TCFD REPORT 2021

Grupo Energía Bogotá

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1 INTRODUCTION

The Bogota Energy Group (GEB)[1], with more than 125 years of history, is a leader in the energy sector in Latin America. It has operations and projects in the energy chain: generation, transmission and distribution of electricity, and transportation and distribution of natural gas. It controls operations in Colombia, Peru and Guatemala, and has shares in companies with presence in Brazil, Costa Rica, Guatemala, Colombia and Panama.

At the end of 2020, the GEB Board of Directors approved a Corporate Strategy that acknowledges the trends, opportunities and challenges that the energy sector faces at the global, regional and local levels. It establishes the necessary actions for the Group to continue playing a leading role in the energy transition, and in generating conditions of prosperity and social equity in Latin America.

The Group's Corporate Strategy has four strategic axes: tomorrow's transmission, sustainable generation, gas for the future and smart cities. These axes are based on the recognition of the challenges that climate change imposes on the energy sector and indicate the mitigation and adaptation measures through which GEB can contribute to the solution of those challenges.

In addition, the GEB Board of Directors approved the Group's Sustainability Strategy in June 2021. In essence, this strategy seeks to "*assure the sustainable growth of GEB (Grupo Energía Bogotá) by creating conditions of well-being and prosperity in the territories, transparent and fair relations with stakeholders, and contributing to the transition towards energy-efficient and low carbon economies.*"

Through that Strategy, GEB and its subsidiaries committed to the emission reduction targets defined in the Nationally Determined Contributions (NDCs) of the countries where they operate. In the case of operations in Colombia, the country and GEB are committed to reducing their greenhouse gases (GHG) emissions by, at least, 51 % by 2030 in relation to the "*business as usual*" scenario, and to reach carbon neutrality no later than 2050.

Additionally, the Group is committed to progressively adopt the recommendations of the *Task Force on Climate-related Financial Disclosures* (TCFD) for the assessment and reporting of weather-related risks and opportunities. As part of this commitment, GEB presents its first TCFD report. The scope of the report covers the Group's operations in Colombia. These include the electricity transmission businesses operated by the Transmission Branch and the natural gas transportation businesses operated by Transportadora de Gas Internacional (TGI). This report presents the progress in the implementation of the TCFD recommendations in the areas of governance, strategy, risk management, goals and metrics, and objectives.

Climate-related financial disclosures of GEB and its subsidiaries will be integrated into next GEB's Sustainability Report.

[1] *For the purposes of this report and unless the context indicates otherwise, Grupo Energía Bogotá S.A. ESP or GEB is the holding company of the Business Group. The Holding and the operation of the energy transmission business in Colombia is under the same legal entity. This business is known as the Transmission Branch. Transportadora de Gas Internacional S.A. ESP is the subsidiary of GEB in charge of the natural gas transportation business in Colombia. GEB has a 100% share in TGI.*

2 GOVERNANCE

Grupo Energía de Bogotá has a robust Corporate Governance model. This model is based on principles and standards that guarantee transparent and traceable decision-making processes that are the foundation of trustworthy relationships with shareholders: investors, regulatory agencies, government entities and other interest groups.

Under the leadership of the Board of Directors and Senior Management, GEB has promoted the adoption of best practices and the continuous improvement of the corporate governance structure, and has strengthened a culture of transparency, integrity, and accountability.

The management and administration of GEB are under the control of the General Assembly of Shareholders, the Board of Directors and the Presidency.

The Board of Directors is the highest governance and strategic management body. Its mandate is to maintain the vision of the Group and to secure the coordinated and consistent management of the Group and its subsidiaries. Among its main functions are the approval, modification and follow-up of the strategic plan of the organization, the creation and supervision of support committees, the evaluation of the Senior Management's performance, and the definition of administration and business management policies.

The GEB Board of Directors has four (4) support committees: Audit and Risk Committee, Compensation Committee, Financial and Investment Committee and Corporate Governance and Sustainability Committee. All are chaired by an independent member.

TGI has a Board of Directors and four (4) support committees: Audit and Risk Committee, Corporate Governance, Sustainability and Human Talent Committee, Financial and Investment Committee and Operating Committee.

2.1 Board oversight of risks and opportunities related to climate change

The GEB Board of Directors is responsible for approving the Corporate Strategy of the Business Group, the business plan, the management objectives, and the guidelines for their execution. In 2020, it approved the 2021 – 2030 Corporate Strategic Plan, which defined a new higher purpose for the organization: "*Improving lives with sustainable and competitive energy*". This Plan seeks to ensure the profitability and competitiveness of the businesses, to generate value for stakeholders, and contribute to the well-being of communities. All the foregoing contributing to the energy transition, and to the mitigation and adaptation to climate change.

The Strategic Plan and the investments of GEB and its subsidiaries are aligned with the climate goals of the countries where they operate. They reflect the commitment to execute strategic actions, activities and operations aimed at accelerating the transition towards equitable, competitive, sustainable and low-carbon economies.

In 2021, GEB's Board of Directors set three goals related to the reduction of GHG emissions. The progress towards those goals is monitored through indicators that constitute the criteria for the evaluation of the organization's performance in relation to its contribution to the mitigation of climate change. The assessment of the compliance with the goals is conducted quarterly, and they correspond to 30% of GEB's objectives. The variable compensation of corporate employees is tied to those goals:

- Emission reductions of Corporate carbon footprint.

- Emission reduction of TGI's carbon footprint.

- Reduction of emissions, measured as the ratio of tCO_2 eq emissions/Income of Transmission Branch.

The reduction of GHG emissions was included as one of the objectives of TGI. This objective, as in the case of the corporate objective, determines the value of the variable compensation of the employees, and is reported quarterly to the Board of Directors of TGI.

In addition, in 2021, the Board of Directors approved the Group's Sustainability Strategy. That Strategy establishes the following commitments related to climate risks and opportunities:

- Include in the projects' design measures that endow the infrastructure with the capacity withstand and to operate under extreme weather conditions.
- Prioritize the participation of Group´s companies in generation projects with renewable and non-conventional energies (*Non-Conventional Renewable Energy*).
- Gradually integrate the TCFD framework for the economic assessment and reporting of climate-related risks and opportunities.
- Include, as costs, in the *ex-ante* economic assessment of the projects and investments, the value of the expected future flows of GHG emissions.

The GEB Board of Directors has two Support Committees with responsibilities related to the supervision of risks and opportunities of climate change:

1. **Audit and Risk Committee:** this committee verifies compliance with accounting procedures, the Statutory Auditor's recommendations and the control architecture and risk analysis. It supervises and reports to the Board of Directors on the effective application of the risk matrix of GEB and its subsidiaries. This, to identify, manage and inform the Board of Directors of the main financial and non-financial risks, on-balance sheet and off-balance sheet.

   Every quarter, the management reports to the Audit and to Risk Committees and to the Board of Directors on the management of the Group's strategic risks.

2. **Corporate Governance and Sustainability Committee:** this committee supervises the performance of corporate governance and the development of activities aimed at ensuring the environmental and social sustainability of its operations. It recommends corporate guidelines on sustainability to the Board of Directors. Additionally, it makes recommendations to ensure the Group's contribution to the inclusive and sustainable development of the regions where it operates. The foregoing, while considering the global climate trends, international standards, the observed social and environmental risks and opportunities, the requirements of investors and assessment firms, and the realities of the communities in the areas of influence.

In 2021, GEB began the analysis and quantification of the risks and opportunities associated with climate change for its electricity transmission and natural gas transportation businesses in Colombia. This analysis, and the TCFD report, will be presented to the above motioned committees of the Board of Directors. The goal for 2022 is the inclusion of the weather-related risks in the Group's matrix of strategic risk.

At TGI, the committees of the Board of Directors that take part in issues related to climate change are:

- **Audit and Risk Committee**: recommends, supervises and periodically reports to the Board of Directors on the effective application of the company's risk matrix, so that financial and non-financial risks are properly identified and managed.
- **Corporate Governance, Sustainability and Human Talent Committee**: supervises the management of matters related to occupational health and safety, the environment, governance and social management.

2.2 Management's Role in Assessing and Managing Climate-Related Risks and Opportunities

For GEB and its subsidiaries, the mitigation and adaptation to climate change are integral components of their sustainability strategies. Senior Management monitors and approves the initiatives and policies that effectively contribute to the control of climatic risks, and to the advantageous use of opportunities.

Corporate Senior Management:

Grupo Energía Bogotá has a President's Committee responsible for the monitoring of the implementation of the corporate strategy, and for the management the risks of the organization. It approves the corporate guidelines and supervises the environmental, social and governance performance of the Group. This

committee, which meets weekly and includes the leaders of the Holding, recommends the strategic matters and issues that should be presented to the consideration of the committees of the Board of Directors.

The issues related to climate change presented and discussed by the committee during 2021 were:

- Adherence of GEB to the National Carbon Neutrality Program of the Ministry of the Environment and Sustainable Development of Colombia.
- Carbon Neutrality Roadmap for the Corporate Office and the Transmission Branch in Colombia.
- Approval of the Group's Corporate Climate Change Policy.

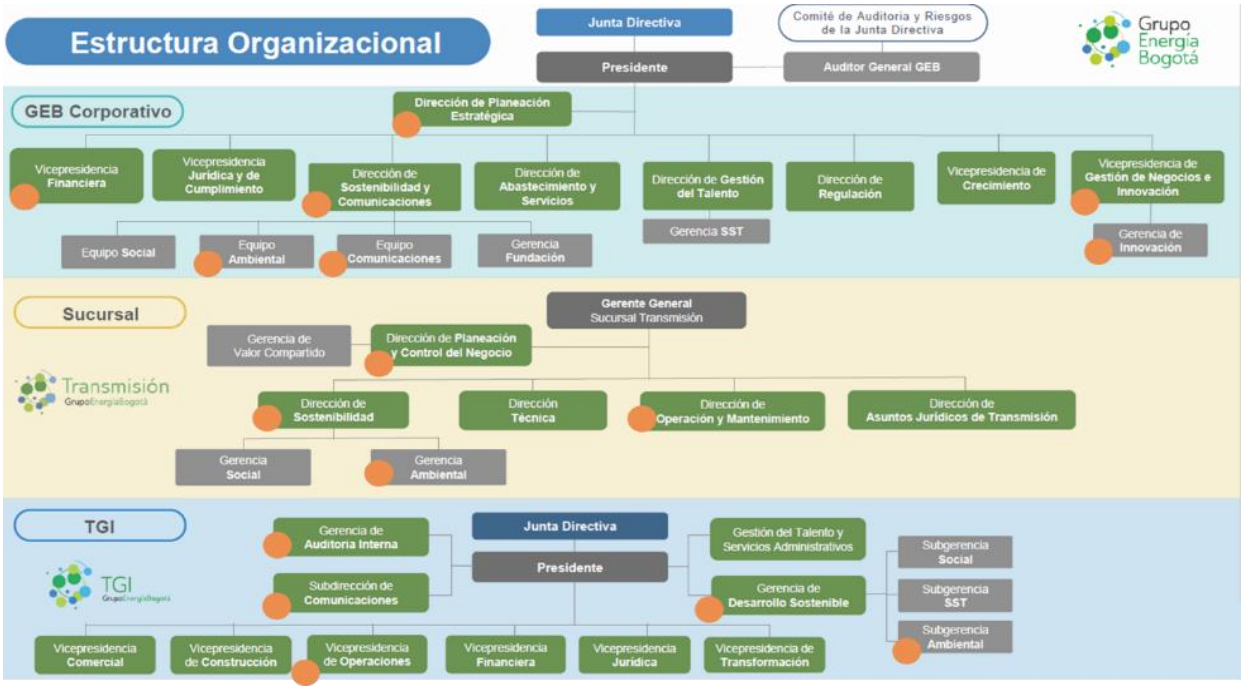
At the Corporate level, the following agencies participate in the management of the Group's weather-related risks:

- **Strategic Planning Department:** monitors the implementation of the Corporate Strategic Plan. It is responsible for the coordination of the Group's processes and procedures. It identifies, measures and manages strategic and emerging risks to minimize the probability of the materialization of their potential financial and reputational impacts, and identifies the opportunities that may arise.
- **Sustainability and Communications Department:** leads and monitors the Sustainability Strategy and the Climate Change Policy of the GEB companies. It coordinates the analysis of climate change risks and opportunities and guides the definition of the emission reduction paths required to achieve the proposed climate-related goals.
- **Regulation Department:** monitors the legal and regulatory risks of GEB's businesses, and identifies any new climate regulations that may positively or negatively impact the businesses.
- **Vice Presidency of Growth:** ensures that the Group's new investments prioritize sustainability criteria and that they contribute to the acceleration of the energy transition in the countries where the Group´s companies operate.
- **Vice Presidency of Business Management and Innovation:** it promotes development, research and innovation initiatives that allow the adoption of practices and technologies for the control of greenhouse gases (such as SF_6 and methane) and for the reduction of emissions in each of the businesses of GEB´s subsidiaries.
- **Financial Vice Presidency:** leads the Group's financial strategy which to prioritizes financing strategies based ESG criteria.

The most relevant areas for climate change management by TGI and the GEB Transmission Branch in Colombia are presented below:

Transmission Branch (Electric energy transmission)	**TGI** (Natural gas transport)
General management: leads the transmission business strategy ensuring that the projects contribute to the energy transition.	**Presidency:** promotes natural gas as an energy source to ensure a just and efficient transition. The presidency is supported by a President's Committee made up of company directors.
Business planning and control Department: monitors the implementation of the strategic plan, and identifies, measures and manages physical and transition risks.	**Vice Presidency of Operations:** manages the natural gas transportation operation, ensuring the availability, reliability, continuity and integrity of the transportation network and the control of GHG emissions.
Sustainability Department: ensures environmentally safe and socially equitable decision-making throughout the life cycle of projects, compliance with environmental and social legislation and standards and the incorporation of good practices aimed at adapting to and mitigating climate change. It manages the measurement of the carbon footprint and guides the decarbonization strategy.	**Vice Presidency of Government Affairs and Sustainable Development:** leads, plans and directs corporate policies to ensure the social and environmental sustainability of operations, the application of best practices in Environmental Management. It manages the measurement of the carbon footprint and guides the decarbonization strategy.
Operation and Maintenance Department: guarantees the availability of assets, manages the physical risks for the transmission infrastructure and designs maintenance plans, sensitivity analyses, stability, hydrographic studies and response actions to critical events.	**Vice Presidency of Construction:** leads project management in order to ensure the improvement of infrastructure, business expansion and the development of new projects, with responsible social and environmental criteria.

Transmission Branch (Electric energy transmission)	**TGI** (Natural gas transport)
Technical Department: integrates environmental criteria in the construction of projects and ensures that the infrastructure incorporates the necessary measures and technology to mitigate and adapt to climate change.	**Vice Presidency of Transformation**: develops initiatives that contribute to positioning the company as a leader in the energy transition. This is the case of research and partnerships for Hydrogen and Biogas technologies. It identifies lines of financing and investment funds for the production, transportation and blending of Hydrogen and CCUS (Carbon Capture, Storage and Use) projects.



*An orange dot indicates positions with responsibilities related to climate change at GEB, Transmission Branch and TGI.

3 STRATEGY

Climate change management is a central part of GEB's new Corporate Strategy. As indicated before, this is developed through four strategic axes: transmission of tomorrow, sustainable generation, gas for the future and smart cities. The construction and operation of resilient infrastructure adapted to extreme climate conditions and the contribution to the energy transition are part of our corporate and sustainability strategies that seek to generate value in the long term.

The Group's Sustainability Strategy impacts each of the axes of the Corporate strategy. It acknowledges the commitments acquired in the framework of global negotiations and agreements regarding climate change. The Strategy aims at securing the Group's leadership in energy transition and to generate value by integrating the climate-related risks and opportunities into operations and businesses.

As part of its Sustainability Strategy, GEB and its subsidiaries committed to accompanying the governments of the countries where they operate in meeting the climate goals agreed upon through their Nationally Determined Contributions (NDCs). In the case of operations in Colombia, it is planned that the GHG emissions of GEB and its subsidiaries will reduce gas emissions by at least 51 % by 2030 in relation to the "*business as usual*" scenario, and that they will reach carbon neutrality no later than 2050. In Peru, the goal is to reduce emissions 30% by 2030 with respect to the reference scenario, plus an additional 10% that is conditional on international cooperation. In Brazil, the commitment is to reduce emissions by 37% by 2025 and 43% by 2030, compared to 2005. In the case of Guatemala the goal is to reduce GHG emissions by 11.2% with respect to the reference scenario by year 2030, or by 22.6% conditioned on international cooperation.

To achieve their respective goals, each of the subsidiaries, considering their particular technological, operational, financial, etc. realities, must design and undertake a strategy and design a path for reducing emissions.

The Group is progressively integrating the TCFD framework for the economic assessment and reporting of climate-related risks and opportunities, following the recommendations that this framework defines in terms of governance, strategy, risk management, and metrics and objectives.

Based on the guidelines of the Sustainability Strategy, the Group adopted a Corporate Climate Change Policy in January 2022 that establishes 16 commitments in five lines of action:

Guided by these principles, GEB has proceeded to analyze climate-related risks and to identify opportunities. These, to define a management strategy that incorporates the relevant weather-related risks into the strategic risk matrix.

3.1 Definition of climate change risks and opportunities for GEB

GEB's activities within the electricity sector chain (generation – transmission – distribution) and its participation in the natural gas chain (transportation and distribution) could impact the environment and society. This, through the use of natural resources, the effects on communities and other interest groups, the energy transition and the construction of low-carbon regional economies.

The transition risks, and the physical risks and opportunities associated with climate may affect GEB's business. Their identification and assessment are strategic:

- The **transition risks** are those that come from changes in legislation, the market, stakeholders, etc. that are aimed at mitigating the effects of climate change through new requirements.
- The **physical risks** are those that can be caused by greater frequency and severity of extreme weather events, or by long-term climate change. These risks can lead to physical damage to assets, supply chain disruptions or increased costs to address the risks.
- The **climate opportunities** are those that arise from the transition to low-carbon economies that generate new market niches to be promoted or developed.

Given the differences between the electricity transportation business (managed by the Transmission Branch) and the natural gas transportation business (managed by TGI), separate analyses were carried out for each of those businesses. Weather-related risks and opportunities were considered in three time horizons:

Table 1 Time horizons considered in the analysis

Time horizon		Description
Short term	Between 2022 and 2030	The short-term horizon is aligned with the GEB Strategic Plan towards 2030. It acknowledges the global, regional and local context of the industry, the ESG dimensions and its trends. It identifies the opportunities and challenges that the Group and its subsidiaries face to continue growing and playing a leading role in the energy transition and in the construction of conditions of prosperity.
Medium term	Between 2030 and 2040	The medium-term horizon is defined both by the horizon defined in the GEB corporate strategy and by national climate change guidelines.
Long term	Between 2040 and 2050	The long-term horizon has been defined in line with the Colombian Low Carbon Development Strategy towards 2050. It guides the policies and actions of the government, sectors and territories aimed at building a climate-resilient future in Colombia. Includes long-term planning exercises.

Climate risks and opportunities were analyzed in the scenarios defined by the International Energy Agency (IEA) and the United Nations Intergovernmental Panel on Climate Change (IPPC). These scenarios allow assessing the probability of their materialization, in accordance with the TCFD recommendations.

The scenarios prepared by these agencies and those used by the Government of Colombia (Ministry of Mines and Energy, the Ministry of Environment and Sustainable Development, and the Institute of Hydrology, Meteorology and Environmental Studies -IDEAM), have been used in the analysis. The scenarios developed by the Colombian institutions are based on the scenarios of the fifth IPCC report.

For the sixth report, the IPCC included aspects related to socioeconomic development in the climate scenarios. This allows for a more comprehensive assessment of risks and opportunities related to climate and to the transition to a decarbonized economy. These socioeconomic aspects are relevant insofar as they can determine the probability of success of the climate strategies. In addition, they facilitate the establishment of hypotheses and the estimation of the probability of occurrence of the different climatic risks and opportunities.

The assessments were based on two scenarios from the International Energy Agency and three from the IPCC**:**

IEA scenarios	Description	
	General:	Energy sector
Stated Policies (Stated	• Climate policies, laws and goals already implemented or announced by governments in their NDCs and government strategies are taken into account in the analysis.	• Increase in final energy consumption of 76% by 2050.

Policies Scenario)	• It is assumed that governments will not meet their stated goals and that *Business as Usual* will dominate the development progress of every country and organization. • No additional policy to combat climate change is considered.	• The final consumption of hydrogen is situated at 1 EJ. • Increase in final consumption of natural gas of 35% by 2050. • The generation of electricity with renewables will be multiplied by 3.6. • Total CO_2 emissions on 2050 of 33,903 $MtCO_2$.
Net Zero on 2050	• Global energy sector reaches net CO_2 emissions on 2050. • Early action by advanced economies in meeting this Net Zero goal • Non-energy emissions will be reduced in the same proportion as energy emissions. • In line with the objective of the Paris Agreement to limit the increase in global temperature to 1.5 °C. • Commitments in the fight against climate change must be backed by solid and credible policies and long-term plans. • Countries go beyond existing commitments to reach the Net Zero goal.	• Increase in final energy consumption of 107% by 2050. • The final consumption of hydrogen is situated at 20 EJ. • Decrease in the final consumption of natural gas of 71% by 2050. • The generation of electricity with renewables will be multiplied by 8.2.

Time horizon	Description IPCC Scenarios	
SSP5-8.5	• Higher end of global warming and CO_2 emissions. • Absence of additional climate policies and non-compliance with current policies. • Development continues to be based on the exploitation of fossil fuels and the adoption of energy-intensive lifestyles throughout the world. • Economic growth and technological progress are high, the volume of investment in health and education is high, and pollution problems are well managed.	• Increase in global mean surface temperature by 2100 between 3.3°C and 5.7°C compared to pre-industrial times. • Amplification of El Niño-related rainfall variability in the second half of the century. • Probable sea level rise of 0.63-1.01 m by 2100.
SSP3-7.0	• High emissions and high global disaggregation with high levels of regional rivalries between countries and governments. • Absence of additional climate policies and non-compliance with current policies. • Strong presence of nationalist governments and slow economic development, leading to high but lower CO_2 emissions than the SSP5-8.5 scenario. • Regional conflicts and uneven development counteract the integration needed to combat climate change. • Environmental problems no longer have international priority and environmental degradation worsens. • Greater level of difficulty for mitigation and adaptation to climate change.	• CO_2 emissions continue to rise sharply to double current levels by 2100. • The global average surface temperature by 2100 will increase between 2.8°C and 4.6°C compared to pre-industrial times.
SSP1-1.9	• Warming is limited to 1.4°C by the end of the century after temporarily exceeding 1.5°C. • CO_2 emissions decrease drastically until carbon neutrality in 2050 and are negative in the second half of the century. • Strong international cooperation, inclusive and sustainable development measures, improvement of living conditions, eradication of poverty, improvement of citizens' consumption patterns towards the consumption of environmentally friendly and less energy-intensive products and services. • Drastic and immediate decisions for mitigation and adaptation.	• The global average surface temperature by 2100 will increase between 1.0°C and 1.8°C compared to pre-industrial times. • The global mean sea level will continue to rise during the 21st century with a probable increase in 2100 of 0.28-0.55 m. • Net CO_2 emissions implicit by mid-century (2050).

3.2 Analysis of climate change risks and opportunities for GEB

Based on the scenarios described above, GEB began to identify and assess the main **transition and physical risks** for its operations in Colombia. Separate analyses were conducted for the transmission and for the natural gas transportation businesses:

*Table 2 Climate-related risks analyzed for **Transmission Branch***

Transition risks		Impact	Risk management measures
Policy and Legal Risks	Policies or laws that increase restrictions and demands related to fighting change	• Increased compensation, operation, maintenance and reporting costs • Obsolescence of transmission system • Loss of business profitability and competitiveness	• Monitor laws, regulations, doctrine and jurisprudence • Participation in guilds, associations and/or collegiate bodies • Climate change policy and decarbonization road map
	Policies or laws that require the adjustment of the infrastructure for adapting to climate change.	• Increased compensation, operation and maintenance costs • Loss of business profitability	• Monitor laws, regulations, doctrine and jurisprudence • Participation in guilds, associations and/or collegiate bodies • Climate change policy and decarbonization road map
	Lawsuits related to actions to combat climate change	• Reputational damage and legal costs • Loss of credibility from stakeholders	• Social and environmental impact studies, including management plans and measures incorporating value-adding practices and lessons learned
Technology risk	Technological improvements or innovations that accelerate the transition to cleaner fuels	• Need to adapt the new transmission lines to integrate the group into this new Smart Grid market • Lag in technology and loss of competitiveness	• GEB innovation strategy approved by the President's Committee in December 2021 • Search for strategic allies with experience in new technologies
Market risk	Rise in commodity prices *(with high carbon footprint e.g., cement, steel, copper, etc.*) for infrastructure construction	• Increased construction costs in infrastructure • Loss of profitability and competitiveness	• Advance negotiations with suppliers to mitigate the effect of reasonable increases in the prices of raw materials
	Changes in policies and in the conditions of insurance contracts and low appetite of investors and financiers	• Increase in insurance costs • Fewer funding opportunities • Loss of profitability and competitiveness	• Controls to mitigate these risks
Reputational risks	High level of awareness of stakeholders about climate change	• Negative perception of stakeholders (investors, financiers, communities, shareholders, government, etc.) about the organization's inaction in the face of the energy transition • Loss of reputation and trust	• Sustainability Policy • Sustainability Strategy • Reputational crisis management strategy
	Inadequate identification and management of potential risks and opportunities associated with climate change	• Inadequate and insufficient mitigation and adaptation measures that respond to social and environmental risks • Underuse of the opportunities associated with climate change. • Reputational damage • Loss of competitiveness and business opportunities	• Sustainability Policy • Sustainability Strategy
	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures	• Negative reaction and conflict with stakeholders (investors, financiers, communities, shareholders, government, etc.). • Loss of trust with stakeholders (investments, communities, shareholders, etc.) and new social barriers to expansion.	• Sustainability Policy • Materiality Analysis • Sustainability Strategy

Physical risks		Impact	Risk management measures
Acute risks	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms,	• Loss of soil stability, alteration of regional hydrology, forest fires	• Insurance policies in accordance with the company's strategic planning • Regulatory management of the recognition of additional works • Detailed environmental studies with primary information on the area

	landslides, heat waves, droughts, floods, etc.)	• Destruction or damage of electricity transmission infrastructure • Increase in electrical power losses along transmission lines	• Designs that contemplate return periods of events greater than 100 years
Chronic risks	Long-term changes in weather patterns, leading to uncertainty and volatility in the supply of wind, solar and hydraulic energy sources	• Uncertainty and volatility in the supply of wind, solar and hydraulic energy sources • Greater uncertainty in the electricity transmission service planning process, higher operating costs and loss of profitability	• Participation in sectoral spaces • Work will be done on the analysis, assessment and modeling of scenarios, forecasting climate volatility and its impact on power generation capacity from wind, solar and hydraulic energy sources in Colombia.
	Long-term changes in weather patterns, leading to the need to adapt infrastructure to conditions of weather uncertainty and volatility	• Need to adapt infrastructure to conditions of weather uncertainty and volatility • Higher construction and operating costs, and loss of profitability	• Geotechnical characterizations with 5-year cycles, which generate maintenance plans focused on protection works, embankments stabilization for transmission assets that are in operation
	Long-term changes in weather patterns, which affect and deteriorate transmission infrastructure in vulnerable areas (coastal, mountainous, steep slopes, etc.)	• Impact and deterioration of the transmission infrastructure in vulnerable areas (coastal, mountainous, high slopes, etc.) • Higher costs of maintenance and replacement of the infrastructure and loss of profitability.	• Insurance policies • Regulatory management of the recognition of additional works • Detailed environmental studies from the design stage and with primary information on the area • Designs that provide for return periods of events greater than 100 years

Table 3 Climate-related risks analyzed for TGI

Transition risks		Impact	Risk management measures
Policy and Legal Risks	Policies or laws that increase restrictions and requirements related to the fight against climate change (restriction on methane emissions, price of carbon credits, reporting on mitigation and adaptation actions, accelerated technology adoption)	• Increased operation and maintenance costs • Increased compensation and reporting costs • Increased pipeline construction costs • Loss of business profitability and competitiveness against other energy sources.	• Decarbonization Roadmap at TGI through the application of initiatives and other activities in the operation and construction of projects • Climate Change and Energy Efficiency Program • Monitor laws, regulations, doctrine and jurisprudence
	Policies or laws that require adjusting the natural gas transportation infrastructure for adaptation and mitigation to climate change	• Increased costs of construction, operation, maintenance and compensation • Loss of business profitability and competitiveness against other energy sources	• Monitor laws, regulations, doctrine and jurisprudence • Decarbonization Roadmap at TGI through the application of initiatives and other activities in the operation and construction of projects • Climate Change and Energy Efficiency Program • Infrastructure risk management plans in accordance with the provisions of Resolution 1523 of 2012
	Lawsuits related to actions to combat climate change	• Reputational damage and legal costs • Expenses derived from sanctions • Loss of credibility with stakeholders (communities, government, customers) • Fewer opportunities to access ESG financing	• Social and environmental impact studies, including management plans and measures incorporating value-adding practices and lessons learned
Technology risk	Technological improvements or innovations that accelerate the transition towards cleaner fuels (biogas, hydrogen)	• Need to adapt industrial processes and transport networks to integrate TGI into the new biogas and hydrogen market • Lag in technology and loss of competitiveness	• GEB innovation strategy approved by the President's Committee in December 2021 • Generation of partnerships to innovate in biogas and hydrogen

Transition risks		Impact	Risk management measures
		• Need for new investments (loans, bonds) to adapt industrial processes and transport networks	• Realization of hydrogen pilot projects and studies of the biogas value chain
Market risk	Rise in raw material prices (with a high carbon footprint, e.g., cement, steel, polyethylene, iron, etc.) for the construction of the natural gas transportation infrastructure	• Increased construction costs in infrastructure • Loss of profitability and competitiveness compared with other energy sources (coal, oil, etc.)	• Advance negotiations with suppliers to mitigate the effect of reasonable increases in the prices of raw materials
	Reduction in the demand for natural gas, due to the acceleration of the energy transition	• Decrease in demand for the natural gas transportation service • Underuse of infrastructure • Loss of market and income • Obsolescence of infrastructure	• Strategic plans that reflect projections of change in demand
	Changes in policies and in the conditions of insurance contracts and low appetite of investors and financiers due to the deterioration of the image of fossil fuels	• Increase in insurance costs • Fewer funding opportunities • Loss of profitability and competitiveness.	• Controls to mitigate these risks
Reputational risks	High level of awareness of stakeholders about climate change	• Negative perception of stakeholders (investors, financiers, communities, shareholders, government, etc.) on fossil fuels • Loss of reputation and trust	• Sustainability Policy • Sustainability Strategy • Reputational crisis management strategy
	Inadequate identification and management of potential risks and opportunities associated with climate change	• Inadequate and insufficient mitigation and adaptation measures that respond to social and environmental risks • Underuse of the opportunities associated with climate change • Reputational damage • Loss of competitiveness and business opportunities	• Sustainability Policy • Sustainability Strategy • Drills with the community, coordination with local authorities in the event of emergencies
	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures for climate change	• Negative reaction and conflict with stakeholders (investors, financiers, communities, shareholders, government, etc.) • Loss of trust with stakeholders (investments, communities, shareholders, etc.) and new social barriers to expansion	• Sustainability Policy • Materiality Analysis • Sustainability Strategy

Physical risks		Impact	Risk management measures
Acute risks	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.)	• Loss of soil stability, alteration of regional hydrology, forest fires • Destruction or damage of electricity transmission infrastructure • Increase in electrical power losses along transmission lines	• Preventive plans for carrying out works • Contingency and emergency plans • Climate Change and Energy Efficiency Program
Chronic risks	Long-term changes in weather patterns, which deteriorate the gas transportation infrastructure and lead to the need to adapt it to conditions of weather uncertainty and volatility	• Need to adapt the natural gas transportation infrastructure to conditions of weather uncertainty and volatility • Higher construction and operating costs, and loss of profitability	• Periodic inspections of the infrastructure through ILI technology and other techniques • Climate Change and Energy Efficiency Program

Based on the analysis of the transition and physical risks, priorities were identified taking into consideration their potential impact and probability of occurrence. Additionally, their financial impact was assessed (see figure 5 and figure 6)

Both the Transmission Branch and TGI have committed to reduce their emissions by at least 51 % by 2030 in relation to the “business as usual” scenario and will reach carbon neutrality no later than 2050. TGI already has a decarbonization roadmap and a Climate Change and Energy Efficiency Program. The Transmission Branch will develop its decarbonization roadmap and energy efficiency plan throughout 2022.

Decarbonization strategies, based on the GEB Sustainability Strategy, includes, as a priority, the control of fugitive methane emissions, the increase in the energy efficiency of industrial processes, the rationalization in the consumption of electricity, fossil fuels and inputs, the control of SF_6 emissions, and the rationalization of travel and commuting. In addition, the prioritization of generation projects with renewable and non-conventional renewable sources (NCRS).

The design of the projects must include climate change adaptation measures that give the infrastructure the capacity to withstand and operate under extreme weather conditions.

In addition to the risks, there is a series of opportunities related to climate change that have been analyzed equally for the Transmission Branch and for TGI.

Table 4 Climate-related opportunities analyzed for Transmission Branch

Opportunity		Benefit	Action Measures
Efficient Use of Resources	Policies and regulations that promote energy efficiency in the generation, transportation, distribution and final consumption of energy	• New investments and projects to reduce transmission losses, to achieve other energy efficiencies, and lower SF6 emissions • Increased revenue from the development of more efficient and loss control projects, and reduced carbon footprint	• Climate change policy and decarbonization road map
	Increased self-generation capacity	• Self-generation with renewable energies in substations, administrative headquarters, etc. • Reputational enhancement, carbon footprint reduction and cost reduction	• Participation in energy transportation projects from renewable sources (e.g., Colectora Project in La Guajira)
Products and Services	Technological developments and implementation of good practices that allow greater efficiency and risk control in the provision of the transmission service	• Transformation of transmission lines into Smart Grids - Energy 4.0, use of more efficient materials, information and data management systems, and adoption of practices that prevent and mitigate risks to ecosystems • Increased profitability, business opportunities, reduced losses and risks, and reduced compensation expenses and carbon footprint	• Evaluation of private business and income alternatives other than conventional business
	Increase in the supply and demand of renewable energy that must be transported	• New businesses and network expansion projects towards generation plants with renewable energies • Improved financial performance	• Climate change policy
Resilience	Transformation of the energy transmission business, by taking advantage of technological, regulatory, cultural and market opportunities, etc., to ensure its long-term adaptation and competitiveness in a climate change environment	• Definition of a Net Zero Strategy aligned with the NDCs • Leveraging technological opportunities (energy efficiency, emission control, self-generation and other adaptation and mitigation measures) to contribute to the energy transition • Decrease in costs associated with taking advantage of opportunities (reputational, maintenance, replacement, operation, etc.) • Long-term business continuity and competitiveness	• Climate change policy

Table 5 Climate opportunities analyzed for TGI

Opportunity		Benefit	Action Measures
Efficient Use of Resources	Policies and regulations to promote efficiency and control leaks in gas transportation systems and reduce the carbon footprint	• New businesses for the provision of emission control services • Reduction in compensation costs. • Lower economic losses due to natural gas leaks in transportation • Increased revenue from new business development • Increased revenue from increased efficiency and leak control • Increased profitability	• Decarbonization Roadmap at TGI through the application of initiatives and other activities in the operation and construction of projects

Opportunity		Benefit	Action Measures
Power Source	Development of the alternative energy market such as hydrogen and biogas	• Inclusion of hydrogen and biogas in the company's product portfolio • Increased profitability and new business opportunities	• GEB innovation strategy • Generation of partnerships to innovate in biogas and hydrogen • Realization of hydrogen pilot projects and studies of the biogas value chain
Market	Increased demand for natural gas as a transition fuel	• Growth in the natural gas transportation business. • Increased revenue and new business opportunities	• TGI 2.0 Strategy • GEB innovation strategy • Projects related to MicroLNG and Regasification
	Restrictions on the use of mineral coal and liquid fuels in industry and for the generation of electricity	• Replacement of fossil fuels, with high carbon intensity by gas • Increased revenue and new business opportunities	• Projects related to MicroLNG and Regasification • GEB innovation strategy
Resilience	Transformation of the natural gas transmission business, by taking advantage of technological, regulatory, cultural and market opportunities, etc., to ensure its long-term adaptation and competitiveness in a climate change environment	• Participation, as a transition fuel, in the development of a path aligned with the NDCs • Leveraging new energy options (Hydrogen and biogas), for a low-carbon economy • Decrease in reputational costs associated with the fossil fuel business • Long-term business continuity and competitiveness	• TGI 2.0 Strategy • GEB innovation strategy

To leverage and face innovation opportunities and challenges, GEB recently created an Innovation Office to promote and strengthen innovation capacities and to enable and accelerate the materialization of innovations through the provision of implicit (cultural transformation) and explicit services for all GEB business units and subsidiaries.

GEB is structuring a strategy to participate in production, transportation and distribution of low-carbon blue and green hydrogen. It will continue to participate in promoting the massification of sustainable mobility and expanding its participation in generation with non-conventional renewable energies (NCRE).

In relation to smart grids, GEB will develop capacities and initiatives to apply advanced analytics to its businesses; and, by leveraging digitalization initiatives, it will adopt and promote technologies that increase the efficiency in the use of energy resources.

Finally, GEB is committed to progressively integrate the TCFD framework to all of its controlled subsidiaries to assess the climate-related risks and opportunities in the operations of Peru and Guatemala.

3.3 Financial impact of weather-related risks and opportunities

To economically estimate the risks and opportunities associated with climate change, a qualitative and participatory methodology was followed:

1. Financial impact scales were established for the Transmission Branch and for TGI. This was done considering the risk appetite of each business.
2. Questionnaires were designed and sent to key people in the GEB, Transmission Branch and TGI organizations.

Company	Area
Corporate	Regulation Department
	Financial Vice President's Office
	Vice President of Business Management and Innovation
	Strategic Planning Department
Transmission Branch	Planning and Business Control Department
	Operation and Maintenance Department
	Technical Department
	Sustainability Department
TGI	Sustainable Development Management
	Assurance Management
	South Zone Maintenance Department
	East Central Maintenance Department
	Planning and Performance Management (Risks)
	Commercial Management
	Integrity Management
	Corporate Affairs Department

3. Risks and opportunities were prioritized according to their financial impact and probability of occurrence.
4. A weighted average of the values provided was obtained.

Financial Impact of <u>Transmission Branch</u> Risks

No.	Risk type	Risk	Financial impact	Financial impact level	Time horizon
1	**Political and legal**	Policies or laws that increase restrictions and demands related to fighting change	US$ 2.44 M	low	2030

2	**Technological**	Technological improvements or innovations that accelerate the transition to cleaner fuels	US$ 2.09 M	low	2030
3	**Market**	Increase in the prices of raw materials (with a high carbon footprint e.g., cement, steel, copper, etc.) for the construction of infrastructure	US$ 2.44 M	low	2030
4	**Reputation**	Inadequate identification and management of potential risks and opportunities associated with climate change	US$ 1.56 M	very low	2030
5	**Chronic Physical**	Long-term changes in weather patterns, leading to uncertainty and volatility in the supply of wind, solar and hydraulic energy sources	US$ 4.23 M	medium	2050

Financial impact of TGI Risks

No.	Risk type	Risk	Financial impact	Financial impact level	Time horizon
1	**Political and legal**	Policies or laws that increase restrictions and demands related to fighting change	US$ 3.32 M	medium	2030
2	**Technological**	Technological improvements or innovations that accelerate the transition to cleaner fuels	US$ 3.52 M	medium	2040
3	**Market**	Increase in the prices of raw materials (with a high carbon footprint e.g., cement, steel, copper, etc.) for the construction of infrastructure	US$ 3.75 M	high	2030
4	**Reputation**	Inadequate identification and management of potential risks and opportunities associated with climate change	US$ 3.20 M	medium	2040
5	**Chronic Physical**	Long-term changes in weather patterns, which deteriorate the gas transportation infrastructure and lead to the need to adapt it to conditions of weather uncertainty and volatility	US$ 3.67 M	medium	2050

Financial impact of Transmission Branch opportunities

No.	Opportunity Type	Opportunity	Financial impact	Financial impact level	Time horizon
1	**Products and services**	Increase in the supply and demand of renewable energy that must be transported	US$ 3.79 M	medium	2030

Financial impact of TGI opportunities

No.	Opportunity Type	Opportunity	Financial impact	Financial impact level	Time horizon
1	**Power source**	Development of the alternative energy market such as hydrogen and biogas	US$ 3.70 M	medium	2040
2	**Market**	Increased demand for natural gas as a transition fuel	US$ 3.41 M	medium	2030

The integrated analysis of the financial impact of the climate-related risks and opportunities of the Transmission Branch and TGI, lead to the following conclusions:

- The business of natural gas transportation in Colombia has a higher risk of being financially affected by climate change. The financial impact of most of its risks is in the medium to high range.
- The risk with the greatest financial impact for the Transmission Branch is long-term change in weather patterns. The change in weather partners could generate uncertainty and volatility of the supply of the different energy sources (wind, solar and hydraulic). Its valuation was US$4.23 M to 2050.

- The risk of greater financial impact for TGI corresponds to the increase in the prices of raw materials (with a high carbon footprint, e.g., cement, steel, copper, etc.) for the construction of infrastructure. Its valuation was US$3.75M to 2030.
- The opportunity with the greatest financial impact for the Transmission Branch is the increase in the demand and in the supply of renewable energies that must be transported. Its valuation was US$3.79M to 2030.
- The opportunity that has the greatest financial impact for TGI is the development of the alternative energy market such as hydrogen and biogas. Its valuation was US$3.70M to 2040.

3.4 Resilience

GEB's governance structure together with its risk management strategy constitute a solid resilient strategy with a long-term vision. It includes renewable energies, Non-Conventional Energy Sources (FNCER), smart cities, the promotion of natural gas as a transition energy source and the contribution to the climate change mitigation and energy transition, gas as a fuel for the future, electric power transmission, and ESG and innovation.

In addition, other complementary instruments have been adopted:

- Sustainability Strategy and Policy
- GEB innovation strategy
- Reputational crisis management strategy
- Climate change policy

At the operational level the Transmission Branch has implemented a process for the control of SF_6 emissions. TGI is developing an energy efficiency program and a decarbonization roadmap.

GEB is strengthening its climate change strategy by the definition of emission reduction paths to 2030 for its controlled subsidiaries. These paths set annual emission reduction goals to reach the proposed (NDC´s) long-term objectives.

Finally, through the analysis of climate-related risks and opportunities presented in this report, opportunities for the improvement of the capacity of the Group to mitigate and adapt to climate change have been identified. To the extent that these opportunities are seized, GEB's resilience to climate change impacts will increase.

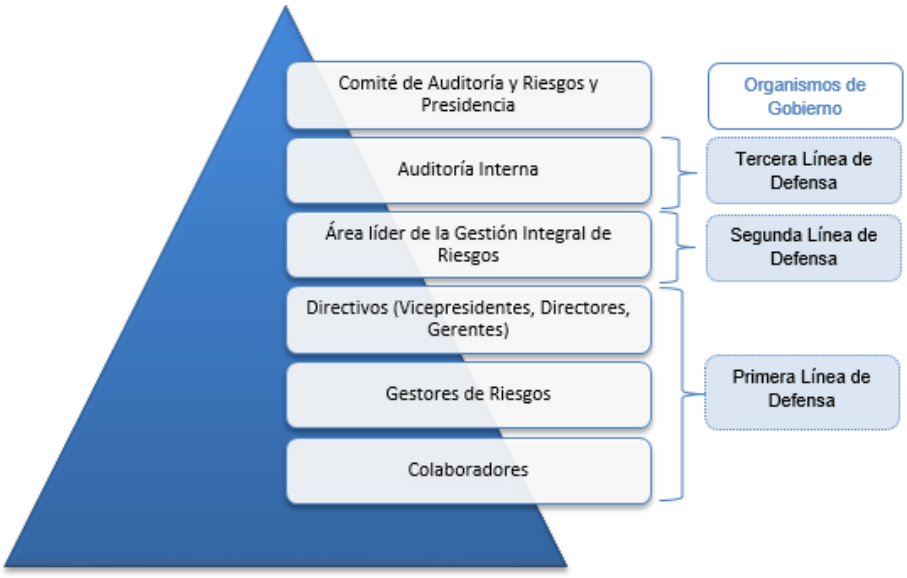
4 RISK MANAGEMENT

4.1 Risk identification, evaluation and management process

As mentioned above, the Sustainability Strategy leverages opportunities and avoids risks in the short, medium and long term. To manage these risks and opportunities, GEB follows a series of structured actions associated with the comprehensive risk management process led by the GEB Corporate Strategic Planning Department with the technical support of the Sustainability and Communications Department. This comprehensive risk management process is implemented in light of a series of policies and processes that seek to ensure compliance with the Group's objectives.

Risk management - prevention and mitigation - is a transversal commitment of the Group. It is led by the Audit and Risk Committee of the Board of Directors, which includes in its functions monitoring and assessing the Group's Internal Control system, including risk analysis and the recommendation and issuance of concepts to the Board of Directors.

Risk Governance Structure



Every quarter, management reports the strategic risks to the Audit and Risk Committee and to the Board of Directors. This, to follow-up, adjust and strengthen risk-treatment plans across the entire organization.

The Leaders and Risk Managers of GEB and its subsidiaries are responsible for coordinating in their areas, the identification, assessment, monitoring and updating of risks and controls. They present the information to their leaders for approval and, in the event that a risk materializes, they send the consolidated monitoring information along with corrective and preventive action plans.

All employees are responsible for identifying, assessing, defining and monitoring the risks that may affect the operations and/or activities of the Group and the timely reporting of cases that materialize.

The Comprehensive Risk Management Model (MGIR) is based on the NTC ISO 31000:2018. It provides a framework of reference to assure performance of the necessary activities for adequate management of the identified risks. The model's aim is to secure the strategic objectives, the continuous improvement of the operations of the Group and its affiliates, and the protection of its facilities, assets and resources.

The Corporate identifies, measures and manages the strategic and emerging risks to which the Group's companies are exposed. This to minimize the probability of occurrence of potential financial and reputational impacts, and to take advantage of the opportunities that may arise. Each subsidiary of the Group applies

the Comprehensive Risk Management Model and generates a map that identifies and assesses risks. Measures and plans are developed for the management of risks.

For all identified risks and opportunities, regardless of their level of criticality or priority, potential related impacts are identified and assessed, and action plans and management measures are established.

Risk management model

The Risk Materialization indicator is measured quarterly. It quantifies the relationship between materialized and identified risks. The Risk Control Effectiveness indicator is measured annually. This indicator assesses the effectiveness of the established control in terms of its risk reduction or mitigation effectiveness, and in terms of its degree of operation and application.

4.2 Integration of weather-related risks in general risk management

The GEB Comprehensive Risk Management model seeks to progressively and, based on the analysis of the internal and external context, identify the climatic risks that could affect, positively or negatively, the strategic objectives of the organization.

For the assessment of climate-related risks, the methodology of the described model is maintained. The probability of occurrence and the impact of their consequences are estimated. Based on this, the level of the different identified risks is assessed, and the strategy or response plan to address them is established. The following emerging climate-related risks were identified:

Table 6 Emerging risks related to climate change

Risk	Possible impacts	Opportunities	Mitigation actions
Reconfiguration of the value chain of the energy sector and implementation of new technologies	• Effect on revenue and EBITDA. • Drop in share prices. • Decrease in competitiveness in new electric energy and gas investment opportunities. • Possible decrease in revenues due to low use of the services offered by our Energy Transmission and Distribution and Gas Transport and Distribution assets.	Development of new products and services under the strategic enabler of digitalization and innovation.	• Implement the new strategic plan for 2021-2030, where GEB's businesses in Electricity Transmission and Gas Transportation are strengthened. • Execution of our Strategic Plan. • Digitization of the company's core and back-office processes. • Proactive management and monitoring of the environment in the region, technological monitoring of new market entries and adoption of

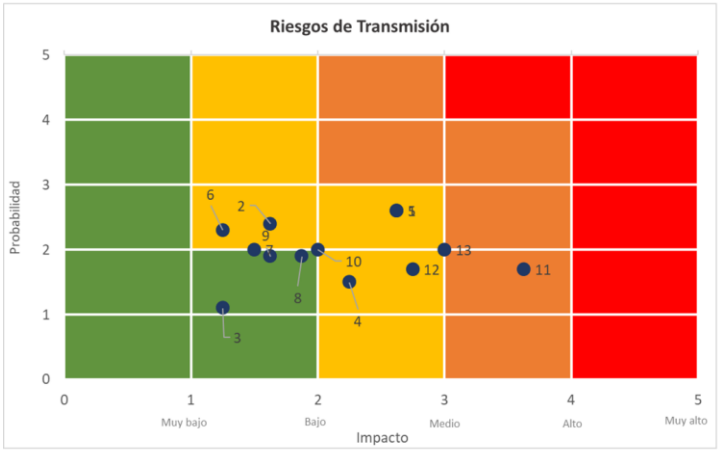
Risk	Possible impacts	Opportunities	Mitigation actions
	• Restrictions on organic and non-organic growth of our businesses.		technologies that add value to the business. • Evolution of the innovation system.
Uncertainty in the occurrence of extreme climate events, and crises due to failure in the management of climate challenges	• Interruption in the provision of services. • Economic and reputational losses for the company. • Damage and unavailability of assets.	The corporate strategy addresses: • Promotion of Non-Conventional Renewable Energies, capturing 20% of the potential future opportunity: 800-1200 MW3. • Efficient energy consumption of the District of Bogotá • Support the District of Bogotá in meeting the goal of 600,000 electric vehicles by 2030. • Commitment to reduce emissions of tons of CO2 equivalent with annual targets aligned with the commitment in each of the countries.	• Acquire insurance policies (Transfer • risks). • Ongoing survey of the insurance market for new and better coverage to reduce the financial impact of a loss event. Business Continuity Plan Institutional • Emergency Response (PIRE for the Spanish original). • Implementation of policy and analysis of qualitative and quantitative scenarios associated with availability and quality of water resources, and the generation of emissions and • waste.

The plan for 2022 is to define a new framework to review and update strategic and emerging risks through an analysis of current the trends by each one of the businesses. Likewise, the relevant climate-related risks obtained from the analysis according to the TCFD methodology will be incorporated into the strategic risk matrix.

This analysis was carried out based on the framework defined by the comprehensive risk management model and GEB's risk appetite. The risks and opportunities were rated (by their potential financial impact and probability of occurrence) allowing them to be incorporated into the organization's strategic risks.

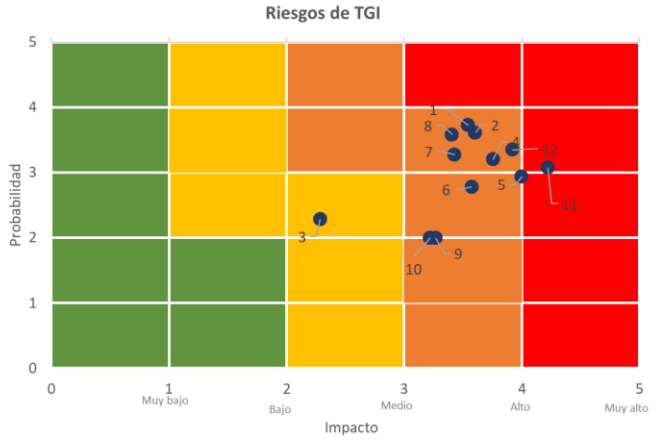
The prioritization of the identified risks, considering both their probability of occurrence and their financial impact, is shown graphically below:

Weather-related risk prioritization for Transmission Branch



No.	Riesgos Identificados	Priorización
1	Políticas o leyes que aumentan las restricciones y exigencias relacionadas con la lucha contra el cambio	1
2	Políticas o leyes que exijan la adecuación de la infraestructura para la adaptación al cambio climático.	7
3	Demandas judiciales relacionadas con acciones de lucha contra el cambio climático	13
4	Mejoras o innovaciones tecnológicas que aceleren la transición hacia combustibles mas limpios	9
5	Aumento de los precios de las materias primas *(con alta huella de carbono ej. Cemento, acero, cobre, etc)* para la construcción de la infraestructura	2
6	Cambios en las políticas y en las condiciones de los contratos de seguros y bajo apetito de inversionistas y financiadores	12
7	Alto nivel de concientización de los grupos de interés sobre el cambio climático	11
8	Inadecuada identificación y manejo de los potenciales riesgos y oportunidades asociados al cambio climático	8
9	Desconocimiento de las expectativas de grupos de interés en relación con las medidas de mitigación y adaptación	10
10	Eventos climáticos extremos, incluyendo el aumento de la intensidad de los fenómenos meteorológicos (huracanes, desbordamientos, tormentas, deslizamientos, olas de calor, sequías, inundaciones, etc.)	6
11	Cambios a largo plazo en los patrones climáticos, que derivan en una incertidumbre y volatilidad de la oferta de fuentes de energía eólica, solar e hidráulica	3
12	Cambios a largo plazo en los patrones climáticos, que conllevan la necesidad de adaptar la infraestructura a condiciones de incertidumbre y volatilidad climática	5
13	Cambios a largo plazo en los patrones climáticos, que afectan y deterioran la infraestructura de transmisión en zonas vulnerables (costeras, montañosas, altas pendientes, etc.)	4

Figure 1 weather-related risk prioritization for TGI



No.	Riesgos Identificados	Priorización
1	Políticas o leyes que aumentan las restricciones y exigencias relacionadas con la lucha contra el cambio climático (restricción a las emisiones de metano, precio de los créditos de carbono, reporte sobre las acciones de mitigación y adaptación, adopción acelerada tecnología)	1
2	Políticas o leyes que exijan la adecuación de la infraestructura de transporte de gas para la adaptación y mitigación al cambio climático	3
3	Demandas judiciales relacionadas con acciones de lucha contra el cambio climático	12
4	Mejoras o innovaciones tecnológicas que aceleren la transición hacia combustibles mas limpios (biogás, hidrógeno)	6
5	Aumento de los precios de las materias primas (con alta huella de carbono ej. Cemento, acero, polietileno, hierro etc.) para la construcción de la infraestructura de transporte de gas	7
6	Reducción de la demanda del gas natural, por aceleramiento en la transición energética	9
7	Cambios en las políticas y en las condiciones de los contratos de seguros y bajo apetito de inversionistas y financiadores por el deterioro de la imagen de los combustibles fósiles	8
8	Alto nivel de concientización de los grupos de interés sobre el cambio climático	5
9	Inadecuada identificación y manejo de los potenciales riesgos y oportunidades asociados al cambio climático	10
10	Desconocimiento de las expectativas de grupos de interés en relación con las medidas de mitigación y adaptación al cambio climático	11
11	Eventos climáticos extremos, incluyendo el aumento de la intensidad de los fenómenos meteorológicos (huracanes, desbordamientos, tormentas, deslizamientos, olas de calor, sequías, inundaciones, etc.)	4
12	Cambios a largo plazo en los patrones climáticos, que deterioren la infraestructura de transporte de gas y conlleven a la necesidad de adaptarla a condiciones de incertidumbre y volatilidad climática	2

Based on this analysis, the Group's subsidiaries will apply the climate-related risk management model and generate their risks and opportunity maps and their management plans.

5 GOALS AND METRICS

5.1 Targets related to climate change

The GEB climate strategy seeks, by identifying and taking advantage of mitigation and adaptation opportunities, to ensure the continuity and competitiveness of the business, and the construction of more resilient societies.

The GEB purposes associated with climate change for the year 2022 are as follows:

- Strengthen the quantification and verification of greenhouse gas inventory (Corporate and Transmission Branch).
- Certify the carbon neutral operation of Corporate GEB in 2021.
- Initiate the design of a corporate strategy of climate change, which should be approved in 2023.
- Prepare an organizational culture plan for the efficient management of wastes.
- Implement a sustainable mobility program for GEB employees.
- Prepare a circular economy strategy.

Table 7 GEB Climate Goals

2022 Goals			
Reduction of 5.7% of the Corporate's net emissions	Offset 100% of the Corporate's emissions	Reduction of 5.7% of the Transmission Branch's emissions	Compensate 100% of the emissions generated by the Transmission Branch

The goals for reducing Greenhouse Gas emissions are mainly concentrated in the following measures:

1. Minimization of fugitive methane emissions and vents.
2. Control SF_6 leaks.
3. Improvement of the efficiency of combustion processes and of electricity consumption.

Other complementary measures include:

1. Rationalization and optimization in the transportation for passengers and cargo.
2. Circular economy initiatives.
3. Prevention of emissions using solar panels.
4. Efficiency in the use of refrigerants and fire extinguishers.
5. Efficiency in the fuel use by compressors in the gas transportation business.

The strategic investment plan will be aligned with the commitment of the national government of Colombia to reduce carbon emissions by 51% by 2030, and with the goals established by the countries where the Group has a presence.

In the case of TGI, the following goals related to climate change have been established:

Table 10 TGI Climate Goals

2022 Goals			
Reforestation of 100 hectares	50% of fugitive emission baselines	25% reduction in fugitive emissions from the baseline measured and accumulated in 2022	2% reduction in GHG emissions

5.2 Metrics to assess weather-related risks and opportunities

GEB and its subsidiaries are part of the electricity and natural gas value chains. Thus, their environmental performance are central components of their business strategy. So much so that all decision processes that entail environmental risks are conducted following the precautionary principle, in accordance with the management systems at each one of the Group's companies.

Each subsidiary company has an Environmental Management System (EMS) that facilitates the management of the sustainability challenges and objectives. Those systems also contribute to the creation of an internal culture of rigorous environmental information management and performance. It allows for the

identification of gaps, the measurement of advances and the assessment of environmental impacts throughout the life cycle of assets and projects.

In accordance with the Sustainability Strategy, the main metrics for monitoring weather-related risks and opportunities are presented below:

Table 11 (Investment in energy transition)

Description	GEB	TGI
Investment in energy transition USD	$33,399,045	$1,813,273

*51.24% of investments made by GEB are in energy transition projects.

Table 12 GHG Emissions from GEB (tCO_2equ)

Scopes	2018	2019	2020	2021
Scope 1	1,573.6	3,599.0	2,926.5	2,926.8
Scope 2	78.5	89.8	150.6	106.4
Scope 3	615.2	513.4	131.1	152.7
TOTAL	2,267.35	4,202.2	3,208.2	3,185.9

Table 13 GHG emissions from TGI (tCO_2equ)

Scopes	2018	2019	2020	2021
Scope 1	139,925.4	157,440.0	116,969.91	219,412.2
Scope 2	317.1	512.3	591.96	414.4
Scope 3	210.4	226.0	54.13	144.7
TOTAL	140,452.9	158,178.3	117,616.00	220,024.5

Table 84 Total energy consumption of the organization, MWh

Energy type	2018	2019	2020	2021
Non-renewable fuels	882,008.1	634,664.8	645,862.2	675,709
Renewable fuels	0	0	0	0
Electricity consumption	3,512.9	3,719.14	3,725.38	3,929.4
Renewable energy consumption	N. A.	18.92	20.8	17.6

Table 15 Compensation of emissions year 2021

Description	GEB (Corporate + Transmission Branch)	TGI
Emissions compensation	3,209 tCO_2eq	72,000 tCO_2eq

Table 16 Reliability of the electrical system

Description	2018	2019	2020	2021
SAIDI (hours)-Transmission network	4.29 h (99.951%)	3.24 h (99.963%)	4.46 h (99.949%)	7.18 h (99.918%)

Table 17, Expenses in R+D+I

Description	2020	2021
Investment in R+D (USD)	16,053,134	32,988,523

6 CONTENTS OF THE TCFD RECOMMENDATIONS

Recommendation	Contents	TCFD report	Enlargement
GOVERNANCE Disclose organizational governance on weather-related risks and opportunities	a) Describe the role of management in assessing and managing weather-related risks and opportunities.	2.1 Oversight of the Board of Directors on the risks and opportunities related to climate change	Sustainability Strategy
	b) Describe the board's control over weather-related risks and opportunities.	2.2 Roles in assessing and managing weather-related risks and opportunities	Sustainability Strategy
STRATEGY Disclose the current and potential impact of weather-related risks and opportunities on the organization's business, strategy and financial planning where such information is material.	a) Describe the weather-related risks and opportunities identified by the organization in the short, medium and long term.	3.1 Definition of climate change risks and opportunities for GEB	---
	b) Describe the impact of weather-related risks and opportunities on the organization's business, strategy, and financial planning.	3.2 Analysis of risks and opportunities of climate change for GEB and 4. Risk management	---
	c) Describe the resilience of the organization's strategy, taking into account the different weather-related scenarios, such as a scenario with 2 ºC or less	3.4 Resilience	---
RISK MANAGEMENT Disclose how the organization identifies, assesses and manages weather-related risks.	a) Describe the organization's processes for identifying and assessing weather-related risks.	4.1 Risk identification and assessment process	Sustainability Report 2021- Risk Management Chapter
	b) Describe the organization's processes for managing weather-related risks.	4.1 Risk identification and assessment process	Sustainability Report 2021- Risk Management Chapter
	C) Describe how the processes for identifying, assessing and managing weather-related risks are integrated into the Organization's overall risk management.	4.2 Integration of weather-related risks in risk management	---
METRICS AND OBJECTIVES Disclose the metrics and targets used to assess and manage relevant weather-related risks and opportunities where such information is material	a) Disclose the metrics used by the organization to assess weather-related risks and opportunities in accordance with its strategy and risk management process.	5.2 Metrics to assess weather-related risks and opportunities	Annexes Report on sustainability GEB
	b) Disclose Scope 1, Scope 2 and, if applicable, Scope 3 greenhouse gas (GHG) emissions and their related risks.	5.2 Metrics to assess weather-related risks and opportunities	Sustainability Report 2021- Climate Change Chapter
	c) Describe the targets used by the organization to manage weather-related risks and opportunities and performance against targets.	5.1 Targets related to climate change	Sustainability Report on 2021- Climate Change Chapter