emissions (metric tons CO<sub>2</sub>e)**

#### **Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The product sold by Cemig (electricity) is not processed as an intermediary product for production of a final consumption asset; electricity is an input in production processes, not an intermediate good. Therefore, this source of emissions is not applicable to Cemig.

### **Scope 3 category 11: Use of sold products**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

### **Base year emissions (metric tons CO<sub>2</sub>e)**

6,985,687

#### **Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018.

### **Scope 3 category 12: End of life treatment of sold products**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

### **Base year emissions (metric tons CO<sub>2</sub>e)**

### **Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The product sold by Cemig (electricity) does not have an end-of-life treatment, since does not generate residues to be treated or discarded. Therefore, this source is not applicable to Cemig.

### **Scope 3 category 13: Downstream leased assets**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

#### **Base year emissions (metric tons CO<sub>2</sub>e)**

### **Comment**

O ano-base histórico escolhido e referenciado devido ao ano estipulado para a meta de redução de perdas totais de energia (escopo 2) estabelecida pela empresa em 2018. A Cemig não arrenda bens. Assim, essa fonte de emissões não é aplicável à Companhia.

### **Scope 3 category 14: Franchises**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

#### **Base year emissions (metric tons CO<sub>2</sub>e)**

### **Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. Cemig does not lease assets. Therefore, this source of emissions is not applicable to Company.

### **Scope 3 category 15: Investments**

---

#### **Base year start**

January 1, 2017

#### **Base year end**

December 31, 2017

#### **Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. The emissions for Investments were not accounted in 2017.

**Scope 3: Other (upstream)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. Other emissions were not accounted for upstream in 2017.

**Scope 3: Other (downstream)**

---

**Base year start**

January 1, 2017

**Base year end**

December 31, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The historic base year selected and referenced due to the year stipulated for the reduction goal of total power losses (scope 2) established by the company in 2018. Other emissions were not accounted for downstream in 2017.

## C5.3

**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

Brazil GHG Protocol Programme

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## C6. Emissions data

### C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

#### Reporting year

---

##### **Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

12,847.64

##### **Comment**

It can be observed an increase of 13% of Scope 1 in respect to the previous year and this is associated mainly to the soil Change and Use that when compared to the year of 2020 had an increase of 34% and Agriculture Activities, that had an impact 1027% greater than in 2020.

The emissions by mobile combustion continues being more representative in Scope 1, totaling 8.956,83 tCO<sub>2</sub>e and an increase of 13% in respect to 2020. The escape emissions also presented an increase of 13%, totaling 3.688,06 tCO<sub>2</sub>e in 2021.

### C6.2

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

#### Row 1

---

##### **Scope 2, location-based**

We are reporting a Scope 2, location-based figure

##### **Scope 2, market-based**

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

##### **Comment**

For companies from the electric sector that have generation and distribution businesses such as Cemig, it is not possible to buy energy from other suppliers, therefore, it is not possible to account for emissions based on market.

### C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

#### Reporting year

---

##### **Scope 2, location-based**

861,233.04

### Comment

For companies from the electric sector that have generation and distribution businesses such as Cemig, it is not possible to buy energy from other suppliers, therefore, it is not possible to account for emissions based on market.

Yet, the variation in Scope 2 is directly due to the increase in the Losses of T&D (increase of approximately 410,827.09 tCO<sub>2</sub>e). The calculation of emissions of scope 2 is made based on the emission factor of the network, which considers all fuels consumed in the generation of the electric power distributed. The annual average of electric power emission factor of the years being compared was:

Network emission factor

- 2018: 0.0740 tCO<sub>2</sub>e/MWh

- 2019: 0.0750 tCO<sub>2</sub>e/MWh

- 2020: 0.0617 tCO<sub>2</sub>e/MWh

- 2021: 0.1264 tCO<sub>2</sub>e/MWh

The increase of reduction of network emission factor of distribution is consequence of the rainfall in the years, implying the balance of energy demand through hydroelectric and thermoelectric plants. Between 2020 and 2021 we have an increase of 4.81% in respect to network factors.

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

### C6.4a

**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

---

#### Source

Fugitive CO<sub>2</sub> emissions from fire extinguishers

#### Relevance of Scope 1 emissions from this source

Emissions are not relevant

#### Relevance of location-based Scope 2 emissions from this source

No emissions from this source

#### Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions excluded

#### Explain why this source is excluded

In the year 2021 there was a change in the provision of services for maintenance of CO<sub>2</sub> fire extinguishers. For this reason, this report does not calculate the data from



escape emissions regarding the loss of CO<sub>2</sub> by fire extinguishers.

For 2022 there will be an adequacy in the management areas responsible for these missing emissions values to be calculated in the next inventory.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

0

**Explain how you estimated the percentage of emissions this excluded source represents**

In the emissions inventory of 2020 the escape emissions of CO<sub>2</sub> by fire extinguishers were accounted, representing a total of 6,45 tons of CO<sub>2</sub>e. Calculated  $6.45 / 874,080.7$  (total of emissions of scope 1 and 2 in 2021), we would have only 0.001% of contribution of these emissions.

---

**Source**

Escape emissions of refrigerant gases in metropolitan region of Belo Horizonte

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

No emissions from this source

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

No emissions excluded

**Explain why this source is excluded**

It was not possible to obtain data with good traceability outside the metropolitan region of Belo Horizonte. For 2022 there will be adaptation in the responsible management areas so that the missing emission values are computed in the next inventory.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

1

**Explain how you estimated the percentage of emissions this excluded source represents**

For calculation of escape emissions of refrigerant gases data from Cemig D units were used and of Cemig GT. The emissions of scope 1 and 2 of Cemig D added to the emissions of scope 1 and 2 of Cemig GT represent 99% (99.5%) of emissions total of scope 1 and 2. Therefore, 1% (0.5%) remaining refer to the other units.

---

**Source**

Emissions of the company Sete Lagoas Transmissão de Energia

**Relevance of Scope 1 emissions from this source**

Emissions excluded due to a recent acquisition or merger

**Relevance of location-based Scope 2 emissions from this source**

Emissions excluded due to a recent acquisition or merger

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

Emissions excluded due to a recent acquisition or merger

**Explain why this source is excluded**

Due to the recent acquisition, it was not possible to obtain data for accounting the emissions.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

**Explain how you estimated the percentage of emissions this excluded source represents**

## C6.5

**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

244.06

**Emissions calculation methodology**

Fuel-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.
- Thesis Tool (GVCES).

Between 2020 and 2021, the emissions increased 468% due to resumption of face-to-face work.

## Capital goods

---

### Evaluation status

Not relevant, explanation provided

### Please explain

In 2017, in order to reestablish the financial balance of the Company, Cemig stated a disinvestment program. The program purpose is to establish a sale process of assets following the priority criteria below:

- a) assets with greater liquidity;
- b) assets that bring no return in short term; and
- c) assets not strategic and/or with little relevant participations.

In this disinvestment context, the emissions linked to acquisition of capital goods were not relevant for Cemig in 2021.

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

---

### Evaluation status

Not relevant, explanation provided

### Please explain

The emissions due to losses in the transmission and distribution systems of electricity produced by Cemig were accounted in Scope 2.

## Upstream transportation and distribution

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

2,726.37

### Emissions calculation methodology

Fuel-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.
- Thesis Tool (GVCES).

Between 2020 and 2021, the emissions reduced by 87% due to less participation of

suppliers (contractors) in sending information for the calculation of these emissions. In 2022 the Company will take a new approach to improve engagement for collecting this information.

## Waste generated in operations

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

558.165

### Emissions calculation methodology

Waste-type-specific method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.
- Thesis Tool (GVCES).

Between 2020 and 2021, Waste emissions generated in operations reduced by 44% due to lower generation of waste destined for landfills or incinerated or co-processed.

## Business travel

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

96.518

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.

- Thesis Tool (GVCES).

Between 2020 and 2021, the emissions provided from business Trips reduced by 3% due to dissemination of online meetings.

## Employee commuting

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

533.577

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.
- Thesis Tool (GVCES).

Between 2020 and 2021, the emissions related to daily dislocations of employees to/from work increased 207% due resumption of on-site work 2021.

## Upstream leased assets

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Cemig does not own upstream leased assets, so source is not relevant for Cemig.

## Downstream transportation and distribution

---

### Evaluation status

Not relevant, explanation provided

### Please explain

In 2021 Cemig reclassified the emissions related to fuel consumption used by outsourced trucks in emissions Inventory of greenhouse gas emissions. In 2020, the Inventory listed this activity in the category downstream Transport and distribution, but, since Cemig has contracts with these suppliers, the activity was reclassified for the category upstream Transport and distribution.

## Processing of sold products

---

### **Evaluation status**

Not relevant, explanation provided

### **Please explain**

The product sold by Cemig (electricity) is not processed as an intermediary product for production of a final consumption asset; electricity is an input in production processes, not an intermediate good. Therefore, this source of emissions is not applicable to Cemig.

## **Use of sold products**

---

### **Evaluation status**

Relevant, calculated

### **Emissions in reporting year (metric tons CO<sub>2</sub>e)**

9,276,221.556

### **Emissions calculation methodology**

Average data method

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

### **Please explain**

The inventory of greenhouse gas emissions (GEE) of Cemig was elaborated based on the following quantification methodologies:

- Specifications of Brazilian Program GHG Protocol – Accounting, Quantification and Publication of Corporate Greenhouse gas emissions.
- Calculation tool of Brazilian Program GHG Protocol Version 2022.1.0.
- Thesis Tool (GVCES).

Between 2020 and 2021 the emissions related to Use of products sold increased due to the startup of Thermal Plants to supply electric power in the periods of hydric crisis. The emission Factor of National Interconnected System – SIN was in 2020: 0.0617 tCO<sub>2</sub>e/MWh and in 2021: 0.1264 tCO<sub>2</sub>e/MWh, increase of 105% in respect to 2020. Since the emissions provided from the sale of electricity correspond to more than 60% of emissions of scope 3, the impact of the emission factor of SIN was very significant and contributed directly to the increase of emissions in this category.

## **End of life treatment of sold products**

---

### **Evaluation status**

Not relevant, explanation provided

### **Please explain**

The product sold by Cemig (electricity) does not have an end-of-life treatment, since does not generate residues to be treated or discarded. Therefore, this source is not applicable to Cemig.

## Downstream leased assets

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Cemig does not lease assets. Therefore, this source of emissions is not applicable to Company.

## Franchises

---

### Evaluation status

Not relevant, explanation provided

### Please explain

Cemig does not have deductibles. Therefore, this source of emissions is not applicable to Company.

## Investments

---

### Evaluation status

Not relevant, explanation provided

### Please explain

The investments made by Cemig do not imply in increase in emissions. Therefore, this source of emissions is not applicable to Company.

## Other (upstream)

---

### Evaluation status

Not relevant, explanation provided

### Please explain

No other relevant source was identified upstream.

## Other (downstream)

---

### Evaluation status

Not relevant, explanation provided

### Please explain

No other relevant source was identified downstream.

## C6.7

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

Yes

## C6.7a

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	2,029.15	Emissions of CO2 direct (Scope 1) arising from biomass energy use of renewable origin. In the elaboration of greenhouse gas emission inventory of the Company was adopted the renewable biomass definition formulated by the Executive Committee of Clean Development Mechanism of United Nations Convention for Climate Changes (EB 23, Annex 18). Emissions of this nature do not contribute for the increase of CO2 concentration in atmosphere in long term.

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

### Intensity figure

0.0000259786

### Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

874,080.68

### Metric denominator

unit total revenue

### Metric denominator: Unit total

33,646,118,000

### Scope 2 figure used

Location-based

### % change from previous year

42.63

### Direction of change

Increased

### Reason for change



When compared to the previous year, an increase is observed in the emissions of Scopes 1 and 2 of respectively, 13% and 92%. The variation occurred due to an increase in the grid emission factor, which was from 0.0617 tCO<sub>2</sub>e/MWh in 2020 to 0.1264 tCO<sub>2</sub>e/MWh in 2021.

This result is due of the increase of 13% do Scope 1 in respect to the previous year, associated mainly to the soil Change and Use which compared to the year of 2020 had an increase of 34% and the Agriculture Activities, which had an in impact of 1027% greater than in 2020.

The emissions by mobile combustion continues being more representative in Scope 1, totaling 8,956.83 tCO<sub>2</sub>e and an increase of 13% in respect to 2020. The escape emissions also presented an increase of 13%, totaling 3,688.06 tCO<sub>2</sub>e in 2021.

Yet, the variation in Scope 2 is directly due to increase in T&D Losses (increase of approximately 410,827.09 tCO<sub>2</sub>e). The calculation of emissions of scope 2 is made based on the emission factor of the network, which considers all fuels consumed in the generation of the electric power distributed. The annual average in the electric power emission factor of 2021 almost doubled from 2020. This increase of distribution network emission factor is consequence of the rainfall regime in the years, implying the balance of energy demand through hydroelectric and thermoelectric plants.

The Distribution Total Loss Index – IPTD, in 2021, was 11.27%, representing a reduction of 1.3% in respect to the result of 2020 (12.56%). However, the emissions arising from losses increased, due to an increase of 105% of grid factor.

In addition, the net operational revenue of Cemig increased 33.37% in the same period.

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**Intensity figure**

0.0564274766

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

874,080.68

**Metric denominator**

megawatt hour generated (MWh)

**Metric denominator: Unit total**

15,490,337.9

**Scope 2 figure used**

Location-based

**% change from previous year**

42.99

### Direction of change

Increased

### Reason for change

When compared to the previous year, 2019, an increase is observed in the emissions of Scopes 1 and 2 of respectively, 13% e 92%.

This result is due of the increase of 13% do Scope 1 in respect to the previous year, associated mainly to the soil Change and Use which compared to the year of 2020 had an increase of 34% and the Agriculture Activities, which had an in impact of 1027% greater than in 2020.

The emissions by mobile combustion continues being more representative in Scope 1, totaling 8,956.83 tCO<sub>2</sub>e and an increase of 13% in respect to 2020. The escape emissions also presented an increase of 13%, totaling 3,688.06 tCO<sub>2</sub>e in 2021.

Yet, the variation in Scope 2 is directly due to increase in T&D Losses (increase of approximately 410,827.09 tCO<sub>2</sub>e). The calculation of emissions of scope 2 is made based on the emission factor of the network, which considers all fuels consumed in the generation of the electric power distributed. The annual average in the electric power emission factor of 2021 almost doubled from 2020. This increase of distribution network emission factor is consequence of the rainfall regime in the years, implying the balance of energy demand through hydroelectric and thermoelectric plants.

The Distribution Total Loss Index – IPTD, in 2021, was 11.27%, representing a reduction of 1,3% in respect to the result of 2020 (12.56%). However, the emissions arising from losses increased, due to an increase of 105% of grid factor.

In addition, the net generation of Cemig (which included only the plants that Cemig has operational control) increased 21% between 2020 and 2021.

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

### C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO <sub>2</sub> e)	GWP Reference
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CO2	8,928.9	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	34.42	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	197.15	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	3,542.46	IPCC Fourth Assessment Report (AR4 - 100 year)

## C-EU7.1b

**(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.**

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	150.743	3,688.062	The emissions of Escape category were, mainly, due to escape of SF6 in transmission and distribution systems, with the participation of this source of 96.1% in total emissions of this category. It is worth mentioning that CO2 emissions from fire extinguishers were not accounted for and that the remaining 3.9% in this category refer to refrigerant gases.
Combustion (Electric utilities)	8,827.333	1.161	0	8,886.71	Emissions from stationary and mobile combustion of Cemig, excluding emissions of Gasmig and Cemig SIM. In addition to the emissions of CO2 e CH4, constitute this category of emissions of N2O.

Combustion (Gas utilities)	50.401	0.058	0	62.427	Emissions from stationary and mobile combustion of Gasmig. In addition to the emissions of CO2 e CH4, constitute this category of emissions of N2O.
Combustion (Other)	7.752	0.005	0	7.852	Emissions of mobile combustion of Cemig SIM. In addition to the emissions of CO2 e CH4, constitute this category of emissions of N2O.
Emissions not elsewhere classified	43.27	0	0	88.482	Emission of Agriculture and Soil Use category. In addition to the emissions of CO2, constitute this category of emissions of N2O.

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
Brazil	12,847

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

- By business division
- By activity

### C7.3a

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO2e)
Cemig GT	2,032.345
Cemig D	8,817.978
GASMIG	308.718
CEMIG SIM	7.852
Camargos	827.701
CEMIG PCH	0
Horizontes	0.014

Itutinga	9.108
Leste	12.939
Oeste	11.484
Parajuru - Eólica	18.867
Rosal	8.493
Sá Carvalho	4.051
Salto Grande	9.368
Sul	17.173
Três Marias	827.701
Volta do Rio - Eólica	138.638
CENTROESTE	41.5

### C7.3c

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Combustion	114.27
Mobile Combustion	8,956.83
Fugitive Emissions	3,688.06
Agricultural and Land Use Change	88.48

### C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	12,847	Not applicable

### C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

## C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	The electric power produced by Cemig in 2020 is provided 100% from renewable sources. The power consumed by Cemig is provided from the grid; therefore, may not be accounted as purchase of renewable power.
Other emissions reduction activities	0	No change	0	Cemig counts with projects of Program of Energy Efficiency (PEE), which consist of reductions in the consumption of electricity by final consumers by replacing obsolete electrical equipment with a high level of consumption and by environmental education initiatives. In this way, the Program presents itself as a relevant instrument in the reduction of greenhouse gas emissions in the chain of value of Cemig. However, such values are not accounted in Inventory of greenhouse gas emissions of Cemig. Between 2019 and 2020 CEMIG reduced its emissions by soil use (Scope 1), but in 2021 there was such a reduction in emissions.
Divestment	0	No change	0	There was no disinvestments between 2020 and 2021.
Acquisitions	0	No change	0	The company Sete Lagoas Transmissão de Energia was purchased by CEMIG group in December 2021, but was not included in the inventory.
Mergers	0	No change	0	There was no mergers between 2020 and 2021.

Change in output	0	No change	0	There was no variation in production impacting the emissions between 2020 and 2021.
Change in methodology	0	No change	0	There was no change in methodology between 2020 and 2021.
Change in boundary	0	No change	0	There was no change in limit between 2020 and 2021.
Change in physical operating conditions	0	No change	0	There was no change in physical conditions that would impact the operation between 2020 and 2021.
Unidentified	0	No change	0	Not applicable
Other	414,577.319	Increased	90.223	<p>When compared to the previous year, of 2020, an increase is observed in the emissions of Scopes 1 and 2 of respectively, 13% and 92%.</p> <p>The increase of 13% of scope 1 is associated mainly to the soil Change and Use which compared to the year of 2020 had an increase of 34%. Yet, the variation in Scope 2 is directly due to increase in T&amp;D Losses (increase of approximately 410,827.09 tCO<sub>2</sub>e). The calculation of emissions of scope 2 is made based on the emission factor of the network, which considers all fuels consumed in the generation of the electric power distributed. The annual average of electric power emission factor of the years being compared was:</p> <p>Network emission factor</p> <ul style="list-style-type: none"> <li>- 2018: 0,0740 tCO<sub>2</sub>e/MWh</li> <li>- 2019: 0,0750 tCO<sub>2</sub>e/MWh</li> <li>- 2020: 0,0617 tCO<sub>2</sub>e/MWh</li> <li>- 2021: 0,1264 tCO<sub>2</sub>e/MWh</li> </ul> <p>The increase of reduction of network emission factor of distribution is consequence of the rainfall in the years, implying the balance of energy demand through hydroelectric and thermoelectric plants. Between 2020</p>

				and 2021 we have an increase of 4.81% in respect to network factors.
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## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 55% but less than or equal to 60%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

### C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**



	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	4,449.51	28,024.24	32,473.75
Consumption of purchased or acquired electricity		37,476.67	0	37,476.67
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		41,926.18	28,024.24	69,950.42

## C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### Sustainable biomass

#### Heating value

LHV

#### Total fuel MWh consumed by the organization

4,449.51

**MWh fuel consumed for self-generation of electricity**

441.92

**MWh fuel consumed for self-generation of heat**

0

**Comment**

It is considered as sustainable biomass the ethanol and biodiesel, fuels considered in the scope of RenovaBio, State policy that, among the other instruments, establishes annual national goals of decarbonization for the fuel sector, encouraging increased production and participation of sustainable biofuels in the Brazilian transport energy matrix.

**Other biomass**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Not used by the Company.

**Other renewable fuels (e.g. renewable hydrogen)**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Not used by the Company.

**Coal**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Not used by the Company.

**Oil**

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

27,806.95

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

In this category was considered diesel, gasoline and kerosene, that are used in the own fleet.

**Gas**

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

217.29

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Were considered as fuels: Liquefied Petroleum Gas (LPG), Natural gas and Natural Vehicle Gas (NVG), that are used in the own fleet and in stationary sources.

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Not used by the Company.

**Total fuel**

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

32,473.75

**MWh fuel consumed for self-generation of electricity**

441.92

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Not applicable

## C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

**Coal – hard**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

**Lignite**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

**Oil**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

**Gas**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

**Sustainable biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

**Other biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

### Waste (non-biomass)

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

### Nuclear

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

Not used by the Company.

### Fossil-fuel plants fitted with CCS

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

**Geothermal**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

**Hydropower**

---

**Nameplate capacity (MW)**

5,638.1

**Gross electricity generation (GWh)**

15,776.85

**Net electricity generation (GWh)**

15,069.78

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

2,942.046

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0.2

**Comment**

The generation of net and gross power refer only to the plants that Cemig has operational control. The emission intensity was calculated dividing the emissions of Scope 1 of Cemig GT, only of hydroelectric generators (that is, were excluded the emissions of wind powers units Parajuru and Volta do Rio and of solar unit of Marias) for generation of net power of hydroelectric power plants.



## Wind

---

**Nameplate capacity (MW)**

115.2

**Gross electricity generation (GWh)**

438.78

**Net electricity generation (GWh)**

419.12

**Absolute scope 1 emissions (metric tons CO2e)**

157.504

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0.2

**Comment**

The generation of net and gross power refer only to the plants that Cemig has operational control. The emission intensity was calculated dividing the emissions of Scope 1 of wind powers units Parajuru and Volta do Rio for the generation of net power of wind power plants.

## Solar

---

**Nameplate capacity (MW)**

1.42

**Gross electricity generation (GWh)**

1.44

**Net electricity generation (GWh)**

1.44

**Absolute scope 1 emissions (metric tons CO2e)**

827.713

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0.2

**Comment**

The generation of net and gross power refer only to the plants that Cemig has operational control. The emission intensity was calculated dividing the emissions of Scope 1 of solar unit 3 Marias by generation of net power of unit.

## Marine

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

**Other renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

**Other non-renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Not used by the Company.

## Total

---

**Nameplate capacity (MW)**

5,826.7

**Gross electricity generation (GWh)**

16,217.07

**Net electricity generation (GWh)**

15,490.33

**Absolute scope 1 emissions (metric tons CO2e)**

3,927.263

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0.2

**Comment**

The emission intensity was calculated dividing the total emissions of Scope 1 of CEMIG GT (that is, excluding the emissions of Scope 1 of CEMIG D, of CEMIG SIM and GASMIG) for the total net power generation. Was considered the next generation only for plants that Cemig has operational control.

## C8.2g

**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

---

**Country/area**

Brazil

**Consumption of electricity (MWh)**

37,476.67

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

37,476.67

## C-EU8.4

**(C-EU8.4) Does your electric utility organization have a transmission and distribution business?**

Yes

## C-EU8.4a

**(C-EU8.4a) Disclose the following information about your transmission and distribution business.**

---

**Country/Region**

Brazil

**Voltage level**

Transmission (high voltage)

**Annual load (GWh)**

0

**Annual energy losses (% of annual load)**

1.5

**Scope where emissions from energy losses are accounted for**

Scope 2 (location-based)

**Emissions from energy losses (metric tons CO<sub>2</sub>e)**

10,884.049

**Length of network (km)**

4,936.8

**Number of connections**

39

**Area covered (km<sup>2</sup>)**

567,478

**Comment**

The number of connections was reported as the number of substations of the Transmission grid.

The emissions of scope 2 presented consider the category "Losses in Transmission" for Cemig GT.

---

**Country/Region**

Brazil

**Voltage level**

Distribution (low voltage)

**Annual load (GWh)**

54,629.95

**Annual energy losses (% of annual load)**

11.23

**Scope where emissions from energy losses are accounted for**

Scope 2 (location-based)

**Emissions from energy losses (metric tons CO2e)**

843,600.195

**Length of network (km)**

564,434

**Number of connections**

8,884,553

**Area covered (km2)**

567,478

**Comment**

The annual load, or system load is the electricity annually injected in the distribution grid in the frontier points and by generation units.

The losses were calculated by the difference between the energy injected and the total market requisite (captive + free).

The emissions of scope 2 presented consider the category of "Losses in Distribution" for Cemig D.

The number of connections is provided by the number of consumers served by Cemig D (captive and free).

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

---

**Description**

Other, please specify

Intensity of emissions of Scope 1 by MWh produced (CO2e/MWh)

 Metric value: 0.00247564

**Metric value**

0.83

**Metric numerator**

Direct emissions (Scope 1) - CO2e

**Metric denominator (intensity metric only)**

Net generation of power measured in MWh

**% change from previous year**

15.37

**Direction of change**

Decreased

**Please explain**

The intensity of direct emissions is calculated dividing the emissions of Scope 1 by net power generation (considering only plants that Cemig has operational control).

In 2021, the net power production by Cemig presented an increase of 21.90% in respect to the year 2020, but the emissions of Scope 1 reduced a little more (27% in respect to 2020), resulting in a reduction in emissions intensity.

## C-EU9.5a

**(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.**

### Coal – hard

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

### Lignite

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Oil**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source  
as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Gas**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source  
as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Sustainable biomass**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

#### **Other biomass**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

#### **Waste (non-biomass)**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

#### **Nuclear**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**



0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

## Geothermal

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

## Hydropower

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

127,188,888

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

81.21

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

21

**Explain your CAPEX calculations, including any assumptions**

The current CAPEX plan (2021-2025) foresees R\$ 5.7 billion in investments in Generation and in New Projects in the Generation area. For hydroelectric power is foreseen an investment of R\$ 1.19 billion in Generation until 2025 (21% of R\$ 5.7 billion). For these calculations, considered only investments in units that Cemig holds operational control.

## Wind

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

17,992,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

11.5

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

22

**Explain your CAPEX calculations, including any assumptions**

The current CAPEX plan (2021-2025) foresees R\$ 5.7 billion in investments in Generation and in New Projects in the Generation area. For wind power energy is foreseen an investment of R\$ 3.25 billion in New Projects until 2025 (55% of R\$ 5.7 billion).

## Solar

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

11,411,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

7.29

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

57

**Explain your CAPEX calculations, including any assumptions**

The current CAPEX plan (2021-2025) foresees R\$ 5.7 billion in investments in Generation and in New Projects in the Generation area. For solar energy is foreseen an investment of R\$ 3.2 billion in New Projects until 2025 (57% of R\$ 5.7 billion).

## Marine

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Fossil-fuel plants fitted with CCS**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source  
as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Other renewable (e.g. renewable hydrogen)**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source  
as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

**Other non-renewable (e.g. non-renewable hydrogen)**

---

**CAPEX in the reporting year for power generation from this source (unit  
currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of  
total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

This source is not used by the Company.

## C-EU9.5b

**(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).**

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify Capex planned for development of renewable electric power	In the current Capex plan (2021-2025) are foreseen substantial investments in Generation business, in which 100% of electricity is generated by renewable sources. Intended to add 450MWm of physical guarantee, elevate operational efficiency and review the portfolio of PCHs. Source: Institutional presentation available at: <a href="https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1">https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1</a> p. 27	5,721,191,000	26.32	2025
Distributed generation	In the current Capex plan (2021-2025) are foreseen substantial investments in Cemig SIM, subsidiary of Cemig that works with distributed generation. The company has an expectation that in the next two years to be made up to 275 MWp of installations. Source: Institutional presentation available at: <a href="https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1">https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1</a> p. 36	1,000,000,000	4.6	2025
Other, please specify Distribution	In the current Capex plan (2021-2025) are foreseen substantial investments in Distribution business. In 2021 were invested R\$ 2,608 million. Investments comprise improvements in Electric System (Client) Electric System (Cemig) and Infrastructure/Others. Source:	12,500,000,000	57.7	2025

	Institutional presentation available at: <a href="https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1">https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1</a> p.29			
Other, please specify Transmission	In the current Capex plan (2021-2025) are foreseen substantial investments in Transmission business. In 2020 were invested R\$ 153 million and in 2021 is foreseen R\$ 321 million. The investments involve also potential reinforcements and improvements and New Projects. Source: Institutional presentation available at: <a href="https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1">https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1</a> p.27	2,000,000,000	9.2	2025
Other, please specify Gas Sale - Gasmig	In the current Capex plan (2021-2025) are foreseen substantial investments in gas sales businesses. Reinforce the presence of Gasmig in Minas Gerais, with investment of R\$ 1 billion until 2025, with greater transparenence of management and governance, working to increase commercial efficiency and network expansion – increase of Ebitda in approximately R\$ 318 million in 2025. Source: Institutional presentation available at: <a href="https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1">https://api.mziq.com/mzfilemanager/v2/d/716a131f-9624-452c-9088-0cd6983c1349/23c5a9d5-2d5d-38e2-b1af-79d4819ad222?origin=1</a> p.33	1,000,000,000	4.6	2025

## C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	The development of innovations in products and processes is a fundamental part of the activities of Cemig, which has a Program of Technologic Research and Development since 1990. Currently the Company invests part of its net operational revenue in Research and Development. For being elements that integrate electricity generation process, the alternative sources themes, generation technologies, distributed generation, intelligent networks, electric

	<p>vehicles, energy efficiency and better use of traditional energy resources, constitute what Cemig considers as energy alternatives in their P&amp;D Program.</p> <p>In 2021, the Company continued with the projects contracted in Notice Cemig 4.0, that involved the themes of digitalization, decentralization and decarbonization, totaling around 5.1 million invested in projects in the last year. From this amount, R\$ 976,882.57 were invested in the project "Management System of Distributed Energy Resources". Such project consists in a methodology for systematized integration of Distributed Energy Resources (RED) dispersed in the power grid of Cemig to the Distribution Operation Center (COD), considering the pertinent technical and operational aspects.</p> <p>Another highlight in 2021 was the release of "Innovation 2021 Cemig Challenge", a public notice that will be open for 18 months to capture proposals for research and development projects that bring solutions to the challenges in the macro themes: Smart Products and Services; Electric Systems of the Future; Electrification and Electro-mobility and Alternatives in Sustainable Generation.</p>
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## C-CO9.6a/C-EU9.6a/C-OG9.6a

**(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.**

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Distributed energy resources	Applied research and development	≤20%	976,882.57	In 2021 Cemig made an investment of R\$ 5,067.950.41 in projects captured by the Notice Cemig 4.0, covering the topics of digitization, decentralization and decarbonization. The amount of R\$ 976,882.57 refers to the project "Management System of Distributed Energy Resources". Such project consist in a methodology for systematized integration of Distributed Energy Resources (RED) dispersed in the power grid of Cemig to Distribution Operation Center (COD), considering the pertinent technical and operational

				<p>aspects.</p> <p>Another highlight in 2021 was the release of “Innovation 2021 Cemig Challenge”, a public notice that will be open for 18 months to capture proposals for research and development projects that bring solutions to the challenges in the macro themes: Smart Products and Services; Electric Systems of the Future; Electrification and Electromobility and Alternatives in Sustainable Generation.</p>
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## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

### C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/ section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

## C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

---

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/ section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

## C10.1c

**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

---

**Scope 3 category**

Scope 3: Waste generated in operations



**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Business travel

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Purchased goods and services

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Downstream transportation and distribution

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Waste generated in operations

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Business travel

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Purchased goods and services

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Downstream transportation and distribution

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Declaração-de-Verificação-BV-nível-limitado.pdf

**Page/section reference**

1

**Relevant standard**

ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

**Proportion of reported emissions verified (%)**

100

## C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

### C10.2a

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C0. Introduction	Other, please specify General description of company, report year, report consolidation method, organizational activities	The annual independent verification of Sustainability Report of Cemig is based on best practices established in the Principles of Sustainability Report of GRI standards and in the assuring standard ISAE3000.	Cemig submits annually its Sustainability Report for independent verification to assure the legitimacy of its content. The audit process comprised (i) review of disclosures, information and data present in the preliminary version of the sustainability report (ii) interviews with strategic collaborators, both for report data comprehension, as well as to understand the management processes involved with the material themes and (ii) review of complementary documents sent by Cemig to BVC. General data of the company and report elaboration approach are presented in the sustainability

			report and are, therefore, submitted to verification.
C2. Risks and opportunities	Other, please specify Time horizon, risk types	The annual independent verification of Sustainability Report of Cemig is based on best practices established in the Principles of Sustainability Report of GRI standards and in the assuring standard ISAE3000.	Cemig submits annually its Sustainability Report for independent verification to assure the legitimacy of its content. The audit process comprised (i) review of disclosures, information and data present in the preliminary version of the sustainability report (ii) interviews with strategic collaborators, both for report data comprehension, as well as to understand the management processes involved with the material themes and (ii) review of complementary documents sent by Cemig to BVC. In the Sustainability Report, in the chapter about Climate Changes, are presented time horizons considered by the Company in its risk assessments, in addition to some examples of climate risks identified.
C3. Business strategy	Renewable energy products	The annual independent verification of Sustainability Report of Cemig is based on best practices established in the Principles of Sustainability Report of GRI standards and in the assuring standard ISAE3000.	Cemig submits annually its Sustainability Report for independent verification to assure the legitimacy of its content. The audit process comprised (i) review of disclosures, information and data present in the preliminary version of the sustainability report (ii) interviews with strategic collaborators, both for report data comprehension, as well as to understand the management processes involved with the material themes and (ii) review of complementary documents sent by Cemig to BVC. In the Sustainability Report, Cemig presents strategic decisions made in 2021 by Cemig, influenced by business opportunities, powered by



			<p>climate change. Among them:</p> <ul style="list-style-type: none"> <li>- Sale of energy solution projects: in a scenario of greater corporate investments in energy efficiency, aiming to reduce electricity consumption and emissions of greenhouse gas, the subsidiary Cemig SIM, may detect an increase in demand for their services, such as implementation of LED illumination projects, cogeneration, distributed generation and other energy solution services;</li> <li>- Selling own certificate, called "Cemig REC". Complies with international standards, such as GHG Protocol and CDP, and guarantees that company energy is renewable, through its own controls and a methodology proposed by a specialized consultancy.</li> </ul>
C4. Targets and performance	Other, please specify Progress in respect to emissions reduction goals	The independent annual verification of the Inventory of greenhouse gas emissions of Cemig based on standard ISO 14064-3.	<p>Currently, Cemig submits its Corporate Inventory of greenhouse gas emissions to independent verification. The purpose of inventory verification by a third party is the achievement of an independent statement about the inventory quality and awareness of information contained, to assure its users a precise assessment of the emissions standard of the organization's chain of value. The progress in respect to the reduction goals of emissions and justification for such performance are reported in the Inventory of Cemig.</p>
C5. Emissions performance	Other, please specify Standards, protocols and methodologies used in the calculation of	The annual independent verification of Inventory of Greenhouse gas emissions of Cemig is based on standard ISO 14064-3.	<p>Currently, Cemig submits its Corporate Inventory of greenhouse gas emissions to independent verification. The purpose of inventory verification by a third party is the achievement of</p>

	emissions of Scope 1 e 2.		an independent statement about the inventory quality and awareness of information contained, to assure its users a precise assessment of the emissions standard of the organization's chain of value. The references and methodology used for inventory elaboration are presented in the report and are, therefore, submitted to verification.
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	The annual independent verification of Inventory of Greenhouse gas emissions of Cemig is based on standard ISO 14064-3.	Currently, Cemig submits its Corporate Inventory of greenhouse gas emissions to independent verification. The purpose of inventory verification by a third party is the achievement of an independent statement about the inventory quality and awareness of information contained, to assure its users a precise assessment of the emissions standard of the organization's chain of value. In greenhouse gas emission inventory, as emissions of Cemig in the year 2020 are compared to emissions of 2018 to 2021.
C7. Emissions breakdown	Year on year change in emissions (Scope 3)	The annual independent verification of Inventory of Greenhouse gas emissions of Cemig is based on standard ISO 14064-3.	Currently, Cemig submits its Corporate Inventory of greenhouse gas emissions to independent verification. The purpose of inventory verification by a third party is the achievement of an independent statement about the inventory quality and awareness of information contained, to assure its users a precise assessment of the emissions standard of the organization's chain of value. In greenhouse gas emission inventory, as emissions of Cemig in the year 2020 are compared to emissions of 2018 to 2021.

C8. Energy	Energy consumption	The annual independent verification of Inventory of Greenhouse gas emissions of Cemig is based on standard ISO 14064-3.	Currently, Cemig submits its Corporate Inventory of greenhouse gas emissions to independent verification. The purpose of inventory verification by a third party is the achievement of an independent statement about the inventory quality and awareness of information contained, to assure its users a precise assessment of the emissions standard of the organization's chain of value. Data of power consumption are used in the calculation of greenhouse gas emissions of Cemig and are, therefore, submitted to verification.
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## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

No, but we anticipate being regulated in the next three years

### C11.1d

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

In Brazil there is no mandatory instrument for greenhouse gas emissions pricing. However, Cemig is preparing itself to work in compliance with the implementation of a possible instrument by following discussions about the theme, including the new regulation decree of carbon market in Brazil (published on May 2022) and other possible regulation amendments, through the participation in the Climate Change and Air Quality Work Group, which is part of the Council of Entrepreneurs for the Environment (CEMA) da FIEMG.

Additionally, a Cemig actively participated in the Advisory Committee of Project PMR Brazil, which ended on December of 2020 and had as purpose to discuss the convenience and opportunity of inclusion of Greenhouse gas emissions in the package of instruments destined for National Policy implementation over climate change (PNMC) in the period post-2020. The company also uses the internal carbon price in the feasibility analysis stages of new electric energy generation projects since 2019. Currently the price stipulated is US\$ 20.00/ton CO<sub>2</sub> or R\$ 101/ton CO<sub>2</sub>.

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

Yes

### C11.2a

**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

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#### **Credit origination or credit purchase**

Credit origination

#### **Project type**

Hydro

#### **Project identification**

Cemig already registered several carbon projects denominated Clean Development Mechanism – MDL, registered in the United Nations Framework Convention on Climate Change (UNFCCC), including six PCHs with 96 MW output, on hydroelectric plant with 3,150 MW generation capacity.

At Guanhães Energia the credit generation potential is 44,488, with 49% of Cemig; in PCH Cachoeirão totals 34,059 credits, with 49% of Cemig; in UHE Santo Antônio totals 4,015.196, with 15% of Cemig; and in UHE Paracambi totals 33,993 credits, with 49% of Cemig. In 2021, these projects were monitored, corresponding to 662,824 credits of Cemig.

The projects are in different stages of achievement of Reduced Emission Certificate – CER for hydroelectric plants, which are:

SPE Guanhães: <http://cdm.unfccc.int/Projects/DB/RINA1280831660.48/view>

PCH Cachoeirão: <http://cdm.unfccc.int/Projects/DB/RINA1305214649.79/view>

PCH Paracambi: <http://cdm.unfccc.int/Projects/DB/RINA1392324439.94/view>

UHE Santo Antônio:

<http://cdm.unfccc.int/Projects/DB/PJR%20CDM1356613142.79/view>

#### **Verified to which standard**

CDM (Clean Development Mechanism)

#### **Number of credits (metric tonnes CO<sub>2</sub>e)**

0

#### **Number of credits (metric tonnes CO<sub>2</sub>e): Risk adjusted volume**

0

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

Yes

## C11.3a

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

---

**Objective for implementing an internal carbon price**

Navigate GHG regulations  
Drive low-carbon investment  
Identify and seize low-carbon opportunities

**GHG Scope**

Scope 1

**Application**

Cemig, through Service Instruction IS-56 (“Assessment of carbon risk in due diligence operations”), established procedures for analyzing carbon risk in carrying out the due diligences conducted by the Company, relating to the acquisition, merger and implementation of new assets that use fossil fuels for energy generation.

The purpose is to assess the impact of greenhouse gas emissions (GEE) in businesses of Cemig arising from the purchase of assets in operation or in the design or construction phase, in addition to the risks and opportunities with regard to climate changes and the needs to mitigate its effects on the company.

**Actual price(s) used (Currency /metric ton)**

101

**Variance of price(s) used**

The internal carbon price used in the analyzes is based on a basket of carbon price values that consider the following parameters: (i) geographic location, based on prices practiced in countries in the same region of Brazil (Latina America) and (ii) sectorial parameter, based on prices charged by companies in the same sector of Cemig (Brazilian companies and of other countries). The estimated value in this new methodology is US\$ 20.00/tCO<sub>2</sub>e.

**Type of internal carbon price**

Shadow price

### Impact & implication

When evaluating the acquisition, merger or implementation of ventures that use fossil fuels, Cemig performs internal analyzes regarding carbon risk and its financial impact for the Company. Applying this evaluation criterion for UTE Igarapé, was observed that the decommissioning of the plant made in the end of 2019 brought to Cemig the benefit of reducing the carbon cost of company operations.

Cemig has medium and long term guidelines (until 2040) to expand the capacity of solar generation, wind power and thermal fueled by natural gas. At this moment, the company is evaluating opportunities for these investments and, as a criterion for analyzing the feasibility of the business, the carbon risk assessment defined in the Service Instruction will be used. (IS-56) "Assessment of carbon risk in Due Diligence operations".

## C12. Engagement

### C12.1

#### (C12.1) Do you engage with your value chain on climate-related issues?

- Yes, our suppliers
- Yes, our customers/clients
- Yes, other partners in the value chain

### C12.1a

#### (C12.1a) Provide details of your climate-related supplier engagement strategy.

---

##### Type of engagement

Information collection (understanding supplier behavior)

##### Details of engagement

Collect climate change and carbon information at least annually from suppliers

##### % of suppliers by number

25

##### % total procurement spend (direct and indirect)

10

##### % of supplier-related Scope 3 emissions as reported in C6.5

0.06

##### Rationale for the coverage of your engagement

The Transport and distribution category (upstream) of Greenhouse gas emission inventory of Cemig counts with data from fuel consumption (ethanol, gasoline, diesel and vehicle natural gas) used by contractors working at Cemig D.

In Inventory of 2021, 25% of contracts in force of Cemig D contributed with these data voluntarily. The Company had as a goal the engagement of 35% of suppliers for the years 2021 and 2022, having been below the expected engagement. For 2022 new engagement approaches will be developed.

For this type of engagement there is no cost for Cemig (since the request is friendly and the reporting is voluntary). However, the company believes it is a valid effort to introduce climate issues with suppliers.

### **Impact of engagement, including measures of success**

Currently, Cemig monitors both the data reported by the contractors (fuel consumption) and the number of contractors engaged in collaborating with the data to greenhouse gas emission inventory.

It is expected that, soon, this monitoring will be carried out with a greater degree of proximity, encouraging better management practices of climate change.

The value of direct and indirect expenditure (10%) corresponds to an estimate of the time invested in preparing and verifying suppliers' emissions.

Cemig is developing an Environmental Development for suppliers, which includes, among other aspects, the management of emissions.

### **Comment**

Calculation of emissions percentile of suppliers in respect to emissions Scope 3:  
 $1953.36 \text{ (tCO}_2\text{e)} / 3099967.51 \text{ (tCO}_2\text{e)} = 0.06\%$

## **C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

---

### **Type of engagement & Details of engagement**

Education/information sharing

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

### **% of customers by number**

0.05

### **% of customer - related Scope 3 emissions as reported in C6.5**

0.03

**Please explain the rationale for selecting this group of customers and scope of engagement**

Cemig develops several actions to raise awareness of the use of energy in order to combat waste through Program of Energy Efficiency.

With its residential, service and commercial clients, the Company promotes several awareness campaigns on the efficient use of electric energy.

The goal in 2021 was to reach 2% of base of clients. For this, campaigns were broadcast in various media – television, radio, newspaper, internet, social networks and also on energy bills sent to clients.

Projects are selected through a Notice Call process held annually with resources segregated by typology (residential, industrial, commerce and services, public power, public service and public lighting). Approved proposals are financed with resources from the Program.

The residual resource from the public call process is used to finance projects developed directly by the Cemig. These projects are developed in order to provide an isonomic service and seeking the greatest results in avoided energy, directly impacting the indexes of sustainability.

The value of 0.05% corresponds to the amount of clients of Cemig that were directly impacted (received direct actions) by the Program. In this case, from a total of 8,950.000.00 consumers, 4,681 consumers were engaged. The amount of 0.03% corresponds to emissions avoided by PEE (1,853 tCO<sub>2</sub>e) divided by emissions of electricity consumption clients of Scope 3 (6,403,634.86 tCO<sub>2</sub>e).

### **Impact of engagement, including measures of success**

The impact of this engagement strategy is the increase in the rational use of energy by Company's clients. The measurement of results is carried out through the positive feedback received from clients, reporting the savings obtained with the information received about the rational use and environmental benefits of this initiative.

The tangibility of this strategy is measured through the energy savings of clients from Program of Energy Efficiency of Cemig. In 2021, were invested around 40.8 million in projects in all concession area of Cemig D, and made available 140.0 million to the new public call process for composition of project portfolio of 2021.

The energy efficiency actions contemplate low income families, non-profit entities, rural residents, educational institutions and public bodies, achieving an economy of 20,816 MWh in 2021.

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### **Type of engagement & Details of engagement**

Collaboration & innovation

Other, please specify

Engagement through Cemig SIM



**% of customers by number**

100

**% of customer - related Scope 3 emissions as reported in C6.5**

0

**Please explain the rationale for selecting this group of customers and scope of engagement**

Cemig SIM always raises in his speech the question of Sustainability through energy efficiency and consequently the reduction of emissions. Therefore, all clients of Cemig Sim (100% of them) are engaged this way.

Within the business format of Cemig SIM there are several partnerships with private companies for the construction of solar plants, in addition to other clients.

An example of engagement actions of Cemig SIM involves the union of industries of Minas Gerais through a partnership with Federação das Indústrias de Minas Gerais (FIEMG). The executive advisory of energy of FIEMG sends questionnaires to the Unions which, in turn, sends them to the associated small and medium-sized industries. The industries answer the questionnaire and the executive energy consultancy analyses, guides and makes diagnoses for the unions to pass on to the industries the opportunities to reduce energy costs. Given the options presented, the industry chooses the one that best suits it and execute a contract with Cemig SIM.

**Impact of engagement, including measures of success**

It is expected that this engagement results in a cost reduction with electric power of around 20%, without the need for investment by companies.

The measurement of impacts will be based on the number of contracts signed with Cemig SIM.

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**Type of engagement & Details of engagement**

Collaboration & innovation  
Other, please specify  
Engagement by CEMIG REC

**% of customers by number**

0.79

**% of customer - related Scope 3 emissions as reported in C6.5**

0

**Please explain the rationale for selecting this group of customers and scope of engagement**

CEMIG is acting with Renewable Power Certificates (RECs), having included in greenhouse gas emission inventory of 2020 the RECs issued in this year.

The RECs aims to corroborate that the electric power is provided from renewable sources (hydroelectric, wind power, photovoltaic, biomass and etc.) and allow accounting and tracking of energy collateral. As a form of control, one REC that has been sold once cannot be traded again. All certificates receive unique identification numbers and also include various information such as: a renewable source, generation source, the generation date, the quantity traded, the property to which is attributed, etc.

In general, each REC is equivalent to 1 MWh.

In 2020 Cemig created its own certificate, Cemig REC, that meets international standards of demand and guarantees that the purchase of energy by customers is from renewable source.

The value of 0.79% corresponds to eighteen Cemig REC issued in 2021 for clients from different sectors, in respect to the total of clients of Cemig GT (2,262 clients). The goal of the Company will be to engage up to 20% of these clients within the next 5 years.

### **Impact of engagement, including measures of success**

Through this engagement, Cemig aims to become reference in the sale of renewable energy certified and expects to serve clients that seek to implement measures for reduction of greenhouse gas emissions.

The measurement of impacts will be based on the number of certificates of Cemig REC issued.

## **C12.1d**

### **(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

Cemig promotes engagement of its collaborators (own and outsourced) through a distance learning course on the safe and efficient use of energy and internal campaigns on the rational use of energy within the company's facilities, correlated to energy efficiency with reduction of greenhouse gas emissions, in the same line of approach adopted with its customers. Internal campaigns are broadcast through the display of banners and posters at headquarters and offices of Cemig in the entire State and digital medias in existing communication channels, such as login screen, Intranet, Cemig OnLine and in Energia da Gente (digital news of Cemig, targeting the internal public).

For example, in 2021, UniverCemig (Corporative University of Cemig) continued an important research and development project started in 2020 in partnership with UFMG.

The project P&D DO593 entitled "Digital Instruction Platform of UniverCemig - PLAID", led by a team of researchers of UFMG, develops methodologies and digital technologies of virtual immersion for the qualification and training of personnel, in the area of equipment operation of power distribution grid of Cemig.

PLAID consists of a "Virtual Immersion Laboratory – LIVI" with equipment, devices and apps for immersion in Virtual Reality and Increased Reality (RA and RV), an environment for

collaborative work via the web and an itinerant laboratory, Lab-Móvel, also equipped for RA and RV activities. These facilities are under implementation phase at UniverCemig, with renovations of existing spaces, to be completed in the second half of 2022.

Cemig executes, in addition to projects that aim to directly reduce the consumption of electric energy, other projects of an exclusively educational nature that seek to engage society and, mainly, the school public in the themes of sustainability through courses, writing contests and the rational use of electricity in schools, hospitals and charities, in addition to the use of photovoltaic energy in these environments. For internal and external public, Cemig recently reviewed and launched several distance learning courses with the aim of disseminating best practices and knowledge involving the safe and efficient use of electricity, waste management, the objectives of sustainable development and the importance of vegetation and its protection.

## C12.2

### **(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, climate-related requirements are included in our supplier contracts

## C12.2a

### **(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

---

#### **Climate-related requirement**

Other, please specify

Consumption of non-renewable energy and reduction of greenhouse gas emissions

#### **Description of this climate related requirement**

ATI is one of the pre-qualification stages for manufacturers that aim to be suppliers of materials and equipment for Cemig. It is a requirement applicable to some groups of more critical materials that is carried out, for new suppliers. For suppliers that already make up Cemig's base, this assessment is carried out periodically.

At this stage, the company's qualification is evaluated, by material groups, with regard to the following aspects of industrial processes, including social responsibility and the environment, containing climate-related issues, such as the consumption of non-renewable energy and the reduction of greenhouse gas emissions, including the assessment of risks, impacts and opportunities for the business related to climate change.

ATI is performed in two phases. The first is a self-assessment of the potential supplier, which consists of answering a specific questionnaire and sending it to Cemig together with the evidence required for analysis and pre-assessment. The second phase is the assessment carried out by a Cemig inspector. In this face-to-face phase, the processes will be audited according to the same requirements contained in the self-assessment.

Cemig's supplier qualification process may or may not require an ATI at the factory that will produce the materials that the supplier intends to supply to Cemig.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

**% suppliers by procurement spend in compliance with this climate-related requirement**

100

**Mechanisms for monitoring compliance with this climate-related requirement**

Supplier self-assessment

First-party verification

**Response to supplier non-compliance with this climate-related requirement**

Exclude

## C12.3

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

Row 1

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

No, but we plan to have one in the next two years

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

Cemig participates in legal discussion forums, participating in the formulation of regulations and laws through participation in Municipal Committees that deal with the climate issue.

## C12.3a

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

---

**Focus of policy, law, or regulation that may impact the climate**

Carbon tax

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Carbon pricing policies and construction of systems for measuring and verifying and reporting emissions in the country.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

Brazil

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

In 2021, the company monitored through GT CEMA the Climate Change and Air Quality of Fiemg and Action Platform by Climate of Global Compact, the procedures for implementing the regulated carbon market in Brazil. The company action is to support carbon pricing policies and the construction of measurement and verification and reporting systems of emissions in the country.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

## **C12.3b**

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

---

**Trade association**

Other, please specify

Global Compact UN (Action Platform by Climate) and Ambition Program by ODS

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The Global Compact aims to align company strategies and operations with corporate social responsibility principles and sustainability. Currently, Global Compact is one of the greatest initiatives of corporate sustainability in the world, consisting of more than 80 networks covering more than 159 countries, in addition to Brazil.

The principles of Global Compact guide all relationships established as a result of the activities of the Company and are described in the Social Responsibility Book of Cemig. In 2009, Cemig signed the letter of Adhesion to Global Compact publically reinforcing its commitment.

In 2021 Cemig was called and participated in the periodical meetings, presenting projects in the area in specific panels. In December 2021, Cemig joined the Ambition for the SDGs Program, which is coordinated by the Global Compact, with an expected duration of 6 months.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

84,290

**Describe the aim of your organization's funding**

Rede Brasil for Global Compact has as mission the mobilization of companies and organizations to include the SDGs in their business strategies, creating conditions for a more sustainable future.

CEMIG joined Global Compact with the objective of having greater visibility and transparency in the national and international market and increasing the possibilities of contribution with concrete actions for the construction of sustainable global guidelines.

Cemig, being associated to Rede Brasil and, consequently, to Global Compact, undertakes the role as interlocutor organization of a significant part of the business sector on issues related to sustainability: wants to work with different audiences to find solutions to major global challenges, as well as encouraging new and important business opportunities

The Ambition Program of ODS has the following purposes:

1. Prioritization of the SDGs impacted by the organization.
2. Definition of goals and indicators in line with global benchmarks

3. Linking sustainability goals to existing management and business processes

4. Making public commitments and communicating progress.

By participating in the Ambition Program by ODS, Cemig aims to accelerate its actions in ESG, prioritize ODS most impacted by their activities, undertake ambitious targets and define indicators in line with the SDGs and build a strategy to limit global warming to 1.5°C.

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify

Council of Entrepreneurs for Environment of FIEMG

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

In Climate Change and Air Quality Work Group, that is part of Council of Entrepreneurs for the Environment (CEMA) of FIEMG, discussions are promoted on possible changes in legislation resulting from the implementation of National Policy about Climate change, such as creation of a carbon pricing instrument. The participation of Cemig in CEMA is made through the engagement of Sustainability Management. In 2021, eight meetings were held per year, in which regulatory topics such as the legislation of Minas Gerais, carbon pricing (PL528/2021), and initiatives of the National Confederation of Industry (CNI) related to the topic were discussed.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

0

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

## C12.3c

**(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.**

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### Type of organization

Non-Governmental Organization (NGO) or charitable organization

### State the organization to which you provided funding

Plataforma Ação pelo Clima of Global Compact

### Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

54,290

### Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Through the Plataforma Ação pelo Clima of Rede Brasil of Global Compact, Cemig encourages the incorporation of the Climate Agenda in organizational strategies, contributing to the construction of a resilient and carbon neutral economy in a transparent, socially fair and inclusive way. On February 2021, Cemig participated in the webinar "Presentation of platform AdaptaBrasil MCTI for entrepreneur sector". During the event Cemig participated in a simulation of the use of the tool and its applicability in some Hydroelectric Power Plants, such as for example Irapé Plant at Jequitinhonha River and Três Marias Plant at watershed of São Francisco river. The event was sponsored by Plataforma Ação pelo Clima in partnership with Iniciativa Empresarial em Clima - IEC, MCTi (INPE) and GIZ, having as purpose to present the tool AdaptaBrasil and its use in climate risk analysis for various sectors. In addition, Cemig participated in 8 meetings held by Plataforma Ação pelo Clima, in addition to a series of dialogues in UN High-level dialogue on Energy.

### Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**




**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

 ras-2021-en.pdf

**Page/Section reference**

213/Climate Change

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

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**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

 C2831 CEMIG - Relatório Final INV (DM).pdf

**Page/Section reference**

All pages

**Content elements**

Emissions figures  
Other metrics

**Comment**

## C15. Biodiversity

### C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, board-level oversight	The Biodiversity Policy was proposed by the environmental management of Cemig and approved in the Sustainability Committee. After revisions, it went through approval at the management and superintendence level of the company, followed by management board level and Board of Directors.

### C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Adoption of the mitigation hierarchy approach Commitment to avoidance of negative impacts on threatened and protected species Other, please specify  Cemig seeks to minimize the impact of its activities on biodiversity, considering the hierarchy of impact mitigation (prevent, mitigate, rehabilitate/restore, compensate)	SDG

### C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years

## C15.4

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Law & policy



## C15.5

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify Biomass Affected, indicator of fish death in operative maneuvers of Hydroelectric Power Plants. Measuring indicator of affected biomass of fish in maneuvers (BA)

## C15.6

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
Other, please specify Sustainability Report	Impacts on biodiversity Biodiversity strategy	p. 183-212  1
Other, please specify Cemig Reference Form	Impacts on biodiversity Biodiversity strategy	p. 169-178  2

 1ras-2021-en.pdf

 2FRE.pdf

## C16. Signoff

### C-FI

**(C-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.**

### C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Claudio Costa Bianchini	Other, please specify Deputy Director of Corporate Communication and Sustainability

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

**Please confirm below**

I have read and accept the applicable Terms