Carbon Disclosure Project

2010

Companhia Energética de Minas Gerais

English Version

Content

Introduction

0.1 Introduction

Companhia Energética de Minas Gerais - Cemig is the largest integrated energy company in the country and was founded in 1952 by the then governor of Minas Gerais, Juscelino Kubitschek de Oliveira. The Cemig Group, comprised of 62 companies, operates in 19 states in the Brazilian energy sector, with a greater focus on the generation, transmission and distribution of electrical energy. Cemig has 65 power plants with a total installed capacity of 6,716 MW, with 98.02% of this capacity coming from renewable sources. It also has 7.5 thousand km of transmission lines and 460 thousand kilometers of distribution lines serving more than 6.8 million customers in 774 municipalities. With these numbers, the group stands as third largest power generator, the third largest group in energy transmission and the largest group in distribution.

On December 31st, 2009, accounting for Cemig Holding, Cemig Distribuição and Cemig Geração & Transmissão altogether, the Company had 9,746 employees. The group's consolidated operating revenues reached R$ 17.4 billion in 2009. Cemig holds 12% of the electrical energy market in Brazil (both captive and free markets), positioning itself as a major force in the consolidation of the Brazilian electric sector. Due to its commitment to the principles of environmental responsibility and to its consistency and technical excellence, Cemig is recognized internationally as a benchmark in sustainability.

Cemig's vision, mission and values are the pillars that support the Company's affairs, direct its strategic guidelines and its development. In addition, they establish the premises for its management system, respecting and taking into account the needs of stakeholders.

Vision

To be, in 2020, one of the two largest energy groups in Brazil in terms of market value, with a significant presence in the Americas and to be a world leader in sustainability in the sector.

Mission

To perform activities in the energy sector with profitability, quality and social responsibility.

Values

- Integrity – to honor commitments and act with transparency and honesty.
- Ethics – to do good. To respect people's dignity.
- Wealth – to generate goods and services for the welfare and prosperity of customers, shareholders, employees, suppliers and society.
- Social responsibility – to supply safe, clean, reliable and cost-effective energy; contributing to economic and social development.
- Enthusiasm at work – to act with commitment, creativity and dedication.
- Entrepreneurial spirit – to show initiative, to dare and to decide, observing the Company's guidelines.

Cemig is a mixed economy company controlled by the government of Minas Gerais, which owns 51% of its common stock. Besides the controller, the Company has 116,000 shareholders in 44 countries, and shares listed on the São Paulo Stock Exchange - Bovespa, in New York – the New York Stock Exchange - NYSE and on the Madrid Stock Market Latin American Latibex.

Cemig was selected in 2009, for the tenth consecutive year, to be part of the select list of companies in the DJSI World – Dow Jones Sustainability Index. The Company has been part of the index since its creation in 1999 and is the only company in the Latin American electric sector to be

part of this Index. In these ten consecutive years of participation in the Dow Jones Index, Cemig was considered a world leader in the electric sector in the 2005/2006 periods and a world leader in the utilities supersector in 2009/2010 and 2007/2008. The utilities supersector encompasses the companies that provide electric energy services, natural gas distribution, sanitation and other public utility services. This leadership consolidates the Cemig Group's commitment to corporate sustainability. For the fifth consecutive time, Cemig was selected to be part of the Corporate Sustainability Index portfolio maintained by BOVESPA, the São Paulo Stock Exchange, for the period from December 2009 to November 2010. This Index reflects the return on a portfolio composed of shares of companies with a recognized commitment to social responsibility and sustainability in the Brazilian corporate environment. Cemig has been included in this Index since it was created in 2005.

Cemig was awarded the status of "Prime" by Oekom Research, a sustainability rating agency headquartered in Germany. With the Prime classification, Cemig became eligible to receive investments from institutions that take the German agency's criteria into consideration, which means having access to approximately 90 billion Euros. Cemig is the only company in the Brazilian utility sector ever to be classified as Prime by Oekom.

In November of 2009, the National Conservation and Rational Use of Energy Award was presented to Cemig by the Ministry of Mines and Energy. This Award recognizes the Company's important contribution towards sustainable development by means of the implementation of electric energy efficiency and conservation programs in the country.

0.2 Reporting Year

01/01/2009 to 31/12/2009

0.3 Are you participating in the Walmart Sustainability Assessment?

No

0.4 Modules

Electrical

0.5 Country list configuration

Brazil

Governance

1. Group and Individual Responsibility: (CDP 2009 Q25)

1.1 Where is the highest level of responsibility for climate change within your company?

(x) Governance is at the board committee or other executive body level

(x) Sub-set of the board: Choose this value if individual board members form a sub-group that is responsible for climate change in the company;

If it is at board committee or other executive body level:

1.2 What is the mechanism by which the board committee or other executive body reviews the company's progress and status regarding climate change?

Cemig reviews its performance, risks and opportunities related to climate change by means of the establishment of Workgroups directed towards specific subjects. The first Workgroup related to climate issues was created in December of 2006, with the purpose of conducting an analysis of the Clean Development Mechanism – CDM and its opportunities for Cemig. In July of 2008 the Energy Generation Climate-Related Strategy Workgroup was created with the objective of developing an Energy Generation Climate-Related Strategy for Cemig, in view of the perspectives of alterations in the generation matrix in the next few years, considering the expected alterations in emissions of greenhouse gases resulting from CEMIG's generation matrix, defining the initiatives to work towards a more sustainable strategy, considering the Company's reality and the available generation sources.

In organizational terms, Cemig's Executive Board is constituted of 9 Executive Officers, elected by the Board of Directors. In the Company's Bylaws, it has been defined that one of attributions of the **Vice-President** is to propose policies and directives for sustainability, social responsibility, the environment and improvements in quality, including the coordination of social and environmental projects of a strategic and corporate nature, such as projects related to climate change.

In addition to the Deputy CEO, Cemig has the following areas whose attributions relate directly to the Company's climate change actions:

- **Executive Trading Office** has the attribution to manage the commercialization, through interaction with the Executive New Business Development Office, of the Company's carbon credits.
- **Executive New Business Development Office** has the attribution to undertake the prospection and analysis of business opportunities related to taking advantage of opportunities related to carbon credits
    - **New Business Management Office** has the attribution to structure and format the model for obtaining, commercializing and disseminating business opportunities related to taking advantage of opportunities related to carbon credits
    - **SHPP Projects and other Alternative Sources of Energy Management Office** has the attribution to structure and format the model for obtaining, commercializing and disseminating business opportunities related to taking advantage of opportunities related to carbon credits.

If it is at a lower level:

1.3 Please explain how overall responsibility for climate change is managed within your company.

Not Applicable

Individual Performance: (CDP 2009 Q26)

1.4 Do you provide incentives for the management of climate change issues, including the attainment of greenhouse gas (GHG) targets?

No

If so,

1.5 Please complete the table.

Who is entitled to benefit from those incentives?	The type of incentives
Not Applicable	Not Applicable

Risks and Opportunities

2. Process to Identify Risks and Opportunities: (CDP 2009 Q1-6)

2.1 Describe your company's process for identifying significant risks and/or opportunities from climate change and assessing the degree to which they could affect your business, including the financial implications.

Cemig evaluates the risks and opportunities related to climate change by means of the establishment of Workgroups, as is the case with the risks and opportunities related to climate change. The risks inherent to Cemig's corporate activities are evaluated in accordance with their probability of occurrence and by their impact on the various businesses in the value chain, mainly considering the perspectives of alterations in the electric energy generation matrix in the next few years.

In order to make Risk Management possible, Cemig has established strategic control indices aimed at reducing the financial, environmental and social exposure and the tangible and intangible impacts of these risks.

In order to identify the opportunities related to climate change, Cemig created a workgroup that identified opportunities for the development of Clean Development Mechanism – CDM projects and also developed an analysis tool for evaluating CDM projects for each new project to be executed by the Company. This group conducted a diagnosis to identify which projects already implemented, under development or in the study stage fit into and are eligible for the CDM and listed all the potential generation of Carbon Credits for Cemig.

Each project analyzed underwent the following stages: information collection, feasibility assessment and description of technical and financial characteristics. This was done to identify the eligibility for the CDM and to measure the potential for generating Carbon Credits – CERs (Certified Emission Reductions).

As described in question 1.2, Cemig has structured two areas responsible for CDM projects: the New Business Management Office and the Wholesale Energy Purchase and Sales Management Office. These areas have attributions related to prospecting projects and analyzing business opportunities involving carbon credits and their commercialization.

3. Regulatory Risks: (CDP 2009 Q1)

3.1 Do current and/or anticipated regulatory requirements related to climate change present significant risks to your company?

Yes

3.2 What are the current and/or anticipated significant regulatory risks related to climate change and the associated countries/regions and timescale?

Risk	Region/Country	Timescale in years	Comment
International agreements	Brazil	0 – 5 years	
Carbon taxes	Brazil	0 – 5 years	
Voluntary agreements	Brazil	0 – 5 years	
General environmental regulations, including planning	Brazil	0 – 5 years	

3.3 Describe the ways in which the identified risks affect or could affect your business and your value chain.

Cemig recognizes the regulatory risks resulting from climate change and identifies political-regulatory mitigation measures focused on carbon tax issues, regulation and emissions trading as the main consequences. The Company also considers that these regulatory measures will multiply at an exponential rate in the medium and long term, in order to overcome the economic losses resulting from climate change, converging with Nicholas Stern's report "The Economics of Climate Change", which deals with the economic impacts of global warming.

With respect to international and/or voluntary agreements, Cemig, through its management, understands that its exposure to these risks, within international scopes, may be considered low in the short term, as the majority of its activities are currently concentrated in Brazil. It should be noted that Brazil does not belong to Annex 1 of the Kyoto Protocol and, therefore, does not have obligatory Greenhouse Gas (GHG) reduction goals until 2012. However, Cemig believes that after the expiration of the Kyoto Protocol (Post 2012) new agreements may be signed, in which reduction targets may be defined for non-Annex 1 countries or sector goals for GHG emission reductions may be established.

Regarding environmental regulations, the Company also recognizes the regulatory risks related to domestic norms that establish the need to invest in mitigation measures for activities that emit high levels of carbon in the generation of energy, such as the utilization of thermoelectric plants. These measures will become applicable to the energy generation sector, which will be responsible for 40% of total global emissions in the year 2100, according to the B2 scenario of the Intergovernmental Panel on Climate Change – IPCC. It is worth noting that these possible regulations will have a low impact on Cemig, as 98% of its energy generation capacity comes from renewable sources.

3.4 Are there financial implications associated with the identified risks?

Yes

3.5 Please describe them.

This information is strategic and confidential and cannot be released.

3.6 Describe any actions the company has taken or plans to take to manage or adapt to the risks that have been identified, including the costs of actions.

Cemig's main action aimed at minimizing regulatory risks is the maintenance of an energy matrix primarily comprised of renewable sources. In 2009 Cemig acquired a 49% equity stake in 3 wind farms in the state of Ceará with a total installed capacity of 99.6 MW and is investing in the construction of 2 more Hydroelectric plants and 6 SHPPs (small hydropower plants), which together will have a total installed capacity of 406 MW (considering Cemig's equity stake in the enterprises).

Cemig is working to deal with these risks in advance by implementing preventive measures in different scopes, such as the calculation of its GHG emissions since 2004, in addition to actions aimed at reducing its emissions. The Company also invests in mitigation measures by means of energy efficiency programs.

In the monitoring process for some identified regulatory risks, in addition to mitigation actions, the Company also maintains teams active in regulatory forums in the areas of water (Water Resource Councils, Basin Committees and Agencies) and Energy (Regulatory agencies and associations of

companies in the electric sector), in addition to participating in forums and workgroups, among which are the State of Minas Gerais Climate Change Forum and the Energy and Climate Change Technical Chamber – CTClima.

If a company selects "No" in question 3.1:
3.7 Please explain why you do not consider that your company to be exposed to significant regulatory risks – current or anticipated.

Not Applicable

If a company selects "Don't know" in question 3.1:
3.8 Please explain why not

Not Applicable

4. Physical Risks: (CDP 2009 Q2)

4.1 Do current and/or anticipated physical impacts of climate change present significant risks to your company?

Yes

4.2 What are the current and/or anticipated significant physical risks, and their associated countries/ regions and timescales?

Risk	Region/Country	Timescale in years	Comment
Changes in precipitation patterns	Brazil	21 – 50 years	
Changes in frequency of extreme weather events	Brazil	0 – 5 years	
Uncertainty of physical risks	Brazil	6 – 10 years	

4.3 Describe the ways in which the identified risks affect or could affect your business and your value chain.

Cemig evaluates and considers its exposure to physical risks related to climate change. The main influence on this is the fact that a large portion of its energy generation capacity is concentrated in the utilization of hydroelectric plants.

In relation to changes in precipitation patterns and changes occurring in natural resources, the Company considers the amplitude of the impacts on its activities in the short and medium term to be low. This assessment is based on the 4th Report from the IPCC, which presents a vision of diverse scenarios related to the effects of climate change on the terrestrial water system. For the period between the middle and the end of the 21st century, the IPCC indicates that the Southeastern region of Brazil may experience small oscillations in the water cycle which, possibly, may result in an increase in hydraulic production if there is an increase of 3 to 5ºC in global temperature.

On the other hand, specific studies on changes in precipitation patterns for the domestic scenario present unfavorable results in relation to the variation in the availability of water in the Paraná River hydrographic basin, where a large number of the Company's plants is located. Precipitation could be reduced by 2.4% in this region by 2050, according to the report "Climate Change and Energy Safety in Brazil" produced by the Alberto Luiz Coimbra Post-Graduate Engineering Studies Institute (Coppe) – UFRJ.

With regard to the uncertainties surrounding physical risks, whatever the future scenario, Cemig must be prepared, since 97% of its installed capacity is composed of hydroelectric plants.

Cemig and its controlled companies have 65 plants, 59 being hydroelectric plants, 4 thermoelectric plants and two wind farms, with a total installed capacity of 6,716 MW. It should be noted that of the four existing thermoelectric plants, only one uses fuel oil as its fuel. Of the rest, one is deactivated (and thus does not contribute to the Company's total installed capacity) and two utilize process gases and therefore do not emit greenhouse gases.

Regarding changes in the frequency of extreme weather events, Cemig also considers the risks in its energy distribution and transmission activities and conducts studies to identify the most common extreme events, such as strong winds, floods, droughts, torrential rains and other events. These factors may impact the energy distribution and transmission processes as well as the operation of the hydroelectric plant reservoirs.

4.4 Are there financial implications associated with the identified risks?

Yes

4.5 Please describe them.

This information is strategic and confidential and cannot be released.

4.6 Describe any actions the company has taken or plans to take to manage or adapt to the risks that have been identified, including the costs of those actions.

Due to the physical risks to its activities, Cemig invests in various preventive monitoring actions.

Regarding the risks of changes in precipitation patterns and the frequency of extreme weather events, the Company has adopted the following actions:

- Operates an extensive monitoring network that continually monitors hydro-climatological events, with the goal of conducting analyses and studies on the effects of climate change;
- Engages in specific flood control, in addition to producing daily meteorological forecasts, including storm warnings to inform and orient local communities about the situation in the rivers (where level and flow monitoring is conducted). The Company also monitors hydro-climatological events at about 150 stations located along rivers and reservoirs;
- Makes available to society the operative data from the Company's main reservoirs, which originate from its Hydrometeorological Telemetry System. The system is composed by 95 field telemetry stations and transmits online data, which are capable of assisting various sectors of the Company and society in hydro-climatological monitoring;
- Has a Storm Localization system – SLT, which operates in real time with the objective of detecting, processing, distributing and storing information on atmospheric discharges, thereby assisting with Cemig's meteorological warnings;
- Conducts a revision activity which is called "Cheia de Projeto do Vertedor" (Spillway Project), with the objective of assessing the operational conditions of the spillways at the hydroelectric plants and whether there is a need for any operational or physical adjustments to the dam;
- Works to adopt alternative distribution network technologies (protected and insulated networks) in order to improve coexistence between urban trees and overhead distribution networks, avoiding interruptions in the supply of electric energy caused by falling trees. To this end, in March 1999 the Company adopted the Protected Distribution Network – RDP as

a definitive replacement for conventional naked networks and was the first Utility in Brazil to adopt the RDP as the minimum standard for urban service;
- Undertakes directional pruning of urban trees –considered the most appropriate technique for use near overhead distribution networks – and offers arboriculture and tree pruning courses for various municipal governments in the State of Minas Gerais;
- Has 5,942 km of protected and insulated distribution networks in the primary system, representing 18% of the total of primary urban networks. In relation to secondary urban networks, there are 25,216 km of insulated networks, representing 45% of the secondary urban networks;

In relation to changes in natural resources and other uncertainties regarding physical risks, the Company has adopted the following actions:
- Consolidated the Dam Safety Plan, in which directives were established for the development of an Emergency Action Plan and the updating of the Intelligent Dam Control and Safety System – INSPETOR. In 2009, over 100 dam maintenance works, generation infrastructure upgrade and environmental compliance projects were carried out, with an emphasis on the reassessment and reestablishment of the structural and functional safety conditions of the dams and associated civil structures;
- Has Emergency Action Plans for some plants, for any eventual dam ruptures, containing communication flowcharts, the names of those responsible for the response actions, the means of detecting the emergency and the warning level, in addition to the initiation of the development of downstream flood maps, and; monitors wildfires in order to protect its transmission lines and monitors the behavior of the temperature, anticipating trends both in physical growth and temperature anomalies. This activity results in safer planning for generation and transmission line loads, thereby minimizing the risk of temporary and structural interruptions in the interconnected electric system.

If a company selects "Don't know" in question 4.1:
4.7 Please explain why you do not consider your company to be exposed to significant physical risks – current or anticipated.

Not Applicable

If a company selects "Don't know" in question 4.1:
4.8 Please explain why not.

Not Applicable

5. Other Risks: (CDP 2009 Q3)

5.1 Does climate change present other significant risks – current and/or anticipated – for your company?

Yes

5.2 What are the current and/or anticipated other significant risks, and their associated countries/ regions and timescales?

Risk	Region/Country	Timescale in years	Comment
Reputational risks	Brazil	0 – 5 years	
Financial risks	Brazil	0 – 5 years	
Unpredictability of risks	Brazil	6 – 10 years	

5.3 Describe the ways in which the identified risks affect or could affect your business and your value chain.

Cemig considers, in addition to physical and regulatory risks, that it is exposed to other risks related to climate change, resulting indirectly from climactic alterations that may influence the management and operation of the energy generation, transmission and distribution businesses.

Considering the unpredictability of the risks, Cemig considers the possibility of changes in energy consumption patterns due to the influence of global warming due to an increase in the demand for energy for use in refrigeration and air conditioning systems to be a strategic risk.

In addition, the risks related to the Company's reputation and image due to its positioning and its actions related to climate issues are considerable.

Regarding financial risks, Cemig believes that all the risks identified in the answers to the previous questions have financial implications for the Company.

5.4 Are there financial implications associated with the identified risks?

Yes

5.5 Please describe them.

This information is strategic and confidential and cannot be released.

5.6 Describe any actions the company has taken or plans to take to manage or adapt to the risks that have been identified, including the costs of those actions.

Considering the risks related to its reputation, Cemig adopts mitigation actions for the impacts related to climate change described in the answers to the previous questions, in addition to being transparent, in terms of its sustainability actions, with its stakeholders. Of note among the communication and transparency actions undertaken is the publication of its sustainability report since 2006, which consolidate its main actions and strategies related to economic, environmental and social issues, and the Company's participation as a respondent in the Carbon disclosure Project since 2007.

In order to manage reputation and image risks, Cemig relies on indicators integrated into the Balanced Scorecard – BSC, in addition to an internal management process that, since 2008, has included a workgroup formed of representatives from all the executive offices, which is also responsible for the internal alignment of projects aimed at strengthening the brand among the public with which the Company relates. Cemig hired Brand finance to conduct an assessment of its brand (including all the companies in the Group), which was valued at R$ 1.3 billion in 2009.

If a company selects "Don't know" in question 5.1:
5.7 Please explain why you do not consider your company to be exposed to other significant risks – current or anticipated.

Not Applicable

If a company selects "Don't know" in question 5.1:
5.8 Please explain why not.

Not Applicable

6. Regulatory Opportunities: (CDP 2009 Q4)

6.1 Do current and/or anticipated regulatory requirements related to climate change present significant opportunities for your company?

Yes

6.2 What are the current and/or anticipated significant regulatory opportunities, and their associated countries/ regions and timescales?

Opportunity	Region/Country	Timescale in years	Comment
International agreements	Brazil	0 – 5 years	
Emission reporting obligations	Brazil	0 – 5 years	
Voluntary agreements	Brazil	0 – 5 years	

6.3 Describe the ways in which the identified opportunities affect or could affect your business and your value chain.

The main opportunities identified by Cemig, in relation to international agreements, are the Clean Development Mechanism – CDM projects – according to the directives of the Kyoto Protocol, since Brazil, as a country that does not belong to annex 1, does not have GHG reduction goals. The Company also recognizes opportunities resulting from voluntary agreements, with the emergence of alternative markets for the development of carbon credit projects and commercialization, when not eligible within the standards of the UNFCCC.

In relation to the growing obligations to report its GHG emissions, Cemig considers them to be an opportunity to elevate the level of transparency in communication with stakeholders, thereby promoting a perception of increased value of its brand in the market. Some examples of this communication are the sustainability report, participation in sustainability indices such as the ISE-Bovespa and the Dow Jones sustainability Index and participation in Oekom Research and the Carbon Disclosure Project, in which its GHG emissions are reported every year.

6.4 What are the financial implications associated with the identified opportunities?

Yes

6.5 Please describe them.

The main financial implications related to the opportunities identified are related to the generation of carbon credits via CDM projects within the scope of the Kyoto Protocol. Cemig currently has 3 CDM projects, for which an estimated 443,000 tonnes of CO_{2eq} will be generated, which will be valued in accordance with the market at the time of their sale. Information on the three projects will be provided in question 21.5.

6.6 Describe any actions the company has taken or plans to take to exploit the opportunities that have been identified, including the investment needed to take those actions.

Through a diagnosis to identify possible projects within the scope of the CDM (described in the answer to question 2.1), Cemig, was able to identify opportunities which affect in a positive manner its commercial activities. The CDM incentive, therefore, contributed towards the solidification of these projects and the sustainable development of the region.

Some of the possibilities mapped that are to be undertaken within the CDM field are:
- Fuel replacement (conversion of boilers to burn natural gas);
- Reforestation of riparian forests and planted forests;
- Replacement of SF_6 switches;
- Energy efficiency projects such as heating water with solar energy in low income housing projects;
- Construction of new SHPPs and Hydroelectric Power Plants;
- Increasing the power of Hydroelectric Power Plants, SHPPs, Wind farms and co-generation plants;

The Company has signed a contract with a specialized consulting firm to develop and monitor CDM projects, which may be based on the opportunities identified by Cemig in areas such as the installation/repowering of SHPPs and wind farms and other sources of alternative energy.

Currently, Cemig has a CDM project installed at the Barreiro Thermoelectric Power Plant, which operates using an electric energy production process based on steam, which is produced by burning the residual gases from the industrial process at a steel mill. The Barreiro Thermoelectric Power Plant project was approved by the Executive Committee of the United Nations Framework Convention on Climate Change – UNFCCC. Though it owns 100% of the assets, Cemig has ceded the carbon credits from this project to the V&M do Brasil steel company, as it is the supplier of the fuel used in the cogeneration plant.

Cemig, through its subsidiary Efficientia, is undertaking 3 more energy cogeneration projects in the CDM field using gas from blast furnaces in the iron/steel sector. This gas, which is a residue from the production of pig iron, comes from charcoal which is produced using wood from reforested areas. The gas is then burned in a boiler to produce steam and generate electric energy simultaneously. It is a clean and renewable alternative source of energy for the electric system. One of these projects is being conducted with Siderúrgica Pitangui, and is currently in the approval and registration stage by the EB – UNFCCC (Executive Committee of the United Nations Framework Convention on Climate Change).

Cemig has other CDM projects related to Small hydropower Plants (SHPPs) underway, such as: SHPPs Cachoeirão -27 MW; Dores de Guanhães – 14 MW; Senhora do Porto – 12 MW; Fortuna II – 9 MW; and Jacaré – 9 MW, in which the Company has a 49% equity stake. The Project Designg Documents (PDDs) have been concluded for these projects and they are currently in the validation phase by the Designated Operational Entities (DOEs).

If a company selects "Don't know" in question 6.1:
6.7 Explain why you do not consider your company to be presented with significant opportunities – current or anticipated.

Not Applicable

If a company selects "Don't know" in question 6.1:
6.8 Please explain why not.

Not Applicable

7. Physical Opportunities: (CDP 2009 Q5)

7.1 Do current and/or anticipated physical impacts of climate change present significant opportunities for your company?

Yes

7.2 What are the current and/or anticipated significant physical opportunities and their associated countries/ regions and timescales?

Opportunity	Region/Country	Timescale in years	Comment
Changes in precipitation patterns	Brazil	21 – 50 years	
Induced changes in supply chain and/or customers	Brazil	0 – 5 years	

7.3 Describe the ways in which the identified opportunities affect or could affect your business and your value chain.

Identifying the physical changes resulting from changes in precipitation patterns as an opportunity and based on the 4th Report from the IPCC, in the Southeastern and Southern regions of Brazil, where Cemig has the majority of its reservoirs, water availability may oscillate between a stable level and an increase in water production the closer one gets to the higher southern latitudes. As a result and in accordance with this report, the production of hydroelectric energy may increase with climate alterations.

Cemig also believes that variations in temperature may influence the increase in the demand for energy, due to the greater utilization of refrigerators which, consequently, increase the commercialization of energy, economically expanding the Company's activities.

7.4 Are there financial implications associated with the identified opportunities?

Yes

7.5 Please describe them.

This information is strategic and confidential and cannot be released.

7.6 Describe any actions the company has taken or plans to take to exploit the opportunities that have been identified, including the investment needed to take those actions.

Cemig invests in the expansion of its Generation System. Most of the investment is concentrated in the construction of hydroelectric power plants. These are the main projects under construction (Enterprises: Power; Cemig Equity Stake; Invested up to 2009; Scheduled initiation of operations):

- Baguari Hydropower Plant: 140 Mw; 34%; R$ 179 million; 2nd half / 2009
- Dores de Guanhães, Senhora do Porto, Fortuna II and Jacaré SHPPs: 44 MW; 49%; R$ 10 million; 16 to 20 months after issuance of Service Order
- Santo Antônio Hydropower Plant: 3,150 MW; 10%; - ; 1st half/2012
- Pipoca SHPP: 20 MW; 49%; R$ 17 million; 1st half/2010
- Paracambi SHPP: 25 MW; 49%; - ; 2nd half/2011

Cemig is always looking for other opportunities resulting from climate change for the energy sector. To this end, the Company undertakes projects which include:

- Encouraging SHPP and co-generation projects;
- Repowering its hydroelectric plants;
- Providing incentives for the production of technology and the development of alternative energy source projects, such as: solar, wind, biomass, fuel cells, biodiesel, among others;

The investments in SHPPs are part of the Minas SHPP Program, run by Cemig with the objective of expanding its generation system by means of the installation of SHPPs in the State of Minas Gerais.

Cemig has been conducting a broad repowering program for its hydroelectric plants. The goal is to extend the useful life of the plants. The Repowering Project includes technological updates to the regulation, excitation and protection systems, in addition to renovations of the generators and turbines. The repowering of the generation plants, in addition to the extension of their useful lives, increases operational reliability, provides greater physical and electrical protection and better responses to oscillations in the system.

In 2009, the Company started planning the repowering of 10 generation units, four at the Volta Grande Plant and 6 at the São Simão Plant, scheduled for 2010 and 2018.

If a company selects "No" in answer to 7.1, it is then asked:
7.7 Explain why you do not consider your company to be presented with significant opportunities – current or anticipated.

Not Applicable

If a company selects "Don't know" in answer to 7.1, it is then asked:
7.8 Please explain why not.

Not Applicable

8. Other Opportunities: (CDP 2009 Q6)

8.1 Does climate change present other significant opportunities – current and/or anticipated – for your company?

Yes

8.2 What are the current and/or anticipated "other" significant opportunities and their associated countries/regions and timescales?

Opportunity	Region/Country	Timescale in years	Comment
Increased efficiency of goods and services	Brazil	0 – 5 years	
New energy products or services	Brazil	6 – 10 years	
Reputational opportunities and increased ability to attract and retain talent	Brazil	0 – 5 years	

8.3 Describe the ways in which the identified opportunities could affect your business and your value chain.

Regarding new energy products or services, due to the physical characteristics of Brazil (strong sunshine and winds and heavy precipitation), Cemig has identified projects for the utilization of renewable energy sources as other opportunities, with wind, solar, biomass and biodiesel energy being of special interest.

In relation to the increase in the efficiency of assets and services, the Company also identifies the promotion of the use of Natural Gas through its subsidiary, Gasmig, as another opportunity. Gasmig supplies natural gas for use in industry and automobiles, providing a substitute for more polluting vehicles. In 2009, Gasmig began the expansion of its distribution network, reaching new clients that may rely upon natural gas to contribute towards a reduction in GHG emissions from their operations.

Through Efficientia, a services company owned by Cemig, the Company coordinates projects with the objective of promoting a reduction in costs and energy savings at the facilities of Cemig's large industrial and commercial clients.

Another opportunity identified by Cemig are the gains related to the Company's image and reputation that may be measured and expressed by means of indices such as the Dow Jones Sustainability Index (DJSI), the São Paulo Stock Exchange Corporate Sustainability Index (ISE Bovespa), OEKOM Research and other examples of local recognition.

8.4 Are there financial implications associated with the identified opportunities?

Yes

8.5 Please describe them.

This information is strategic and confidential and cannot be released.

8.6 Describe any actions the company has taken or plans to take to exploit the opportunities that have been identified, including the investment needed to take those actions.

The Company undertakes programs aimed at the sustainable consumption of energy, including processes that are more efficient from an energy point of view, in partnership with its residential, commercial, industrial and agricultural clients.

In 2009 Efficientia signed six contracts that will modernize and improve the efficiency of equipment and processes in various industrial sectors in the state of Minas Gerais and one contract with BHTRANS, a mixed economy enterprise in which the Belo Horizonte municipal government holds a majority equity stake, to improve the efficiency of the municipal traffic light system.

In the same year, R$ 11.9 million were invested in the implementation of projects, representing energy savings of 24,029.53 MWh/year, with a reduction in peak demand of 2.0 MW. This savings corresponds to the annual consumption of approximately 16,700 residences with an average consumption of 120 kWh/month, representing an annual reduction in emissions of about 466 tonnes equivalent of CO_2.

Efficientia also coordinates various projects in the sugar-alcohol sector and is managing the construction of new transmission lines and substations to connect sugar and alcohol plants to Cemig's system. These initiatives are allowing the energy generated through co-generation utilizing

sugar cane bagasse (production residue) to be injected into the system, increasing the contribution from renewable energy sources to the national energy matrix. In 2009 five contracts of this nature were signed in the Vale do Tijuco, Paracatu, Chaveslândia, João Pinheiro and Frutal regions, all in Minas Gerais. These contracts will result in a power injection of 176 MW into the system.

Gasmig, a natural gas distribution company of the Cemig Group, was constituted in July 1986 to engage in the distribution of natural gas through pipelines in Minas Gerais. In August 2004, Cemig and Petrobras signed an Association Agreement, according to which Cemig agreed to sell a 40% stake in Gasmig to Gaspetro, a subsidiary of Petrobras. The increase in the natural gas distribution network allows more clients to have the opportunity to opt for a fuel less polluting than other petroleum and coal derivatives.

Among the natural gas distribution capacity expansion projects for Gasmig was the conclusion of the first stage of the Southern Minas Project, with investments of R$ 144 million. The Project entered into operation in January of 2010. These networks extend for 114.4 km and are supplied by the Paulínia – Jacutinga gas pipeline. 188 km of the planned 282 km of the second phase of the Vale de Aço distribution pipeline project also started construction in 2009. Investments in this project totaled R$ 421 million through to 2009.

In 2009 Gasmig sold 551,105,000 m^3 of gas, with 73.9% being for industrial use, 9.7% for automotive use and 16.4% for thermal generation. Its 695 km network served 274 clients in 23 municipalities in the Belo Horizonte Region, the Zona da Mata region, the Vale do Aço region and the Sul de Minas region.

In an effort to take advantage of the direction the Company is headed, Cemig has undertaken a series of initiatives related to the generation of energy, energy efficiency, biofuels and activities in general that may promote some type of environmental gain, a reduction in GHG emissions and encourage new technologies. Below are some areas of work that exist in the Company today.

Wind Power

In 2009 the Company acquired a 49% equity stake in three wind farms owned by Impsa and located in the state of Ceará, namely: Praias de Parajuru (28.8 MW), inaugurated in August of 2009, Praia do Morgado (28.8 MW) and Volta do Rio (42.0 MW), both under construction.
Also in that year Cemig finalized the Mapping of Wind Potential throughout the state of Minas Gerais, where promising sites are also being identified for the implementation of new enterprises.
The Company is currently developing, in partnership with UFMG – the Federal University of Minas Gerais, small wind-powered electric energy generators adapted for installation in mountainous regions that have the potential to serve remote locations.

Solar Energy

Cemig's pioneering work in the area of solar energy, both in its photovoltaic form and in its solar thermal form, which utilizes flat collectors and solar concentrators, has helped to create energy offer alternatives and increase efficiency for consumers in the state of Minas Gerais. In 2009, Cemig undertook the planning, the bidding processes and the structuring for the installation of 15,000 solar heating systems to be installed in 2010 and 2011. It is estimated that this project will result in a 50% reduction in electric energy consumption in each residence with an installed system. The Company is also conducting experimental studies on district solar heating systems that have the potential for lower acquisition, installation and maintenance costs.

The first solar thermoelectric plant in Brazil is installed at Cefet-MG – the Federal Technological Education Center of Minas Gerais. It is a 10 kW experimental unit developed in partnership with Cemig.

Cemig has already installed, as part of the Light for Everyone Program, photovoltaic energy generation systems at 1,667 residences that, added to the units installed through previous programs, amount to 2,500 residences, schools and healthcare clinics. In 2009, about 51 pieces of old equipment were replaced and performance analysis was undertaken for four photovoltaic systems that were interconnected with the electric network in 2008. This initiative is aimed at obtaining subsidies for the installation of large photovoltaic generation units in the medium term. In the research field, Cemig continues to invest in projects aimed at the purification of metallurgical silicon and the development of low cost photovoltaic cells.

It should also be noted that Cemig and GTZ – the German Technical Cooperation Agency are cooperating to study the feasibility of converting the Mineirão Stadium and Mineirinho Arena into buildings supplied by photovoltaic energy.

Biomass

Cemig is conducting R&D projects related to biomass, such as the production of biogas from sanitary landfills, biodigestors for cattle farming residue, the utilization of vegetable oils and alcohol in energy generation systems and microturbines powered by sawdust.

It is also important to point out that, in 2009, partnerships were established for the development of technologies for the generation of electricity using gases from charcoal production sites, from energy forest cultivation residue and from the production of charcoal residue. There is also an ongoing project to generate energy through the gasification of biomass to activate fuel cells.

Solid Residues

Cemig is looking for viable opportunities to generate energy from solid urban residue. To this end, the Company is conducting the “Assessment of technological options for the generation of electricity from urban residue and tree clippings” research project, which will allow the Company to learn better ways of utilizing the energy in urban residue from an environmental point of view.

Biodiesel

Cemig supports the development of technologies for the production and use of biodiesel through research projects and partnerships with other state bodies. The Biofuel Laboratory has thus been built, in partnership with Cetec. The laboratory has a production capacity of 1,000 liters/day of biodiesel.

In 2009 the Company finalized the “Production of biodiesel for the generation of electric energy with microturbines and stationary engines” project and began testing a pickup truck in the Cemig fleet that utilizes B100 biodiesel. A biodiesel distributed generation system analysis project is currently being negotiated.

Hydrogen and Fuel Cells

Cemig has a laboratory for the production of hydrogen via electrolysis and via the processing of ethanol, the project for which has been concluded. The main challenges in making this energy feasible are reducing production costs and storing and transporting this fuel. The hydrogen may be used initially as a fuel for tests in fuel cells, to supply internal demand and also as a chemical element for the purification of silicon, which is to be used in the photovoltaic cell R&D project.

Cemig has been investing in the research and development of fuel cell technologies since 2000 through projects linked to low temperature (PEM) and high temperature (SOFC) fuel cells, specifically in the development of new cell materials and elements, such as polymeric membranes, the application of carbon nanotubes in protonic membranes and the application of DLC (Diamond-like Carbon) techniques aimed at reducing cost and dependence on external components.

In 2009, a prototype low power SOFC cell was produced and an integrated energy generation system is currently being developed using the gasification of biomass to activate SOFC fuel cells.

Reputation improvement

In relation to the opportunities identified and that involve the Company's image and reputation, of note is Cemig's participation in important sustainability indices and recognition bestowed for its corporate sustainability practices.

Cemig was selected in 2009, for the tenth consecutive year, to be part of the select list of companies in the DJSI World – Dow Jones Sustainability Index. The Company has been part of the index since its creation in 1999 and is the only company in the Latin American electric sector to be part of this Index. In these ten consecutive years of participation in the Dow Jones Index, Cemig was considered a world leader in the electric sector in the 2005/2006 period and a world leader in the utilities supersector in 2009/2010 and 2007/2008. The utilities supersector encompasses the companies that provide electric energy services, natural gas distribution, sanitation and other public utility services. This leadership consolidates the Cemig Group's commitment to corporate sustainability.

For the fifth consecutive time, Cemig was selected to be part of the Corporate Sustainability Index portfolio maintained by Bovespa, the São Paulo Stock Exchange, for the period from December 2009 to November 2010. This Index reflects the return of a portfolio composed of shares of companies with a recognized commitment to social responsibility and sustainability in the Brazilian corporate environment. Cemig has been included in this Index since it was created in 2005.

Cemig was also awarded the status of "Prime" by Oekom Research, a sustainability rating agency headquartered in Germany. With the Prime classification, Cemig became eligible to receive investments from institutions that take the German agency's criteria into consideration, which means having access to approximately 90 billion Euros. Cemig is the only company in the Brazilian utility sector, which encompasses electric energy, natural gas distribution, sanitation companies and other public utility companies, ever to be classified as Prime by Oekom.

In addition, in November 2009 the National Conservation and Rational Use of Energy Award was presented to Cemig by the Ministry of Mines and Energy. This Award recognizes the Company's important contribution towards sustainable development by means of the implementation of electric energy efficiency and conservation programs in the country.

If a company selects "No" in answer to 8.1, it is then asked:
8.7 Explain why you do not consider your company to be presented with significant opportunities – current or anticipated.

Not Applicable

If a company selects "Don't know" in answer to 8.1, it is then asked:
8.8 Please explain why not.

Not Applicable

Strategy

9. Strategy: (New for CDP 2010)

9.1 Please describe how your overall group business strategy links with actions taken on risks and opportunities (identified in questions 3 to 8), including any emissions reduction targets or achievements, public policy engagement and external communications.

Cemig employs a strategy of continually investing in an energy generation matrix strongly based on renewable sources, while investing at the same time in research and development of alternative generation sources. The Company's expansion investment plan does not call for, in the short and medium term (2010/2013), the construction of thermoelectric plants in Cemig's generation system.

As detailed in the answers to previous questions, the actions undertaken by Cemig that are part of the emissions reduction program are:

- Investment in the expansion of its Generation System, through the construction of hydroelectric plants;
- To encourage SHPP and co-generation projects;
- Repowering of its hydroelectric plants;
- Renovation and modernization of the equipment at the Igarapé thermoelectric plant;
- To encourage the replacement of fossil fuels with Natural Gas through its subsidiary, Gasmig;
- Development of energy conservation and rational use programs at industrial, commercial and service facilities through its subsidiary, Efficientia;
- Implementation of the Total Fleet Control Program – CTF, which allows for the management of refueling process for Company vehicles, resulting in a reduction in the consumption of fuel;
- Energy efficiency projects;
- To encourage the production of technologies and the development of alternative energy projects, such as solar, wind, biomass, fuel cells, biodiesel and others;

The electric energy production process at Cemig depends very little on the utilization of fossil fuels, as the majority of the energy generated comes from hydroelectric plants. In 2009, 99% of the electric energy generated by Cemig came from hydroelectric plants. Cemig's emissions intensity in 2009 was equal to 0.62 kg CO_{2e}/MWh, based on the calculation of the Company's energy generation and the scope 1 GHG emissions. Cemig's emissions result from the Igarapé Thermoelectric Plant, from its fleet of vehicles and aircraft and from SF_6 - Sulfur Hexafluoride leaks during scheduled maintenance and testing of equipment installed in electric distribution networks and substations.

It can be seen through a comparative analysis that the intensity of Cemig's emissions is much lower than those of the 12 leading companies in the 2009 Electric Utilities Report from the Carbon Disclosure Project – CDP, which had an average emissions intensity in 2008 of 584.34 kg CO_{2eq}/MWh and is also lower than that of the Brazilian electric system, which is 48.4 kg CO_{2eq}/MWh.

In the Company's generation system there is only one thermoelectric plant that uses fossil fuels: the Igarapé Thermoelectric Plant (installed capacity of 131 MW), which uses fuel oil and functions sporadically to meet emergency demands of the national interconnected electric system. In 2008, Cemig undertook the first stage of this plant repowering project, with the replacement of the thermal insulation of the boiler and of the air duct sheeting, resulting in a reduction of 4.6% in emissions of CO_{2eq}. For 2010 and 2011, the repowering and renovation of the turbine and boiler are planned.

According to the directives of the Long Term Strategic Plan, in 2008 Cemig created a Workgroup with the objective of developing a Climate-related Energy Strategy for the Company, in view of the perspectives for new acquisitions which will compose its generation matrix in the next few years. The Strategy should take into consideration the expected alterations in emissions of greenhouse

gases resulting from Cemig's generation matrix through initiatives that are considered more sustainable.

9.2 Do you have a current emissions reduction target?

No, but we are developing one.

If you do not have a target:
9.3 Please explain why not and forecast how your Scope 1 and Scope 2 emissions will change over the next 5 years.

Not Applicable

If you are in the process of developing a target:
9.4 Please give details of the target(s) you are developing and when you expect to announce it/them.

GHG emissions at Cemig are strongly influenced by the operation of its thermoelectric plant. This plant is put into operation according to determinations by ONS – the National System Operator, a federal body in charge of regulating electric energy in Brazil. As the Company does not exert any direct control over when and for how many hours the thermal plant will be operating, and as this plant is its main source of Scope 1 GHG emissions, Cemig has decided to effectively undertake improvements in that plant. In 2008, Cemig undertook the first stage of the repowering plan with the replacement of the thermal insulation of the boiler and of the air duct sheeting, which amounted to an investment of around R$ 2.75 million and reduced CO_{2eq} emissions by 4.6%. For 2010 and 2011 repowering and renovation activities have been scheduled for both the turbine and the boiler, which will receive an estimated investment of R$ 22 million.

If you have had a target and the date for completing it fell within your reporting year, please answer questions 9.5 and 9.6.
9.5 Please explain if you intend to set a new target.

Not Applicable

If you have an emissions reduction target:
9.6 Please complete the table.

Target Type	**Value of the target**	**Unit**	**Base year**	**Emission in base year (metric tonnes CO_{2-eq})**	**Target year**	**GHGs and GHG sources to which the target applies**	**For recently completed targets only: was target met?**	**Comment**
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Emission Reduction Activities: (CDP 2009 Q23)

9.7 Please use the table below to describe your company's actions to reduce its GHG emissions.

Actions	annual energy savings (if relevant)		annual emission reduction in metric tonnes CO_{2-e}	Reduction	Investment made or planned to enable actions (if relevant)		annual monetary savings (if relevant)		Timescale of actions and associated investments (if relevant)
	Number	Units		Achieved or anticipated	Number	Units	Number	Units	
Replacement of thermal insulation at the boiler and of air duct sheeting	4.6	%	39.4	achieved	2.75	R$ million			2008 – R$ 2.75 million
Renovation and repowering of the boiler at the Igarapé Thermoelectric Power Plant				anticipated	22	R$ million			2010/2011 – R$ 22 million

9.8 If not applicable, explain why.

Not Applicable

9.9 Please provide any other information you consider necessary to describe your emission reduction activities.

Within the context of the Cemig/Aneel Energy Efficiency Program – PEE, the Company maintains energy efficiency projects that foster reductions in energy consumption and, consequently, in the emission of GHG gases indirectly, as these programs were carried out at third party facilities.

From a number of projects, worth noting is the partnership signed between Cemig, Cohab – the Minas Gerais Housing Company and Sedru – the State Department for Regional Development and Public Policy, which was started in 2002 and continues conducting the Solar Energy Water Heating in Housing Projects initiative, aimed at optimizing electric energy consumption and reducing the load at peak hours.

Also as part of the Cemig/Aneel program, 100 energy diagnosis were conducted at large sized hospitals and at shelters for the elderly (SERVAS Homes for the Elderly), which resulted in the installation of a total 8,000 square meters of collector plates. These systems are to be installed in the next two years and shall result in a reduction in energy consumption on the order of 3,750 MWh/year and in energy demand of 2,850 kW, reducing GHG gas emissions by 92.25 tonnes of CO_{2eq}.

Cemig has been operating, since 2006, the Conviver Project, aimed at providing guidance on energy efficiency measures to low income clients within the Metropolitan Belo Horizonte Region (RMBH) and in the interior of the State of Minas Gerais. In 2009, with a total investment of R$ 12 million, the Conviver project attended 30,000 new low-income families from the RMBH, which

received 140,000 compact fluorescent lamps, 1,100 heat-recuperator kits for showers and 3,500 refrigerators. Overall, initiatives undertaken in 2009 generated total energy savings of 3,476 MWh/year, which represented a reduction in GHG emissions of 85.51 tonnes of CO_{2eq}.

Another project among those included in the Cemig/Aneel Energy Efficiency Program – PEE is "Cemig at School – Procel", which is an environmental education program used as a communication channel intended to bring, to school teachers and students from both Primary and Secondary schools, themes addressing the fight against electric energy wastage, the protection of the environment and safety when handling energy, which included the distribution of 210 educational material kits for the schools, training programs with students and an investment on the order of R$ 1.4 million in 2009.

For the implementation of energy efficiency projects in rural areas, Cemig relies on its Energy Farm, located in Uberaba in the Triângulo Mineiro region. In 2009, the farm held 8 events intended to raise awareness of the relevance of the efficient use of energy for sustainable development, which benefitted from the participation of 887 people.

Also noteworthy is the Electric Energy and Irrigation Water Use and Rationalization in Family Agriculture in the District of Jaíba project, in the North of Minas Gerais, ongoing since 2007. In July 2009, the installation of 82 irrigation systems was concluded, with an investment of R$ 1.17 million, coming from the Cemig/Aneel Energy Efficiency Program, utilizing resources from both third parties and the consumer. The new irrigation systems are totally automated and more efficient, thus leading to reductions of 33% in the electric energy and water used for irrigation. With the implementation of the Project, total energy savings of roughly 403 MWh in consumption and a reduction of 161 MWh in energy demand were achieved. In 2009, this project received the National Energy Conservation and Rational Use Award, in the Energy Industry Companies category, which was presented by the Ministry of Mines and Energy.

Cemig also has the Total Fleet Control Program – CTF, which allows for the management of the Company's vehicle refueling process. This program has yielded a 33.2% reduction in fuel consumption, consolidated from 2005 through 2009. In addition to that, the Vehicle Fleet Renewal and Suitability Policy adopted by the Company establishes a 5-year period for the average useful life of the fleet. In 2009, Cemig approved the vehicle rental and management project for carriers and passenger vehicles, which calls for the replacement of 1,193 vehicles in 2010.

Engagement with Policy Makers: (CDP 2009 Q28)
9.10 Do you engage with policy makers on possible responses to climate change including taxation, regulation and carbon trading?

Yes

If so,
9.11 Please describe.

Cemig has four professionals that are members of the Climate Changes and Energy Technical Chamber maintained by COPAM – the State Environmental Policy Council. It is important to point out that these Technical Chambers are important forums for deliberation and proposing directives aimed at the establishment of policies and norms for the reduction of atmospheric emissions and greenhouse gases emissions that contemplate alternatives for the improvement of environmental quality and foster sustainability in the state of Minas Gerais.

The Company also takes part in important Environmental Councils that influence the development of norms and directives regarding climate change, among which we may cite: (i) CEBDS – the Business Council for Sustainable Development (affiliated to the WBCSD – World Business Council

for Sustainable Development), in the Technical Climate Change Chamber; (ii) the State Council for Water Resources; and (iii) almost every one of the River Basin Committees, both state and federal, concerning the rivers running through the state of Minas Gerais.

GHG Emissions Accounting, Energy and Fuel Use, and Trading

10. Reporting Boundary: (CDP 2009 Q8)

10.1 Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported. per consolidated audited financial statements;

(x) Companies over which operational control is exercised

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

No

If so,
10.3 Please complete the following table.

Source	Scope	Explain why the source is excluded
Not Applicable	Not Applicable	Not Applicable

11. Methodology: (CDP 2009 Q9)

11.1 Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions and/or describe the procedure you have used.

Brazilian GHG Protocol Program

11.2 Please also provide the names of and links to any calculation tools used.

Multi-sector tool of the Brazilian GHG Protocol Program
http://www.ghgprotocolbrasil.com.br/index.php?page=ConteudoSecao&idsecao=1&idmenu=2

11.3 Please give the global warming potentials you have applied and their origin.

Gas	Reference	GWP
CO_2	IPCC	1
SF_6	IPCC	23,900

11.4 Please give the emission factors you have applied and their origin.

Fuel / Material	Emission Factor		Reference
	Number	Unit	
Electricity	0.0246	tonnes CO_2 / MWh	GHG Protocol Brasil Tool
Gasoline	2.327	Kg CO_{2e} / liter	GHG Protocol Brasil Tool
Diesel	2.681	Kg CO_{2e} / liter	GHG Protocol Brasil Tool
Fuel Oil	2.94	Kg CO_{2e} / liter	GHG Protocol Brasil Tool
Jet Kerosene	2.528	Kg CO_{2e} / liter	GHG Protocol Brasil Tool
LPG	1.530	Kg CO_2 / liter	GHG Protocol Brasil Tool

12. Scope 1 Direct GHG Emissions: (CDP 2009 Q10)

12.1 Please give your total gross global Scope 1 GHG emissions in metric tonnes of CO_{2-e}.

21.921 tCO_{2e}

12.2 Please break down your total gross global Scope 1 emissions in metric tonnes CO_{2-e} by country/region.
Where it will facilitate a better understanding of your business, please also break down your total gross global Scope 1 emissions by business division and/or facility. (Only data for the current reporting year requested.)

Brazil - 21.921 tCO_{2e}

12.3 If not applicable, explain why

Not Applicable

12.4. Business division

Cemig Geração e Transmissão: 7.551 tCO_{2e}
Cemig Distribuição: 14.370 tCO_{2e}

12.5 Facility

Not Available

12.6 Please break down your total gross global Scope 1 emissions by GHG type. (Only data for the current reporting year requested.)

GHG Type	Scope 1 emissions (metric tonnes)	Scope 1 emissions (metric tonnes CO_{2eq}.)
CO_2	16,490	16,490
SF_6	227.2	5,431

12.7 If not applicable, explain why.

Not Applicable

12.8 Fuel Consumption
Please use the table to give the total amount of fuel in MWh that your organization has consumed during the reporting year.

74.980,56 MWh

12.9 If not applicable, explain why.

Not Applicable

12.10 Please complete the table by breaking down the total figure by fuel type.

Fuels	MWh
Total	74,980,56
Diesel	44,654.72
Gasoline	23,036.39
Jet Kerosene	2,801.67
Fuel Oil	4,038.61
LNG - Liquefied Natural Gas	449.17

12.11 If not applicable, explain why.

Not Applicable

12.12 Data Accuracy: (CDP 2009 Q19)
Please estimate the level of uncertainty of the total gross global Scope 1 figure that you have supplied in answer to question 12.1 and specify the sources of uncertainty in your data gathering, handling, and calculations.
Electric utilities should report emissions by country/region using the table in question EU3.

	Scope 1
Uncertainty range	Not Available
Main sources of uncertainty in your data	Not Available
Expand on the main sources of uncertainty in your data	Not Available

13. Scope 2 Indirect GHG Emissions: (CDP 2009 Q11)

13.1 Please give your total gross global Scope 2 GHG emissions in metric tonnes of CO_{2-e}.

889 t CO_{2e}

13.2 Please break down your total gross global Scope 2 emissions in metric tonnes of CO_{2-e} by country/region

Brazil - 889 t CO_{2e}

13.3 If not applicable, explain why

Not Applicable

13.4 Business division

Cemig Geração e Transmissão: 213 tCO_{2e}
Cemig Distribuição: 676 tCO_{2e}

13.5 Facility

Not Available

13.6 Purchased Energy
How much electricity, heat, steam, and cooling in MWh has your organization purchased for its own consumption during the reporting year?

Energy Type	MWh
Eletricity	45,841.67
Heat	0
Steam	0
Cooling	0

13.7 If not applicable explain why.

Not Applicable

13.8 Data Accuracy: (CDP 2009 Q19)
Please estimate the level of uncertainty of the total gross global Scope 2 figure that you have supplied in answer to question 13.1 and specify the sources of uncertainty in your data gathering, handling, and calculations.

	Scope 2
Uncertainty range	Less than 2%
Main sources of uncertainty in your data	Data Gaps
Expand on the main sources of uncertainty in your data	Energy consumption is controlled through the electric energy bill payments correspondent to each of the Company's facilities. Therefore, uncertainties regarding that consumption are smaller than 2%.

14. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP 2009 Q12)

14.1 Do you consider that the grid average factors used to report Scope 2 emissions in question 13 reflect the contractual arrangements you have with electricity suppliers?

Yes. Despite being an electric energy generator, the energy consumed by Cemig comes from the SIN – the National Interconnected Electric Energy System. Therefore, the utilization of the emission factor of the national grid, which is 24.6 kgCO_{2e}/MWh, is justified, as determined by the Brazilian Ministry of Science and Technology in 2009. This factor is a result of the coefficient of fossil fuel utilization in the production of electric energy in the national grid, mainly in the operation of thermoelectric power plants. Further information on the methodology adopted for the calculation of the Brazilian national grid emissions may be obtained at: http://www.mct.gov.br/index.php/content/view/74694.html .

14.2 You may report a total contractual Scope 2 figure in response to this question. Please provide your total global contractual Scope 2 GHG emissions figure in metric tonnes CO_{2-e}.

Not Applicable

14.3 Explain the origin of the alternative figure including information about the emission factors used and the tariffs.

Not Applicable

14.4 Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done on your behalf?

No

If so,
14.5 Please provide details including the number and type of certificates.

Type of certificate	Number of certificates	Comments
Not Applicable	Not Applicable	Not Applicable

15. Scope 3 Other Indirect GHG Emissions: (CDP 2009 Q13)

15.1 Please provide data on sources of Scope 3 emissions that are relevant to your organization.

Source of Scope 3 emissions	Emissions (in metric tonnes of CO_{2eq})	Methodology	If you cannot provide a figure for a relevant source of Scope 3 emissions, please describe the emissions.
Other Scope 3 emissions / 16. Employee Commuting / Employees	246.9	GHG Protocol Brazilian Program	
Upstream Scope 3 / 5. Transportation & Distribution / Transportation/ logistics suppliers	675.2	GHG Protocol Brazilian Program	
Upstream Scope 3 / 6. Business Travel / Transportation suppliers e.g. airline	1,627.7	GHG Protocol Brazilian Program	

Cemig's Scope 3 GHG emissions were calculated taking into account the airplane trips taken by employees on commercial flights, the outsourced transportation service for materials to the Company's facilities and the transportation of employees within the Metropolitan Belo Horizonte Region.

15.2 If not applcable, explain why.

Not Applicable

16. Emissions Avoided Through Use of Goods and Services: (CDP 2009 Q14)

16.1 Does the use of your goods and/or services enable GHG emissions to be avoided by a third party?

Yes

If so,

16.2 Please provide details including the anticipated timescale over which the emissions are avoided, in which sector of the economy they might help to avoid emissions and their potential to avoid emissions.

Cemig's activities are directed towards the generation, transmission and distribution of electric energy and all of the investments in the expansion and/or repowering of its generation system are focused on renewable energies, with special attention to energy efficiency, and these investments are therefore directly and indirectly responsible for a reduction in carbon emissions.

The main source of Cemig's energy generation (97% of its matrix) is hydroelectric plants. When compared with other companies in the electric sector, whose generation is based on the use of thermoelectric plants, Cemig stands out for its supply of energy with low carbon emissions. In a comparative parameter of scope 1 emissions intensity, Cemig has an intensity equal to 0.62 kg CO_{2e}/MWh, while the 12 leading companies in the Electric Utilities Report 2009 from the Carbon disclosure Project – CDP had average emissions intensity in 2008 of 584.34 kg CO_{2eq}/MWh.

Within the context of the Energy Efficiency Program – PEE Cemig/Aneel, R$ 26.5 million were directed towards energy efficiency projects in 2009, resulting in a reduction in energy consumption of 27,765 MWh/year and a reduction in peak demand of 11.62 MW. The actions undertaken through the program resulted in a reduction in greenhouse gas emissions of 539 tonnes CO_{2eq} indirectly, as the programs were undertaken at the facilities of third parties.

Cemig is also involved in energy efficiency through Efficientia S.A., which coordinates projects with the objective of promoting a reduction in costs and energy savings at the facilities of large industrial and commercial clients.

Using resources from the Cemig/Aneel - PEE, R$ 11.9 million were invested by Efficientia in the implementation of projects, representing energy savings of 24,029.53 MWh/year, with a reduction in peak demand of 2.0 MW. This savings corresponds to the annual consumption of approximately 16,700 residences with an average consumption of 120 kWh/month, representing an annual reduction in emissions of about 466 tonnes equivalent of CO_2.

Efficientia also coordinates various projects in the sugar-alcohol sector and is managing the construction of new transmission lines and substations to connect sugar and alcohol plants to Cemig's system. These initiatives are allowing the energy generated through co-generation utilizing sugar cane bagasse (production residue) to be injected into the system, increasing the contribution from renewable energy sources to the national energy matrix. In 2009 five contracts of this nature were signed in the Vale do Tijuco, Paracatu, Chaveslândia, João Pinheiro and Frutal regions, all in Minas Gerais. These contracts will result in a power injection of 176 MW into the system.

Gasmig, a natural gas distribution company of the Cemig Group, was constituted in July 1986 to engage in the distribution of natural gas through pipelines in Minas Gerais. Through its 695-km network, Gasmig offers clients in the Belo Horizonte, Zona da Mata, Vale do Aço and Sul de Minas regions a source of energy that is less carbon intensive as an alternative to fuels derived from petroleum and coal (more carbon intensive than natural gas) for use in industry and automobiles and for domestic use.

17. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (CDP 2009 Q15)

17.1 Please provide your total carbon dioxide emissions in metric tonnes CO_2 from the combustion of biologically sequestered carbon i.e. carbon dioxide emissions from burning biomass/biofuels.

1,188 tonnes of $CO_{2eq.}$

This value corresponds to the percentage of the amount of biofuels added to the fossil fuels, as determined by Brazilian legislation. In 2009, 25% of ethanol were added to gasoline, and 3% of

biodiesel were added to diesel. Brazilian legislation imposes the addition of biofuels to fossil fuels and the amount varies according to the availability of fuels.

17.2 Please explain why not

Not Applicable

18. Emissions Intensity: (CDP 2009 Q16)

18.1 Please describe a financial and an activity-related intensity measurement for the reporting year for your gross combined Scope 1 and Scope 2 emissions.

Type of emissions intensity measurement	Units	The resulting figure for Scope 1 and Scope 2 emissions	Please explain if not relevant. Alternatively provide any contextual details that you consider relevant to understand the units or figures you have provided.
Financial	t CO_{2eq} / R$ million	5.6474	22,810 tonnes of CO_2 / R$ 4,039 million (Ebitda)
Activity-related	t CO_{2eq} / MWh	0.00068	22,810 tonnes of CO_2 / 33,540,000 MWh

19. Emissions History: (CDP 2009 Q17)

19.1 Do the absolute emissions (Scope 1 and Scope 2 combined) for the reporting year vary significantly compared to the previous year?

Yes

If so,
19.2 Please explain why they have varied and why the variation is significant.

Cemig's Scope 1 emissions were reduced by 90% from 2008 to 2009. This reduction is due to the fact that the Igarapé Thermoelectric Power Plant operated for only 8 hours and 40 minutes in 2009, as opposed to the 2,985 hours registered in 2008. This unit operates to supply for contingencies in the interconnected electric energy system. With an installed capacity of 131 MW, it burns fuel oil. In 2008, the Igarapé Thermal Plant emissions were responsible for 89% of the Company's total emissions.

Scope 2 emissions were reduced by 60% in 2009 compared to 2008 due to a reduction of the electric energy emission factor as calculated by the Science and Technology Ministry, from 0.0484 tonnes CO_2/MWh in 2008 to 0.0246 tonnes CO_2/MWh in 2009, and also to a small reduction in the electric energy consumed by the Company.

20. External Verification/ Assurance: (CDP 2009 Q18)

20.1 Please complete the following table indicating the percentage of reported emissions that have been verified/assured and attach the relevant statement.

	Scope 1	Scope 2	Scope 3
Percentage of reported emissions that have been externally verified/assured	0,00%	0,00%	0,00%
Include the verification/assurance statement(s)	0,00%	0,00%	0,00%

21. Emissions Trading and Offsetting: (CDP 2009 Q21 and 22)

21.1 Do you participate in any emission trading schemes?

No, we don't participate nor do we currently anticipate participating in emissions trading scheme within the next two years.

If so,
21.2 Please complete the following table for each of the emission trading schemes in which you participate.

Scheme name	Time period		Allowances allocated	Allowances purchased	Verified Emissions		Detail of ownership i.e. owned / operated or both
	Start date	End date			Number	Units	
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

21.3 What is your strategy for complying with the schemes in which you participate or anticipate participating?

Not Applicable

21.4 Has your company originated any project-based carbon credits or purchased any within the reporting period?

Yes

If so,
21.5 Please complete the following table.

Credit origination / credit purchase?	Project identification	Project documentation URL	Verified to which standard?	Number of credits(metric tonnes $CO_{2eq.}$)	Credits retired?	Purpose e.g. compliance
Origination	CDM Project of Guanhães Energia, Minas Gerais, Brazil	http://www.carbotrader.com/jun1092dcp.pdf	CDM	222,994	N/A	Voluntary Basis
Origination	CDM Project of Cachoeirão, Minas Gerais, Brazil	http://www.carbotrader.com/jun1123dcp.pdf	CDM	184,801	N/A	Voluntary Basis
Origination	Generation with Blast Furnace Gases at Siderpita	http://cdm.unfccc.int/Projects/completeness_check.html	CDM	35,290	N/A	Voluntary Basis

Climate Change Communications

22. Climate Change Communications: (CDP 2009 Q27)

22.1 Have you published information about your company's response to climate change/GHG emissions in other places than in your CDP response?

Yes

If so,
22.2 In your Annual Reports or other mainstream filing? Please attach your latest publication(s).

Yes

The Annual Report may be accessed at the following website:
http://cemig.infoinvest.com.br/static/enu/relatorios_anuais.asp?idioma=enu
For communication with investors, Cemig offers the following website:
http://cemig.infoinvest.com.br/?idioma=enu

22.3 Through voluntary communications such as CSR reports? Please attach your latest publication(s).

Yes

The Sustainability Report may be accessed at the following website:
http://www.cemig.com.br/cemig2008/ing/sustentability_rep.asp
For additional information please access the websites below:
http://cemig.infoinvest.com.br/?idioma=enu
www.cemig.com.br