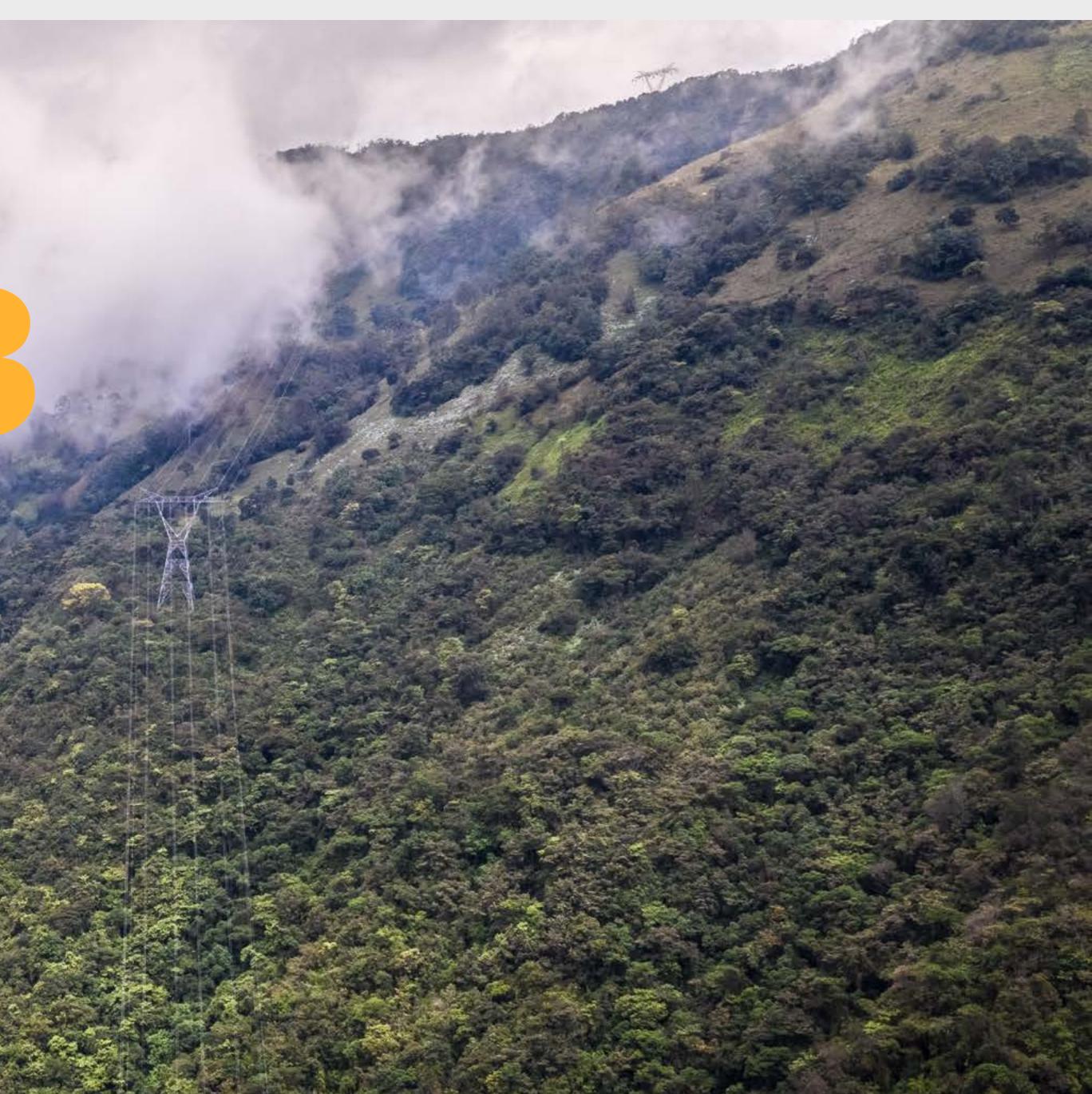


# CLIMATE CHANGE MANAGEMENT REPORT

Indicators and Notes Climate Change Report

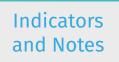




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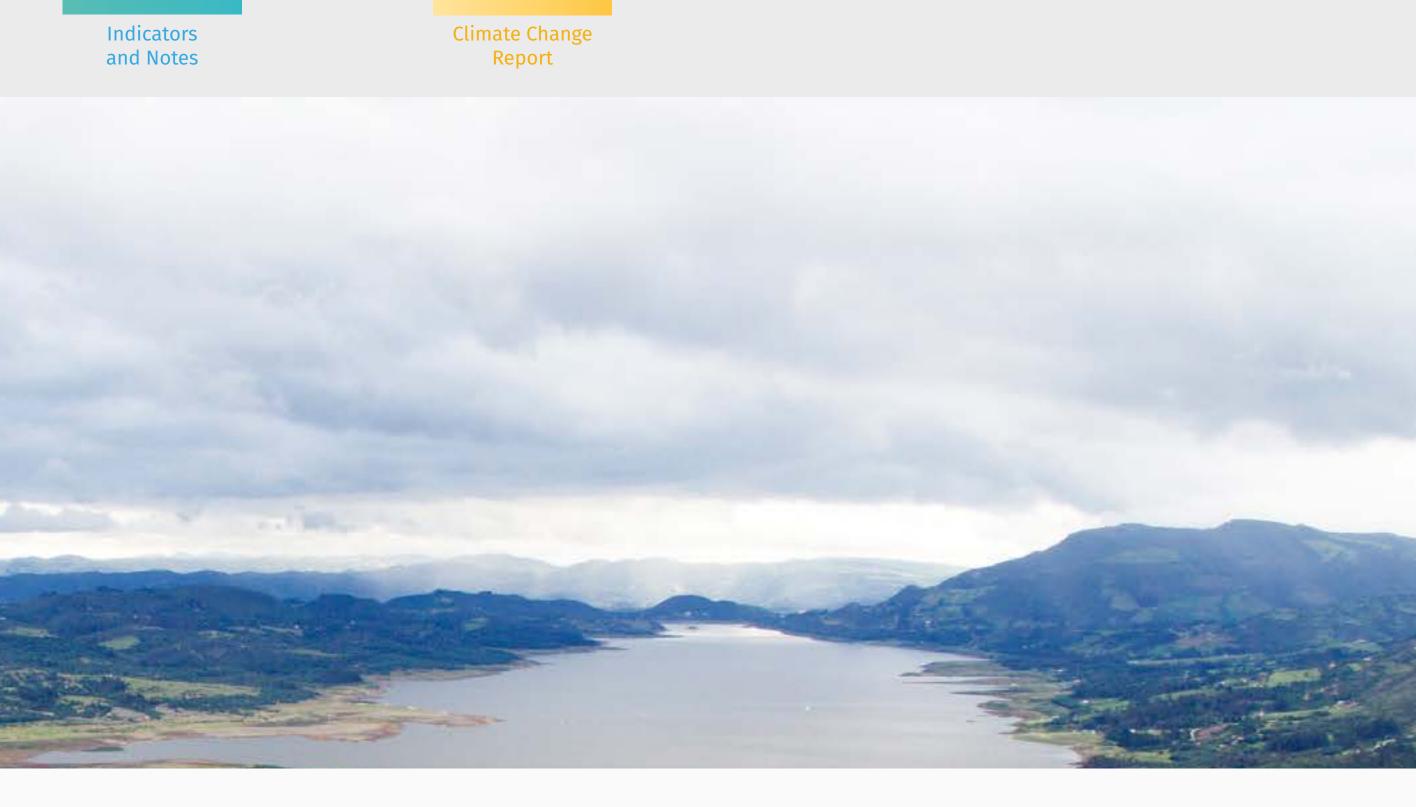
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This report presents the results of the strategic management of Climate Change at Grupo Energía Bogotá S.A. (GEB) E.S.P, following the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) framework. Theserecommendations have been implemented since 2021 in the operations of Colombia, Peru, and Guatemala, in the Holding and its controlled subsidiaries: Enlaza Grupo Energía Bogotá S.A.S. E.S.P. (Enlaza), Transportadora de Gas Internacional S.A. (TGI), E.S.P., Contugas S.A.C., Gas Natural de Lima y Callao S.A. (Cálidda), Transportadora de Energía de Centroamérica, S.A. (Conecta, previously Trecsa), and Electro Dunas S.A.A. (ElectroDunas).



# **1. INTRODUCTION**



# **2. GOVERNANCE**

The Energía Bogotá Group (GEB) has established a governance structure for sustainability, ensuring precise steps in fulfilling its Environmental, Social, and Governance (ESG) commitments and maintaining transparent and responsible accountability to all stakeholders.

Under the leadership of the Board of Directors, a Comprehensive Sustainability Corporate Governance System was adopted. The purpose is to steer and advance the Corporate Sustainability Strategy, creating tools to monitor objectives outlined in the Corporate Strategic Plan and to identify risks and opportunities amid the challengesconfronting various business sectors.

The management and administration of GEB is exercised, within their corresponding spheres of competence, by the General Assembly of Shareholders, the Board of Directors and the Presidency.

The Board of Directors is the highest governance and strategic management body. It aims to maintain the vision and 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 Board of Directors has 4 support commi tees: Audit and Risk Committee; Talent, Culture, and Innovation Committee; Financial and Investment Committee, and Corporate Governance and Sustainability Committee. All are chaired by an independent member.



Indicators and Notes

Climate Change Report





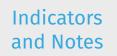


## 2.1 Oversight of the Board of Directors on the Risks and Opportunities Related to Climate Change

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, the Corporate Strategic Plan 2021 - 2030 was approved.

The Board of Directors approves the climate change indicators that are part of the company's goals, compliance with which is tied to the variable compensation of all employees in the organization. Over the past three years, climate change indicators have been included. In 2023, the Corporate Emissions Mitigation Indicator (CEMI) was created, which assesses the performance of climate goals in different challenges, according to the operations and the level of management maturity in each controlled subsidiary. The ICME rates reductions at three levels: satisfactory 90%, very satisfactory 100%, and extraordinary 120%. The compliance follow-up for these emissions mitigation goals is quarterly. During the year 2023, the weight of those goals corresponded to 10% of the Grupo Energía Bogotá objectives. The variable compensation of Corporate employees is tied to these goals:





The Corporate Emissions Mitigation Indicator (ICME) is the sum of the contributions from the subsidiaries.					
Subsidiary	Type of indicator	Reduction goal	Scope		
TGI	Operating emissions	-7%	Includes Scope 1 and 2 emissions Emergency venting is not included as it is fully compensated at 100% Verified 2021 baseline Does not consider compensations		
Enlaza	Operating emissions	-3%	Includes Scope 1 and 2 emissions 2022 Baseline Does not consider compensations		
Cálidda	Net emissions	-6.7%	Includes Scope 1 and 2 emissions 2019 Baseline Includes compensations		
Conecta	Net emissions	-2.5%	Includes Scope 1 and 2 emissions 2019 Baseline Includes compensations		

Table 1. Corporate Emission Mitigation Indicator.





GEB's Board of Directors has four Support Committees responsible for overseeing climate change risks and opportunities and monitoring the financial outcomes of climate management efforts:

**Corporate Governance and Sustainability Committee:** Monitors and provides recommendations to ensure compliance with corporate governance and sustainability objectives and goals. Recommends to the Board of Directors the sustainability strategy and the adoption of policies and guidelines aligned with best practices, international standards, and social and environmental risks and opportunities, as well as stakeholder requirements.

Furthermore, it evaluates and tracks the environmental strategy of the company, including achieving climate change reduction and adaptation goals, environmental performance, biodiversity, the circular economy, action plans, and the management of risks and opportunities.

Financial and Investment Committee: Monitors the financial, financing, and financial risks management of the Group. Analyses opportunities for new business and the opportunity to redefine existing investments, and makes recommendations to management and the Board of Directors. Additionally, it reports on and tracks the financial results arising from the social management of the environment and the company's strategy for climate change adaptation and mitigation, along with managing the financial aspects of greenhouse gas (GHG) emissions reduction trajectories.

Audit and Risk Committee: Oversees and evaluates the Internal Control system of GEB. Analyze financial and non-financial risks. It regularly updates the Board of Directors on the effective application of GEB and its subsidiaries' risk matrix, ensuring that major financial and non-financial risks, including environmental, social, and corporate governance risks, are identified, managed, and communicated to the Board timely and appropriately.

**Committee on Talent, Culture, and Innovation:** Analyzes and discusses issues related to Human Talent Management at GEB. This includes training plans, compensation, organizational culture development, and innovation initiatives. The committee also recommends to the Board the annual performance objectives that lead to variable compensation for employees, including targets derived from the sustainability strategy.

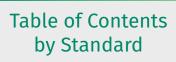
Analysis and quantification of climate change risks and opportunities for controlled businesses and the climate change management report under the TCFD framework will be presented to the previously mentioned Board Committees. For 2024, the goal is to include climate risks in the risk matrix of Contugas, Electrodunas, and Conecta.

Indicators and Notes Climate Change Report









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

For GEB and its subsidiaries, mitigation and adaptation to climate change are integral components of the business strategy. Senior Management monitors and approves the initiatives and policies that, in one way or another, contribute to an effective control of risks and use of climate opportunities.

### Senior Management of GEB (Holding):

Grupo Energía Bogotá has established a Steering Committee responsible for monitoring the implementation of the corporate strategy and managing organizational risks. It approves the corporate guidelines and supervises the environmental, social and governance performance of the Group. This Committee, which is made up of the Directors who lead the areas of the Holding, meets every week and recommends the strategic issues that should be presented for the consideration of the support committees of the Board of Directors.

The issues related to climate change presented and discussed by the committee in 2023 were:

Subject Discussed	Month (Date)
Progress in the Climate Change Strategy	May
Climate change reduction pathways	September
Climate change reduction pathways	October
Progress in Sustainability Strategy (climate change management)	November

Table 2. Climate change issues discussed in the Board of Directors committees

Within the Holding Company, the following departments participate in managing the Group's climate risks:

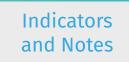
Vice Presidency of Business Management and Innovation: monitors the execution of the Corporate Strategic Plan. It is responsible for the coordination of the Group's processes and procedures. Additionally, it identifies, measures and manages strategic and emerging risks to minimize the probability of materialization of financial and reputational impacts and to seize potential opportunities. The Vice President's Office is also responsible for promoting development, investigation, and innovation initiatives. The Innovation strategy has energy transition and decarbonization as one of its pillars.

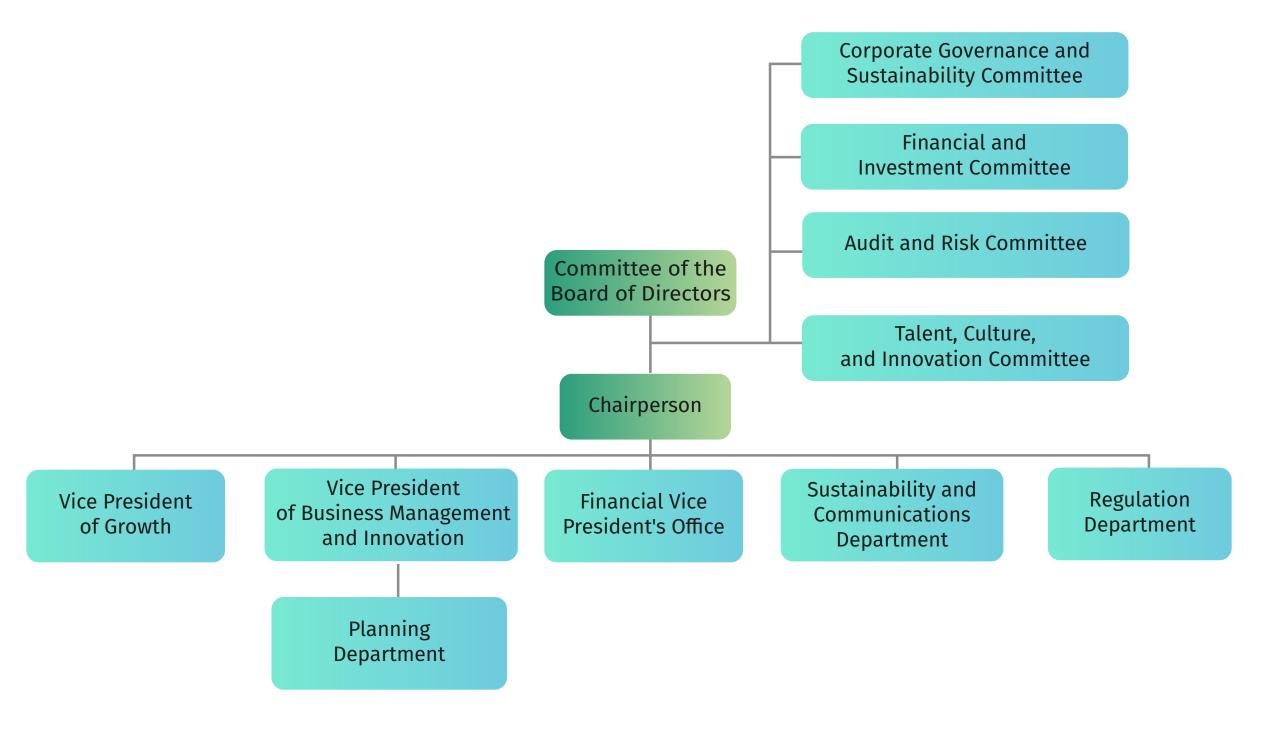
Sustainability and Communications Department: leads and monitors the Sustainability Strategy and the Climate Change Policy of GEB companies. Coordinates the analysis of climate change risks and opportunities and guides the definition of the emission reduction paths required to achieve the proposed climate goals.

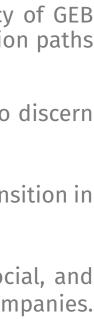
Regulation Department: Tracks the legal and regulatory risks of GEB's businesses and analyzes changes in climate regulations to discern their potential positive or negative impacts on business operations.

Vice Presidency of Growth: Ensures that new investments by the Group adhere to sustainability criteria and support the energy transition in operational countries.

Financial Vice Presidency: Spearheads the financial strategy of the Group, focusing on financing that meets environmental, social, and governance performance criteria. Seize the financing opportunities arising from the climate management of the Business Group companies.





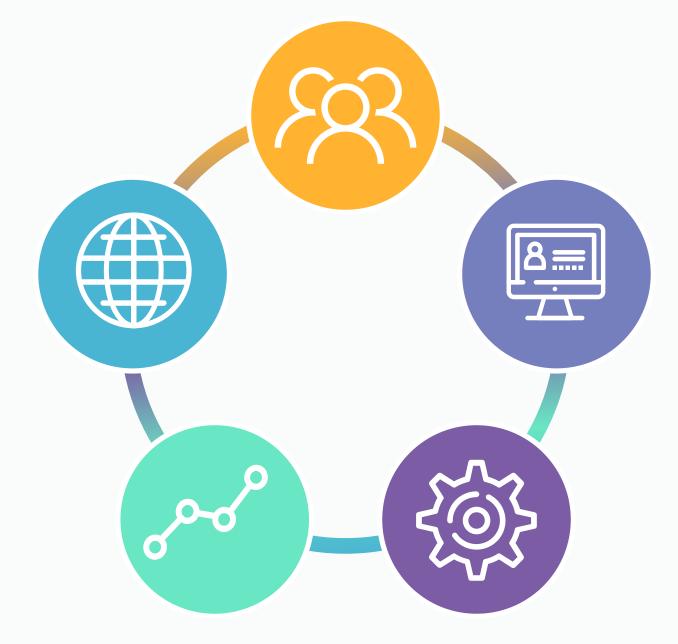




# **3. STRATEGY**

The climate strategy of Grupo Energía Bogotá is developed in the light of the organization's climate change policy adopted by the Board of Directors of the Business Group. In essence, it seeks to contribute to the achievement of the emission reduction goals assumed by the governments of the countries where GEB operates. This role also involves developing measures to enhance the resilience and robustness of company infrastructure against climate events and enduring climate changes (adaptation). GEB seeks to disclose reliable information transparently to stakeholders about its climate management, and its risks and opportunities, contribute to a fair energy transition, and take advantage of the financial opportunities that arise from ambitious climate management.







### 1. Assessment

of Risks and Opportunities Associated with Climate Change



## 2. Adaptation

of the Infrastructure to Extreme Climate Conditions



## 3. Financing

ESG (Environment, Social and Governance)



## 4. Transition

Flexible, Safe and Economically Efficient Way



### **5. Mitigation** and Compensation through Emission Reduction and Renewable Sources

Figure 2. Corporate Climate Change Policy.



## **3.1 Assessment of Risks and Opportunities Associated with Climate Change**

The Group's subsidiaries have technical teams responsible for monitoring and reporting relevant climate indicators, mainly those related to Scope 1 and 2 emissions

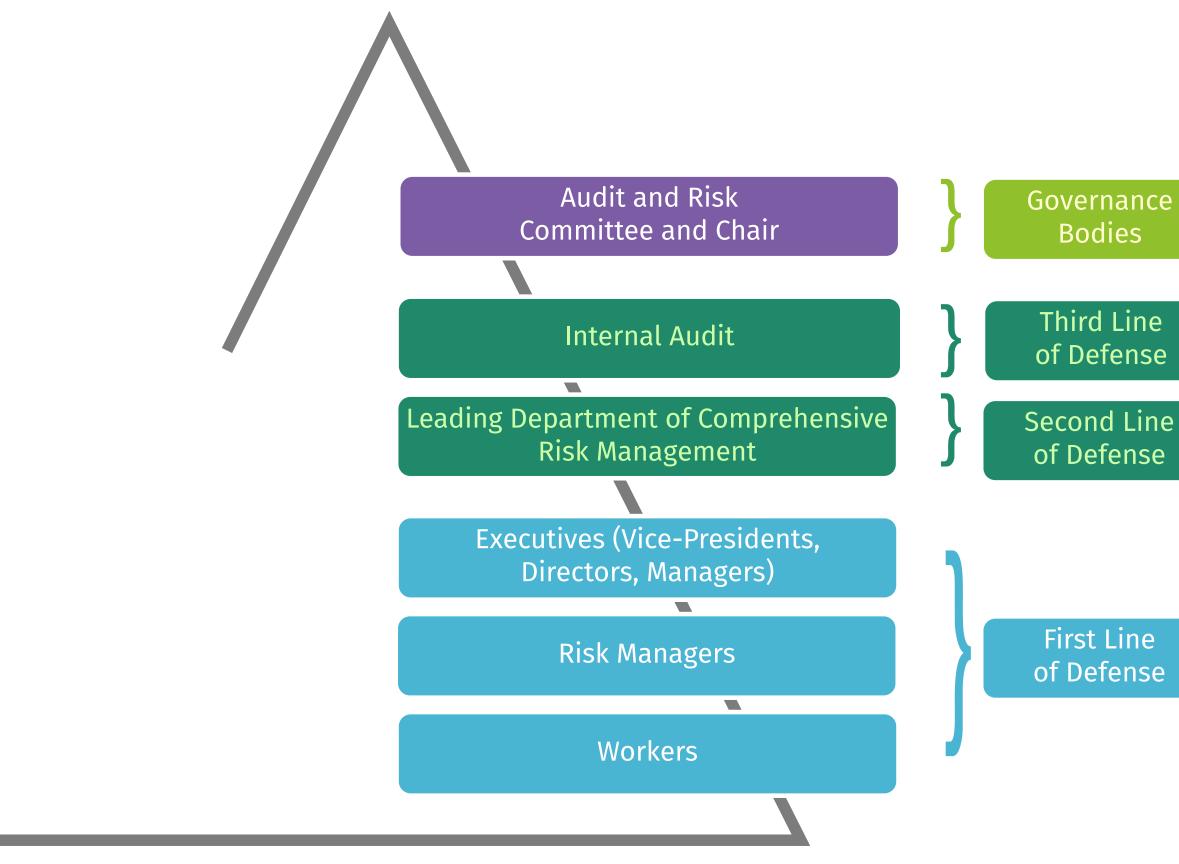
Risk management is a cross-departmental commitment within the Group. It is directed by the Audit and Risk Committee of the Board of Directors, which is tasked with overseeing and evaluating the Group's Internal Control System, including risk analysis and issuing recommendations to management and the Board of Directors.

> Every quarter, management reports the strategic risks to the Audit and Risk Committee and to the Board of Directors. This is done for purposes of follow-up, adjustment and strengthening treatment plans, and taking action on relevant risks.

and properties.

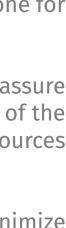
The Corporate sector identifies, measures, and manages strategic risks to which the companies are exposed. This is done to minimize the probability of occurrence of potential financial and reputational impacts, and to take advantage of the opportunities that may arise. The following figure shows the map of the strategic risks.







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. Its aim is to assure the achievement of the strategic objectives, the continuous improvement of the operations of the Group and its affiliates, and the care of its assets, resources







#### Strategic Risks

No	Residual	RISK
1	2	BREACH OF THE CONTRACT BETWEEN TRECSA AND THE GOVERNMENT (PET 001/2009)
2	4	OCCUPATIONAL ACCIDENTS IN THE OPERATIONS AND ACTIVITIES PERFORMED BY GEB AND ITS SUBSIDIARIES
3	1	FAILURE TO REPAY THE DEBT AND CREDIT OBLIGATIONS AT CONTUGAS
4	20	PROCESS SAFETY INCIDENTS AT GEB AND SUBSIDIARIES' OPERATIONS
5	3	REGULATORY CHANGES THAT ARE UNFAVORABLE TO THE COMPANY'S INTERESTS
6	11	FAILURE TO FULFILL THE BUSINESS PLAN
7	12	BREACH OF THE ETHICAL AND/OR REGULATORY FRAMEWORK IN TERMS OF COMPLIANCE
8	6	LACK OF CONTINUITY IN THE STRATEGY OR FAILURE TO IMPLEMENT THE CORPORATE GOVERNANCE PRACTICES
9	7	INADEQUATE MANAGEMENT OF THE CORPORATE STRATEGY AT SUBSIDIARIES
10	8	NOT EXERCISING AN APPROPRIATE ROLE AS SHAREHOLDER IN THE DECISIONS ADOPTED AT COMPANIES IN WHICH GEB HAS NON-CONTROLLING INTERESTS.
11	16	NON-CONTINUITY OF THE BUSINESS
12	9	NOT HAVING THE APPROPRIATE AND MOTIVATED HUMAN CAPITAL TO DEVELOP THE STRATEGY
13	15	LOSS OF CONFIDENTIALITY, INTEGRITY OR AVAILABILITY OF THE COMPANY'S INFORMATION ASSETS AND/OR CYBERASSETS
14	17	LOSS OF COMPETITIVENESS AND/OR RELIABILITY OF THE BUSINESS OPERATION DUE TO INADEQUATE DIGITAL TRANSFORMATION
15	18	LOSS OF PROFITABILITY, VIABILITY AND BUSINESS CONTINUITY DUE TO INADEQUATE MANAGEMENT OF CLIMATE CHANGE
16	5	POTENTIAL DIFFERENCES BETWEEN PARTNERS IN NON-CONTROLLED COMPANIES
17	10	FINANCING RESTRICTIONS AND/OR HIGHER COST OF BORROWING
18	13	EFFECTS ON GEB'S REPUTATION
19	14	PARTICIPATION IN NON-STRATEGIC INVESTMENTS
20	19	VIOLATION OF HUMAN RIGHTS BY GEB, OR BY A GEB EMPLOYEE, PARTNER OR CONTRACTOR

As shown in Figure 4, risk 15, loss of profitability, feasibility, and business continuity due to inadequate climate change management without controls (inherent risk) represents a high impact with a medium probability of occurrence. However, even though controlled risk has an equally high impact, its likelihood of occurrence is low.

Indicators and Notes

#### **GEB Heat Map**

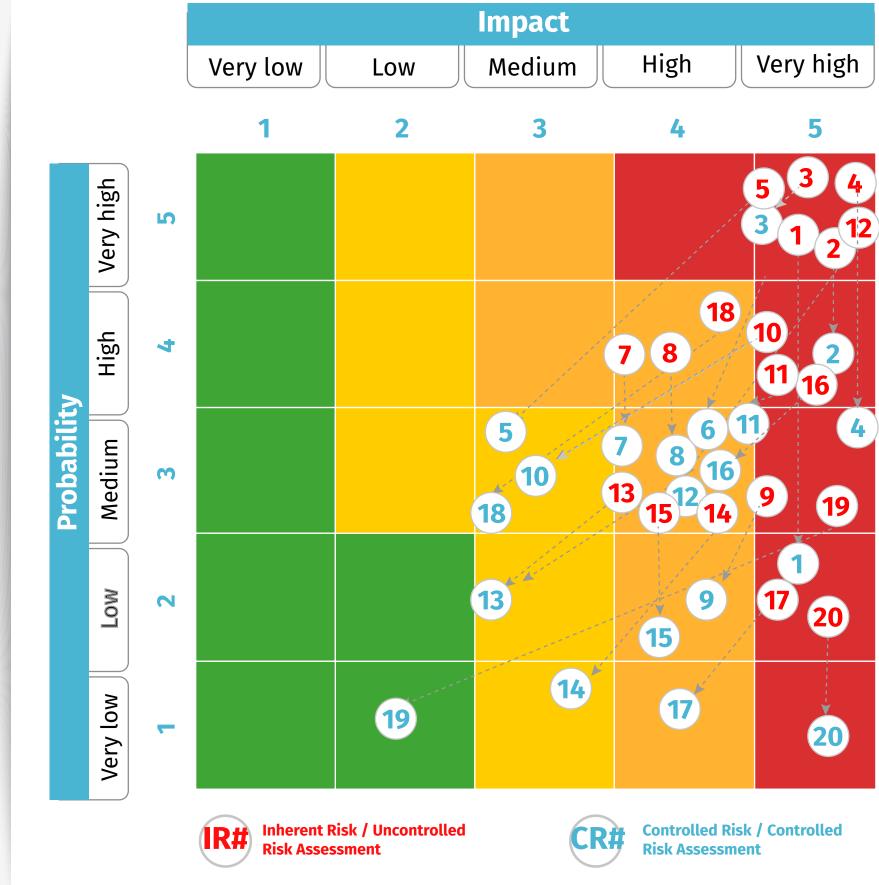


Figure 4. Strategic Risks of the Organization.



## 3.2 Integration of Climate Risks into General Risk Management

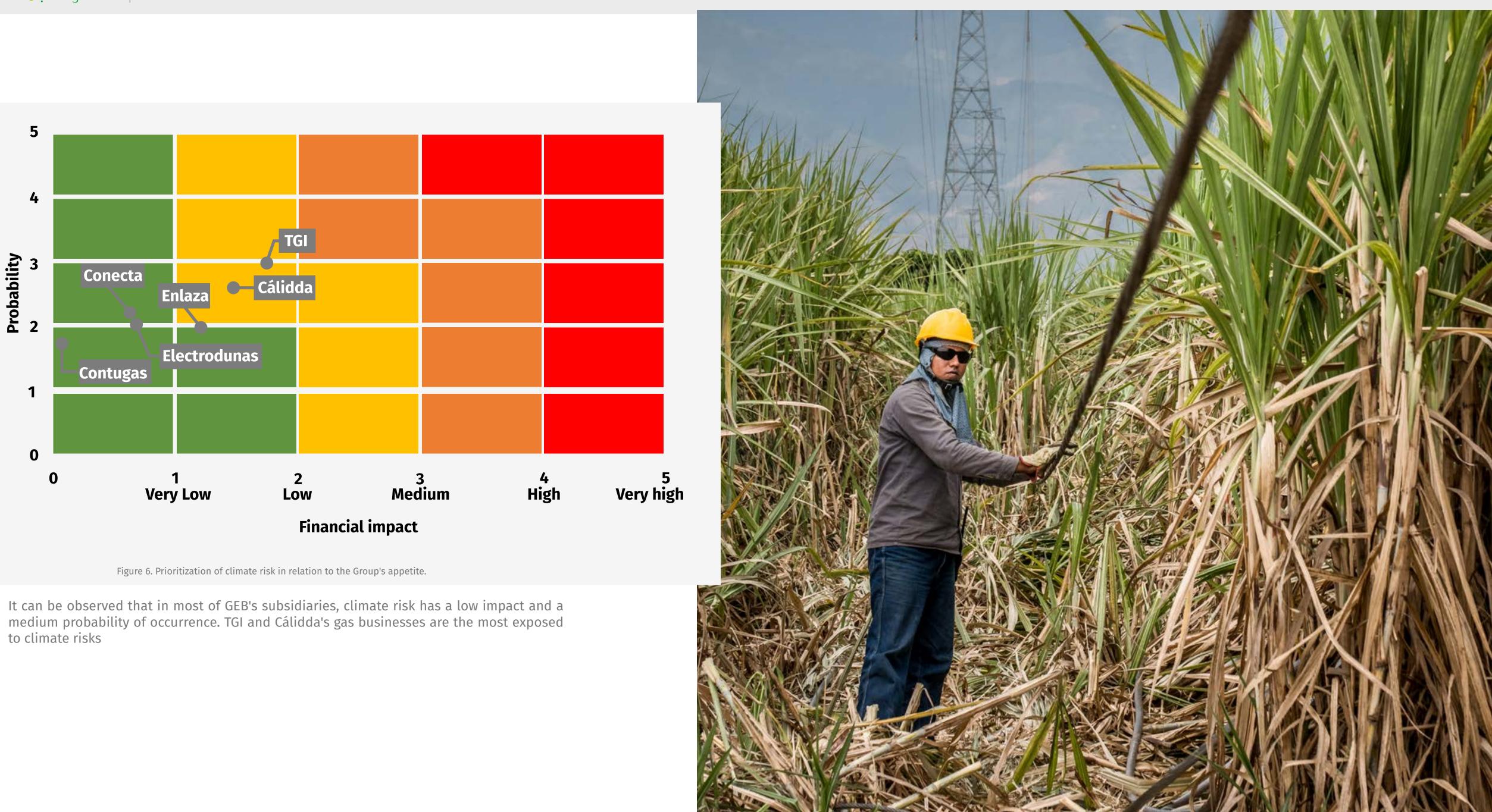
The GEB Comprehensive Risk Management model seeks to, progressively and based on the analysis of the internal and external context, identify the type of climatic events that could affect, positively or negatively, the fulfillment or achievement of the objectives strategic of the organization.

Climate risks are assessed by estimating their likelihood and the impact of potential outcomes. Based on these assessments, the level of risk and corresponding response strategies or plans are formulated.



Figure 5. Risk management model.







#### Climate Change Report



## **3.3 Mitigation**

As part of this 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 Colombia, GEB and its subsidiaries aim to reduce net GHG emissions by at least 51% by 2030 compared to the Business as Usual (BAU) scenario and achieve carbon neutrality by no later than 2050. In Peru, the target is a 30% reduction in emissions by 2030 compared to the baseline scenario. On the other hand, in Guatemala, there is a goal to reduce emissions by 11.2% by the year 2030 compared to the reference scenario.



Figure 7. Emission Reduction Goals for 2030:

In 2023, Grupo Energía Bogotá emitted a total of 488,702.98 tons of CO2 equivalent (tCO2eq), in scopes 1 and 2. The calculation included, in addition, two new sources of bond issue: "fugitive emissions" at TGI (87,015tCO2eq) and "energy distribution losses" at Electro Dunas (34,641 tCO2eq). Despite the efforts made by the subsidiaries to reduce their emissions, at the end of the year GEB emitted 10,526 tCO2eq more than in the base year.

- maintenance.
- ElectroDunas: reduced 81 tCO2eq in energy consumption, installation of photovoltaic plant.
- Cálidda: reduced 1,006 tCO2eq through energy efficiency in its heaters.
- Conecta: reduced its energy consumption by 287 tCO2eq.

Starting from 2024, the subsidiaries will establish reduction goals for emissions following reduction paths. Those paths project the emissions by 2030 of each subsidiary (Business as Usual scenario - BAU), and their decrease as new projects and technologies are implemented.

The identified opportunities for emission reduction in the period 2023 - 2030 were prioritized technically and economically. Marginal Abatement Cost Curves (MACC) were developed to prioritize emission reduction alternatives based on their cost-effectiveness.

The design of the pathways for reducing greenhouse gas emissions (Scope 1 and 2) of the companies within Grupo Energía Bogotá was the initial step in establishing emission reduction strategies.

The proposed reduction paths are not the only way companies have to achieve emission reductions. Reduction paths must be updated periodically considering the costs and effectiveness of existing options for emissions reduction.

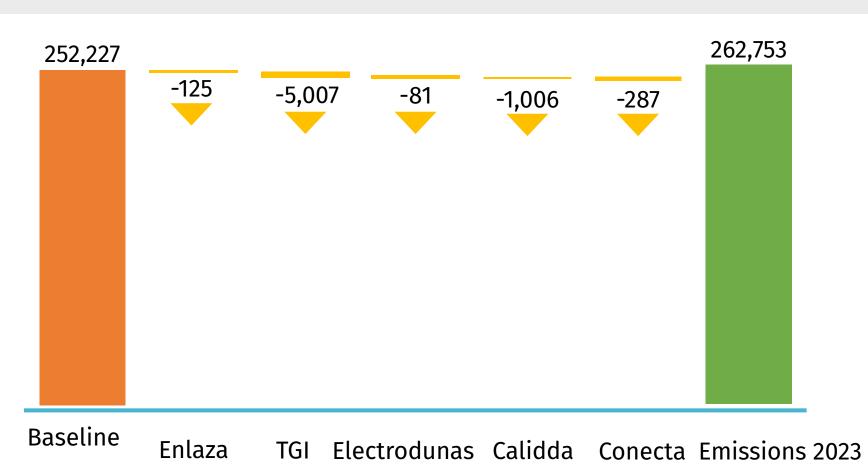


Figure 8. Reduction of emissions during 2023.

Climate Change

Report

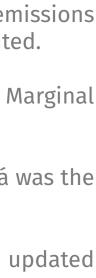
- Emissions reductions compared to each subsidiary's baseline were as follows:
- Enlaza: reduced 125 tCO2eq with its SF6 gas leak control plan
- TGI reduced 5,007 tCO2eq through the implementation of the TEAs shutdown project and operational controls for scheduled

Despite these reduction initiatives, emissions increased mainly due to the fuel consumption of TGI's subsidiary compressors(+10.00 ton CO2 eq compared to 2021). The main reasons for this increase were:

• The Villavicencio station will come on stream in June 2023.

• Mayor transportation of gas, mainly by thermal dispatch due to the El Niño phenomenon.







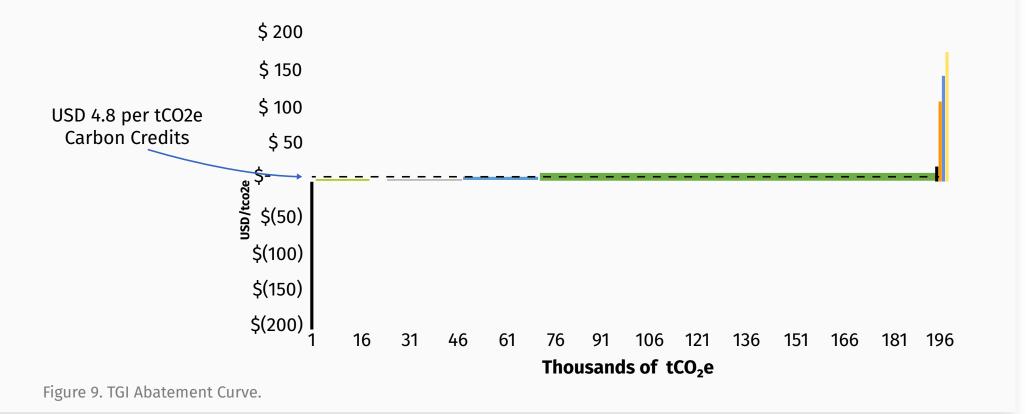
The following are the pathways of each company:

## TGI

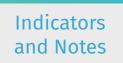
TGI's emissions by 2030 were projected at 114,112 tCO2eq. This represents a 1.2% reduction compared to what was reported in 2021. It is important to clarify that this emissions value does not include leaks due to contingencies and emergencies. TGI has a goal to reduce its emissions by 51% compared to the BAU scenario by 2030.

Below, the TGI emissions reduction curve is presented

Measures	Cost (USD)	tCO <sub>2</sub> e
Turboexpander	-446	866
Electric compressors meeting Useful Life Norm (VUN)	-4	17,736
Preventive Maintenance	-1	2,944
1MW Solar PPA	0	1,292
Optimization of flaring in TEA	2	23,339
Leak repairs	5	24,983
Compressors not meeting Regulatory Useful Life (RUL)	15	122,911
Energy efficiency	24	882
Sustainable Mobility B10 to CNG	113	243
Sustainable mobility E10 to HB	146	49
Replacement of light fixtures	180	16

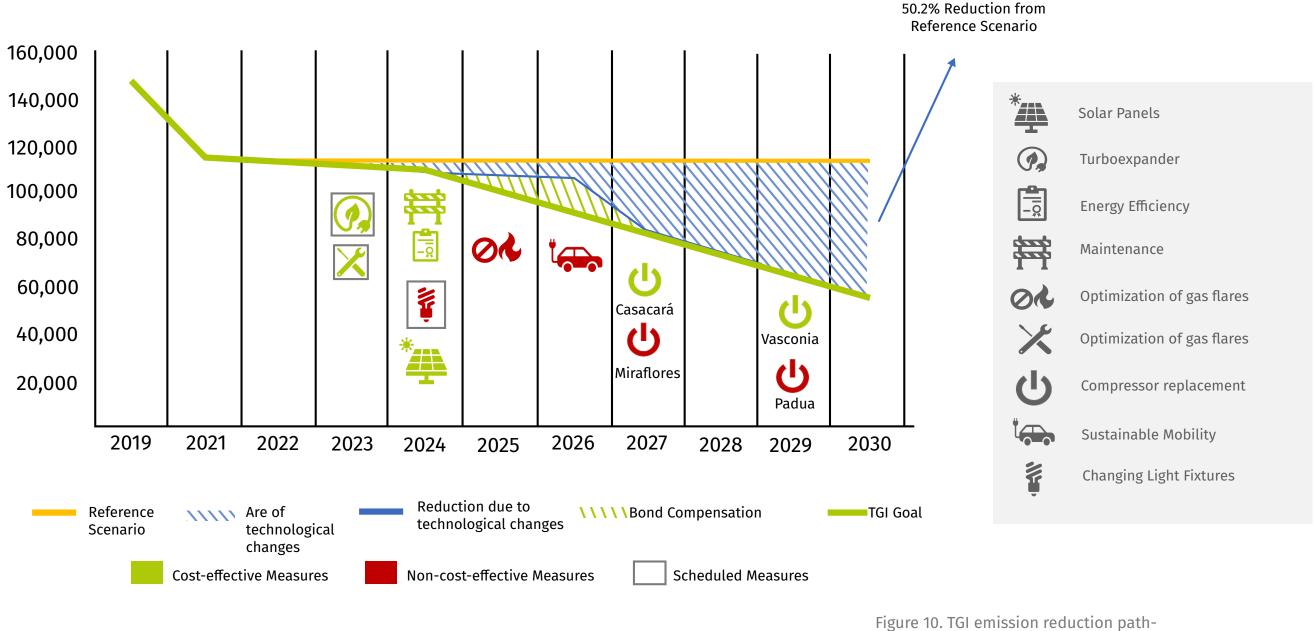


The identified measures have a potential reduction by 2030 of 57,245 tCO2eq. This represents a 50.2% reduction in emissions compared to its BAU scenario. In order to stay on track, it would be necessary to offset a total of 26,419 tCO2eq during the period 2023-2030. The following figure shows the path for reducing TGI emissions by 2030.



tCO<sub>2</sub>e

## **TGI Reduction Pathway**



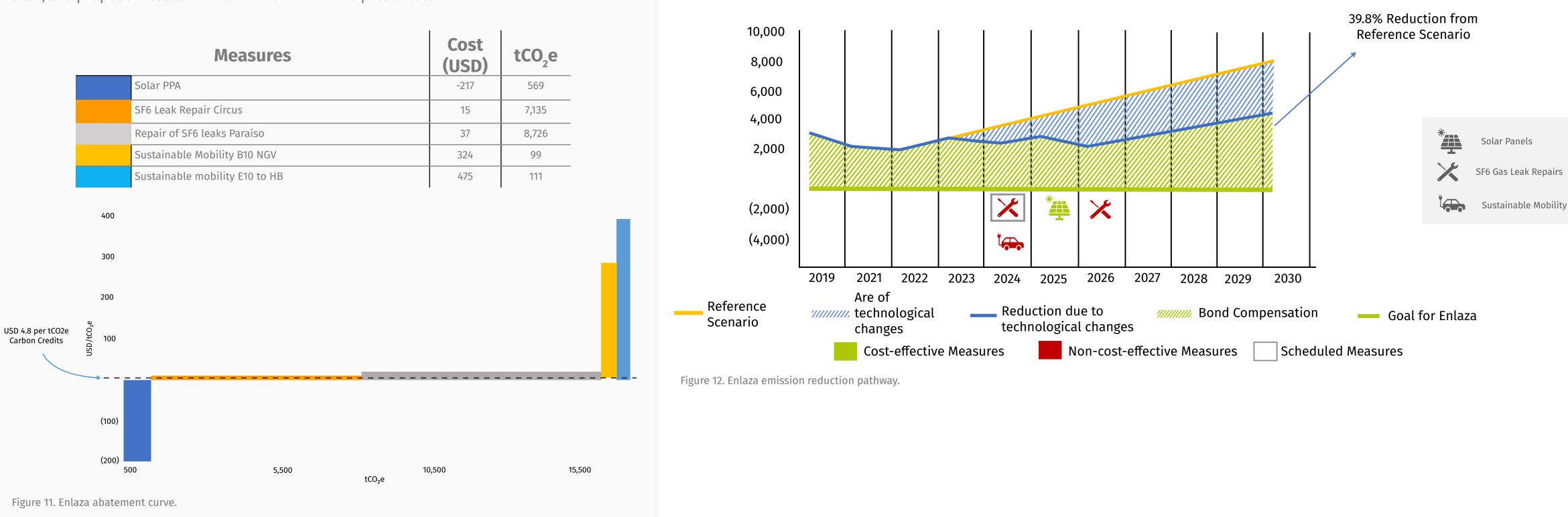
way.



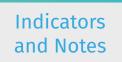
## Enlaza

The projected emissions for 2030 are 8,021 tCO2eq. This represents an increase of 196% compared to what was reported in 2021. However, Enlaza is the only company in the Group that has a carbon neutrality goal by 2030.

Below, the proposed abatement curve for ENLAZA is presented.



The reduction potential of these measures is 3,200 tCO2eq (39.9%) compared to the BAU. In order to meet the target for reduction, it would be necessary to offset a total of 28,122 tCO2eq through carbon credits between 2023 and 2030.



## **Elanza Reduction Pathway**



## Cálidda

The projected emissions by 2030 are 20,586 tCO2eq. This represents a 9% increase compared to the estimate in 2021. The greenhouse gas emissions reduction target set by the company for 2030 is 30% compared to the BAU scenario.

Most of Cálidda's emissions are generated by the gas used in water heaters. However, the high investment required to replace gas heaters with electric ones, and the high cost of electric energy compared to natural gas make this technological change financially unfeasible.

The abatement curve constructed is shown in the figure:

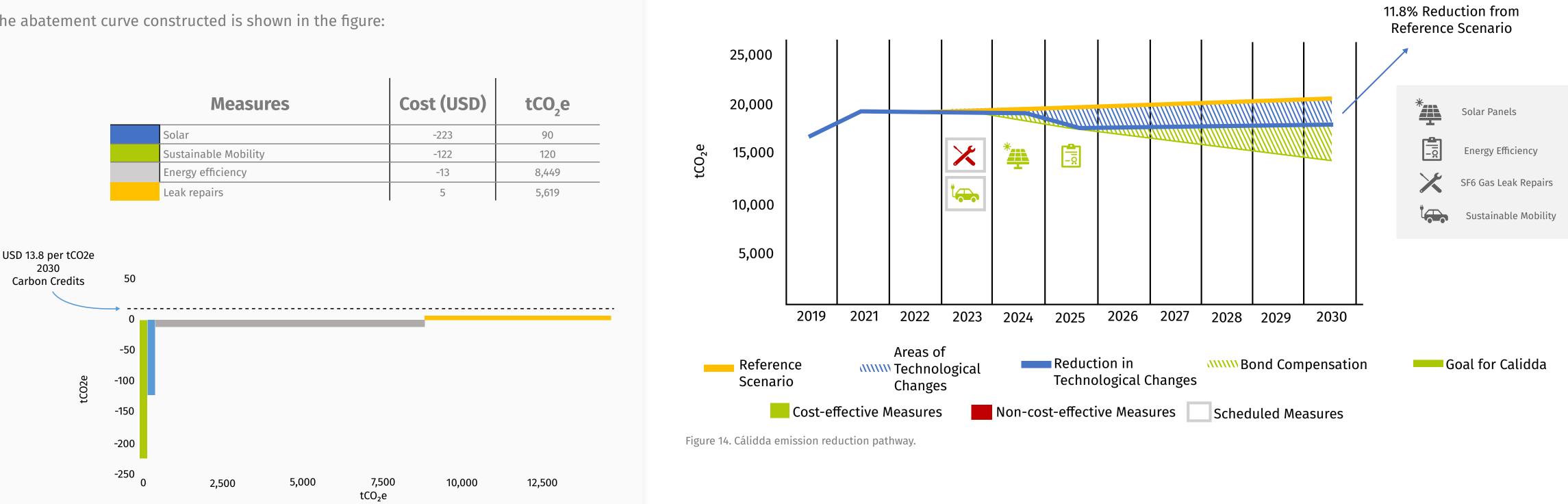
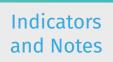


Figure 13. Cálidda abatement curve.

The implementation of these measures has the potential to reduce 2,429 tCO2eq (11.8%) by 2030 compared to the BAU scenario. In order to meet the 30% reduction target, it would be necessary to offset 10,823 tCO2eq through carbon credits between 2023 and 2030.



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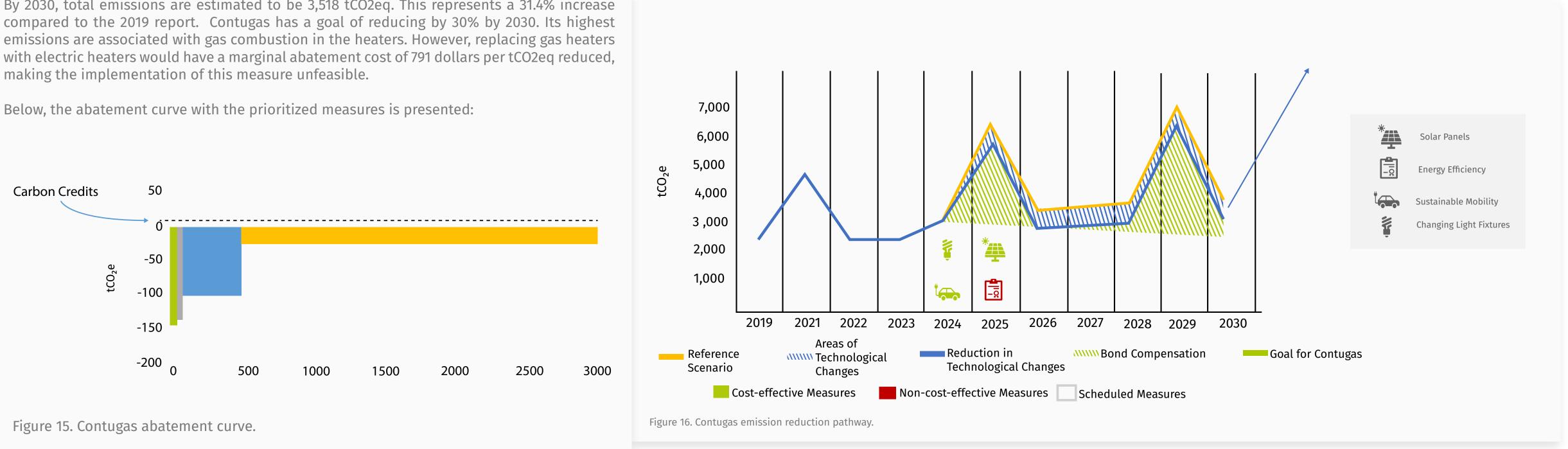
## **Cálidda Reduction Pathway**

# Grupo Energía Bogotá

## Contugas

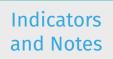
By 2030, total emissions are estimated to be 3,518 tCO2eq. This represents a 31.4% increase compared to the 2019 report. Contugas has a goal of reducing by 30% by 2030. Its highest emissions are associated with gas combustion in the heaters. However, replacing gas heaters with electric heaters would have a marginal abatement cost of 791 dollars per tCO2eq reduced,

Below, the abatement curve with the prioritized measures is presented:



Note: Maintenance is carried out on the gas pipeline every 4 years at Contugas. Those maintenance operations significantly increase their emissions. The last maintenance was carried out in 2021, and the next ones are projected for 2025 and 2029.

The measures identified in the abatement curve have the potential to reduce 508 tCO2eq (14.4%) by 2030, compared to the BAU scenario. However, they are not sufficient to reach the goal. Therefore, it would be necessary to offset the remaining emissions with carbon credits totaling 6,989 tCO2eq between 2023 and 2030.



Climate Change Report

## **Contugas Reduction Pathway**



## ElectroDunas

Projected emissions for 2030 are 132,176 tCO2eq. This is 27.3% higher than estimated in 2021. The increase in emissions was mainly due to the commissioning of a new power plant. The goal set for 2030 is to reduce emissions by 30% compared to Business as Usual.

ElectroDunas' main source of emissions corresponds to the use of gas for energy generation. The main mitigation measure is the implementation of energy efficiency measures.

The technical and economic prioritization of measures to achieve compliance with the target is presented in the following abatement curve:

140,000

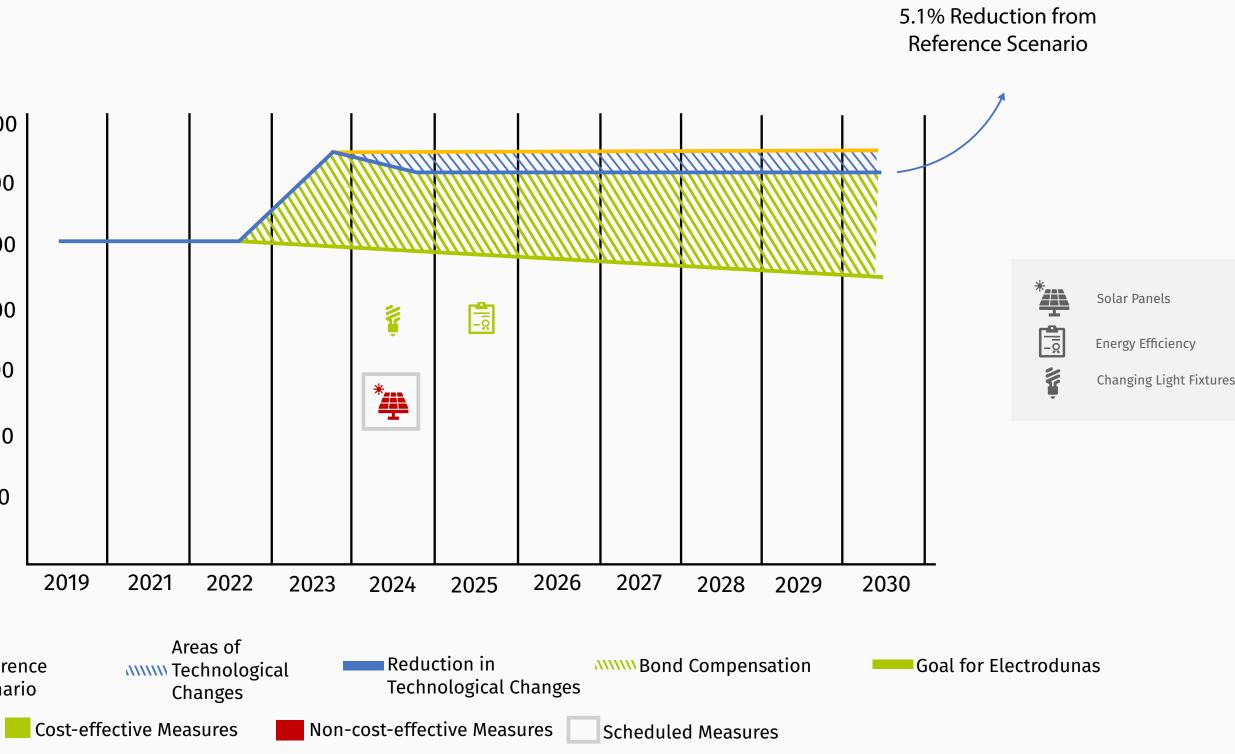
		Measures	Cost (USD)	tCO <sub>2</sub> e		120,000
		Replacement of light fixtures	-95	107	-	100,000
		Energy efficiency	-59	39,344	-	
		Solar	488	876		80,000
					tCO <sub>2</sub> e	60,000
USD 13.8 per tCO2e	300					40,000
2030 Carbon Credits	250					
	200					20,000
	150					
	100					
	50					
	0					
CO <sub>2</sub> e	-50					Referen
Figur	e 17.					Scenari

These measures have a potential reduction of 6,692 tCO2eq (5.1%) by 2030, compared to the BAU scenario. Given that they are not sufficient to reach the target, it would be necessary to offset the remaining emissions with 202,687 carbon credits between 2023 and 2030.



Climate Change Report

## **ElectroDunas Reduction Pathway**





## Conecta

The projected emissions amount to 1,090 tCO2eq for 2030. This represents an 11% increase compared to the estimated figure in 2021. Conecta aims to reduce its emissions by 11.2% by 2030, compared to the BAU scenario.

In order to achieve the goal, the company prioritized the installation of solar panels that have a potential to reduce emissions by 3.95% by 2030 compared to the BAU. To meet Conecta's reduction target, it would be necessary to offset the remaining 96.05% through carbon credits. This would correspond to 202,687 carbon credits between 2023 and 2030.

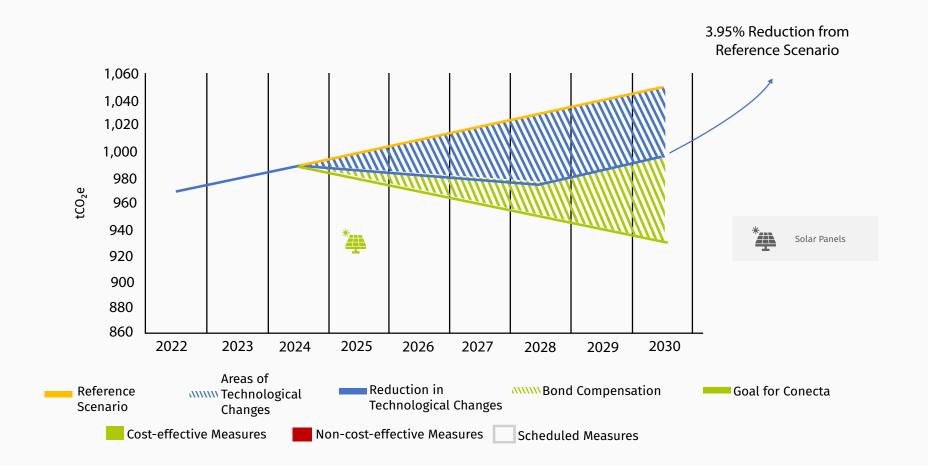


Figure 19. Conecta emission reduction pathway

## **3.4 Compensation**

When subsidiaries determine that the costs associated with the direct reduction of emissions are higher than the prices of acquiring carbon credits, they may opt for this latter alternative.

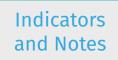
In 2023, a total of 140,008 carbon credits were acquired.

- carbon neutral.

When the acquisition of bonds to offset emissions is necessary, priority is given to bonds generated in collective territories of ethnic groups, through ecological restoration and avoided deforestation projects, preferably within the areas of influence of the Group's operations. Only carbon credits certified with the strongest and most reliable standards recognized by the global market are acquired.

## **Carbon Shadow Price**

Grupo Energía Bogotá, in its Sustainability Strategy, has adopted a carbon shadow price based on the Markit Global Carbon Index, aimed at providing tangibility and monetizing the economic, social, and environmental costs of GHG emissions. This price is integrated into the financial evaluations of future projects to meet stakeholder expectations and enhance operational efficiency and financial structuring of projects. Additionally, it is used to incorporate climate criteria into decision-making and to design emission reduction pathways for its subsidiaries. In 2024, GEB will develop a plan to apply this internal carbon price in line with its sustainability strategy. As of December 31, 2023, the index price stands at USD 52.71 per ton of CO2 eq.



• Transportadora de Gas Internacional S.A. E.S.P. (TGI) acquired 132,568 bonds to compensate for emergencies caused by breaks in the gas pipelines and to certify 10 of its facilities as

• Enlaza acquired 3,842 carbon credits to obtain its certification as carbon-neutral.

• Cálidda acquired 3,320 carbon credits to achieve the proposed goals.

• The corporate acquired 278 bonds, which allowed it to offset all of its emissions.





## **3.5 Adaptation**

In 2023, subsidiaries in Colombia began identifying necessary adaptation measures to ensure the infrastructure's resilience and robustness against extreme weather events and permanent climatic changes. During 2024 in the definition of a portfolio of adaptation measures, using the following methodology:

#### **1 Risk Assessment:**

Identification of specific climate risks in the region, sector, project, or community. Analysis of current and future vulnerability to identified risks. Assessment of the probability and impact of identified risks.

### 2 Planning and prioritization:

Definition of necessary adaptation strategies and actions. Establishment of criteria to prioritize actions according to impact, feasibility, and urgency. Specific goals and objectives for each adaptation action.

### **3 Formulation and implementation plan:**

Development of the adaptation plan and definition of actions for its implementation.

#### 4 Monitoring and Assessment:

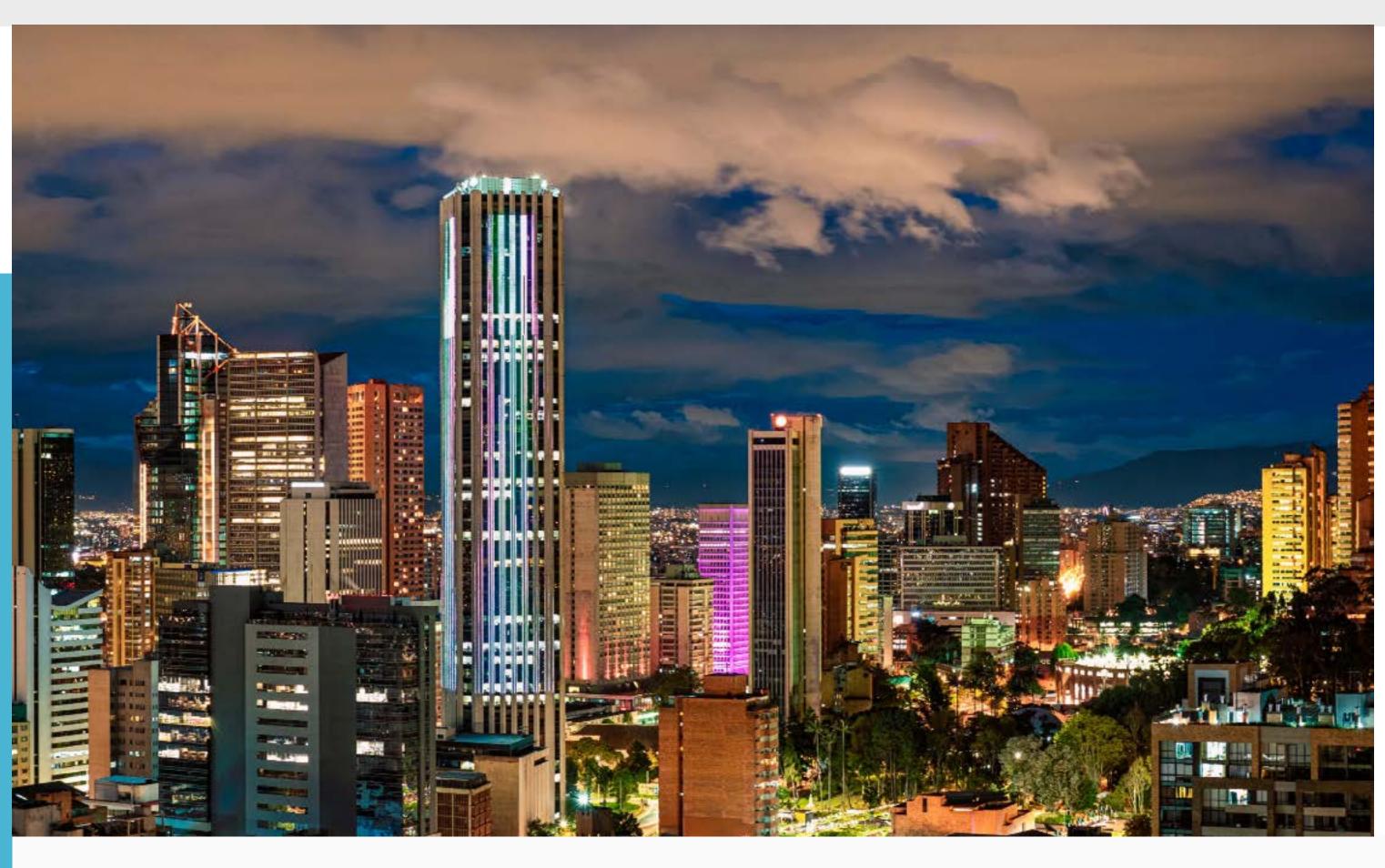
Formulation of indicators to measure the progress and impact of adaptation actions. Periodic assessment of the plan's performance and adjustment of actions as necessary.

#### **5** Communication and engagement:

Development of communication strategies to inform and engage the various stakeholders involved in the adaptation plan.

The risk assessment process is being carried out in a detailed and thorough manner, using public information, such as "Colombia's Third National Communication on Climate Change" and other sources of information.

The experience in designing adaptation plans for the energy transmission subsidiaries - Enlaza and natural gas transportation - TGI, will serve as an example to expand the plan to the entire business group.



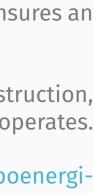
## **3.6 Energy Transition**

One of the strategic pillars of the Group is to contribute to a fair, flexible, safe, and economically efficient energy transition that ensures an equitable distribution of the costs and benefits associated and effectively contributes to local prosperity.

The approach to the growth of Grupo Energía Bogotá's electricity transmission and distribution businesses focuses on the construction, operation, and acquisition of infrastructure that delivers renewable energy to the major demand centers in the countries where it operates.

For more information, refer to the Energy Transition chapter of Grupo Energía Bogotá's 2023 Integrated Report. https://www.grupoenergiabogota.com/content/download/44818/file/V.FINAL%20REPORTE-INTEGRADO%202023.pdf

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## **3.7 Financing**

Grupo Energía Bogotá and its subsidiaries have integrated their sustainability and financial strategies. As part of this, in 2023 GEB developed its first Sustainable Financing Framework.

The Sustainable Financing Framework of GEB, aligned with international standards, establishes criteria for sustainable financing transactions. This has been verified by S&P Global and is based on principles and taxonomies of the international market Eligible projects according to the issuer's green financing framework are evaluated based on their environmental benefits and risks using the Shades of Green methodology.

#### Shades of Green Methodology:

#### Dark green:

indicates activities that are aligned with a future of carbon emissions close to zero and also incorporate climate resilience.

#### Light Green:

indicates activities that significantly reduce greenhouse gas emissions, but do not replace the underlying fossil fuel infrastructure.

#### Yellow:

Activities that denote a certain level of climate risk.

#### **Red:**

Points out a significant climate risk, activities that are notably harmful to the climate, such as building new fossil fuel infrastructure.

The GEB framework contains an exclusion list for financing activities such as the exploration and production of fossil fuels, activities involving human rights exploitation, among others.

For more information visit: Framework for Sustainable Financing: https://www.grupoenergiabogota.com/investors/results-center/content-library/sustainable-financing-framework **ESG Report by S&P Global:** https://www.grupoenergiabogota.com/investors/results-center/content-library/ esg-report



Thanks to the trust generated by GEB's management in terms of energy transition, climate change, and human rights, the demand for these bonds far exceeded the supply.

In 2023, GEB issued a sustainable bond for USD 400 million to finance green and social projects: renewable energy transmission, local social prosperity, etc. For the green project categories of the issuance, GEB expects to allocate 92% to renewable energy projects (including energy transmission) and 8% to energy efficiency. For the social projects of the bond issue, GEB expects to allocate 71% to access to essential services and 29% to job generation.





# **4. RISK MANAGEMENT**

In 2023, climate risks and opportunities were assessed in the ElectroDunas, Contugas, and Conecta subsidiaries.

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.

Below, the analysis of the main climate risks and opportunities of the Group is presented:

	Descr	iption
IEA Energy Sector Scenarios	General	Energy sector
STATED POLICIES SCENARIO	<ul> <li>The analysis takes into account climate policies, laws, and goals already implemented or announced by governments in their NDCs and governmental strategies.</li> <li>It is assumed that governments will not meet their stated goals and that Business as Usual will dominate the development progress of each country and organization.</li> <li>No additional policies to combat climate change are considered.</li> </ul>	<ul> <li>Final energy consumption is projected to increase by 76% by 2050.</li> <li>Final hydrogen consumption is expected to be at 1 EJ.</li> <li>Natural gas final consumption will increase by 35% by 2050.</li> <li>Electricity generation from renewables is projected to increase by 3.6 times.</li> <li>Total CO2 emissions are projected to be 33,903 MtCO2 by 2050.</li> </ul>
NET ZERO BY 2050 SCENARIO	<ul> <li>The global energy sector is expected to reach net zero CO2 emissions by 2050.</li> <li>Early action by advanced economies in meeting the net zero goal.</li> <li>Non-energy emissions will be reduced in the same proportion as energy emissions.</li> <li>In line with the Paris Agreement's goal, the global temperature increase is to be limited to 1.5 °C.</li> <li>Climate change commitments must be supported by solid and credible policies and long-term plans.</li> <li>Countries are expected to go beyond existing commitments to achieve the Net Zero goal.</li> </ul>	<ul> <li>Final energy consumption is projected to increase by 107% by 2050.</li> <li>Final hydrogen consumption is expected to be at 20 EJ.</li> <li>Natural gas final consumption will decrease by 71% by 2050.</li> <li>Electricity generation from renewables is projected to increase by 8.2 times. Time horizon</li> </ul>

TABLE 3. IEA Climate Scenarios

Short term

Medium term

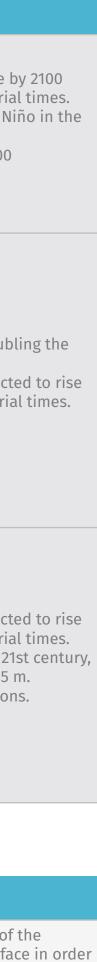
Long Term

Tabla 5. horizontes temporales considerados en el análisis

Time Horizons	Descripción Es	cenarios IPCC
IPCC SSP5-8.5	<ul> <li>Highest level of global warming and CO2 emissions.</li> <li>No additional climate policies and non-compliance with existing policies.</li> <li>Development remains reliant on fossil fuel exploitation and the adoption of energy-intensive lifestyles globally.</li> <li>High economic growth and technological progress, significant investments in health and education, and effective management of pollution issues.</li> </ul>	<ul> <li>Increase in global average surface temperature b between 3.3°C and 5.7°C compared to pre-industria</li> <li>Amplified variability of precipitation related to El Ni second half of the century.</li> <li>Likely sea level rise of 0.63-1.01 m by 2100</li> </ul>
IPCC SSP3-7.0	<ul> <li>High emissions and significant global fragmentation, with intense regional rivalries among countries and governments.</li> <li>No additional climate policies and non-compliance with existing policies.</li> <li>Dominance of nationalist governments and slow economic growth, resulting in high CO2 emissions, albeit lower than in the SSP5-8.5 scenario.</li> <li>Regional conflicts and uneven development hinder the necessary integration to combat climate change.</li> <li>Environmental issues lose international priority, and environmental degradation intensifies.</li> <li>Increased difficulty in mitigating and adapting to climate change.</li> </ul>	<ul> <li>CO2 emissions continue to increase sharply, doubl current levels by 2100.</li> <li>Global average surface temperature for 2100 expecte between 2.8°C and 4.6°C compared to pre-industria</li> </ul>
IPCC SSP1-1.9	<ul> <li>Warming limited to 1.4°C by the end of the century, after temporarily surpassing 1.5°C.</li> <li>Drastic reduction in CO2 emissions to achieve carbon neutrality by 2050, with negative emissions in the latter half of the century.</li> <li>Strong international cooperation, inclusive and sustainable development measures, improved living conditions, eradication of poverty, and shifts in consumer behavior towards environmentally friendly and less energy-intensive products and services.</li> <li>Immediate and decisive actions for mitigation and adaptation.</li> </ul>	<ul> <li>Global average surface temperature for 2100 expected between 1.0°C and 1.8°C compared to pre-industria</li> <li>Global mean sea level continues to rise during the 21 with a probable increase by 2100 of 0.28-0.55 r</li> <li>Mid-century (2050) implicit net CO2 emission</li> </ul>

#### Table 4: IPCC CLIMATE SCENARIOS

Time Horizo	ons	Description
	From 2022 to 2030	This short-term horizon is aligned with the GEB Strategic Plan for 2030. It acknowledges the global, regional and local context of industry, the ESG dimensions and its trends. It identifies the opportunities and challenges that the Group and its subsidiaries factors to continue growing and playing a leading role in the energy transition and in the construction of conditions of prosperity.
n	From 2030 to 2040	This medium-term horizon is delimited both by the horizon defined in the GEB Corporate Strategy and by national climate chang guidelines.
	From 2040 to 2050	This long-term horizon has been defined in line with the Colombian Strategy for Low Carbon Development by 2050. It guides the and actions of the government, sectors and territories aimed at building a climate-resilient future in Colombia. It includes long-terming exercises.



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	Transition risks	Impact	Risk management measures	
	Policies or laws that increase the price of carbon credits, enhance reporting requirements on mitigation and adaptation actions, or demand rapid adoption of technologies.	Loss of business profitability and competitiveness.	- Management of follow-up, analysis, and proposal management to prom	
Technological risks Market risks	Policies or laws that require the adjustment of the infrastructure for adapting to climate change.	Loss of business profitability and competitiveness against other energy sources.	GEB's initiatives related to climate change and its impact on busines Reduction paths to mitigate emissions with cost-efficiency criteria Portfolio of measures to adapt infrastructure to extreme climate events.	
	Legal claims related to the non-compliance with policies and regulations concerning climate change and the inaction or insufficient action in facing the challenges of climate change.	Operation impacts as a carrier. Financial Impact: Loss of credibility from stakeholders.		
Technological risks	Technological advancements or innovations that hasten the transition to a more energy-efficient and lower-car- bon economy, such as renewable energies, battery storage, energy efficiency, car- bon capture and storage, biogas, or hydrogen.	Lag in technology and loss of competitiveness. Need for new investments to adapt industrial processes and distribution networks.	Identification of new technologies and processes focused on updatin operation systems: Installation of units, equipment, ensuring energy en ciency and emissions reduction. Innovation processes focused on the mitigation and adaptation of the infrastructure.	
	Increase in prices of high-carbon-footprint raw materials (e.g., cement, steel, cop- per) for infrastructure construction.	Loss of profitability and competitiveness.		
Market risks	Decrease in natural gas demand due to the acceleration of the energy transition.	Loss of market and income. Obsolescence of infrastructure	Long-term supply agreements for its projects, in which the supplier assumes cost variability, advanced p ments, and recruitment strategies. Monthly analysis of the competitiveness of Natural Gas (NG) vs. subs fuels by tariff category, in order to determine the percentage of savir	
	Changes in customer consumption habits.	Loss of active customers. Loss of potential customers. Loss of profitability in businesses and decrease in consumption volume and revenue.	expenses of NG compared to the substitutes. Policies for transferring risks (all risks for material damages, loss of ea ings).	
	Changes in insurance contract policies and conditions due to increased climate risks.	Loss of profitability and competitiveness.		
Reputational risks	Lack of awareness of stakeholder expectations regarding climate change mitiga- tion and adaptation measures.	Loss of trust with stakeholders (investments, communities, shareholders, etc.) and new social bar- riers to expansion.	A relationship strategy that allows to understand and manage the expe tions and needs of stakeholders.	

Table 6. Climate risks analyzed for the subsidiaries of Grupo Energía Bogotá.

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Table 7. Physical risks analyzed for the subsidiaries of Grupo Energía Bogotá.

The analysis of all physical and transition risks identified those considered priority based on their potential impact and likelihood of occurrence. Additionally, their financial impact was assessed.

During 2023, the subsidiaries identified and analyzed their risks under different climate change scenarios, some of them already had controls in place to decrease the likelihood of occurrence and financial impact.

The analysis of transition and physical risks allowed for the identification of priority risks due to their potential impact and occurrence probability. Political and legal risks were prioritized for both electricity transmission and gas transportation businesses, especially the emergence of policies or laws requiring infrastructure adaptation to climate change. For this reason, the development of adaptation plans for the Group's subsidiaries was initiated.

In addition to the risks, as part of the analysis, opportunities also arose for each of the businesses. For gas transportation, in contrast to the risk of reduced gas demand due to the acceleration of the energy transition, opportunities arise from the increased demand for gas as a transitional fuel and the development of the alternative energy market such as hydrogen and biogas.

Physica	al risks	Impact	<b>Risk management measures</b>
ıte risks	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.)	Damage or destruction of gas transport infrastructure	Policies for transferring risks (all ris for material damages, loss of earnin Portfolio of measures to adapt infrastructure to extreme climate events. Maintenance plans focused on works
onic risks	Long-term shifts in weather patterns that degrade gas transmission infrastructure and necessitate its adaptation to conditions of climate uncertainty and volatility.	Higher construction and operating costs, and loss of profitability. Increased maintenance andreplacement costs for gas transport and electricity transmission infrastructure, and profitability loss Greater uncertainty in the electricity transmission service planning process, higher operating costs and loss of profitability.	protection and stabilization of slop for assets in operation. Detailed environmental studies fro the design phase, incorporating prin data from the territory

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	Opportunity	Benefit	Subsidi
	Promote the use of LED lighting in facilities and urban areas to decrease energy consumption.	Reputational enhancement, carbon footprint reduction and cost reduction.	ElectroD
	Implement sensors and monitoring systems to regulate energy flow in real-time and detect failures more rapidly.	in facilities and c consumption.Reputational enhancement, carbon footprint reduction and cost reduction.ring systems to me and detect lly.Reduction of operating costs, increased sustainability, enhanced reliability, regulatory compliance, and reputation.ucture to mini- te distribution.Cost reduction, increased sustainability, enhanced reliability, regulatory compliance, improved reputation.noting energy transportation, sumptionIncreased revenue from the development of more efficient and loss control projects, and reduced carbon footprint.energy market biogasIncreased revenue and new business opportunities.transition fuel lectricity gener-Increased revenue and new business opportunitieshand of renew- ansportedIncrease in profitability, new business opportunities, opportunities, reduction in transmission losses and carbon credit expenditurestransition totological, opportunities, apatability and competitiveness.Increase continuity and competitiveness.	ElectroD
Efficient Use of Resources	Upgrade and digitalize infrastructure to mini- mize energy losses and optimize distribution.	enhanced reliability, regulatory compliance,	ElectroD
	Policies and regulations promoting energy efficiency in energy generation, transportation, distribution, and final consumption	of more efficient and loss control projects,	Enlaz
Power Source	Development of the alternative energy market such as hydrogen and biogas		TGI, Cálidda, an
	Increased demand for gas as a transition fuel		TGI, Cálidda, an
Market	Restrictions on the use of mineral coal and liquid fuels in the industry for electricity gener- ation.		Contug
	Increase in the supply and demand of renew- able energy that must be transported	Improved financial performance.	Enlaza and (
Products and Services	Implementation of best practices in technology that enhance efficiency and risk control in the transmission service provision.	opportunities; reduction in transmission	Conec
Resilience	Transformation of the gas transportation business by leveraging technological, regulatory, cultural, and market opportunities, etc., to ensure its long-term adaptability and competitiveness in a changing climate.	-	TGI

Table 8. Climate opportunities analyzed for the subsidiaries of Grupo Energía Bogotá.

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1 Financial impact scales were established, taking into account the risk appetite of each business.

2 Questionnaires were designed and sent to the organization's interdisciplinary teams.

3 Risks and opportunities were prioritized according to their financial impact and probability of occurrence.

4 A weighted average of the values provided was calculated.



	Transition risks	Subsidiary	Financial Impact in Millions USD:	Financial impact level	Time horizon
	Policies or laws that increase the price of carbon credits, enhance	ElectroDunas	2.39	High - Between USD 2.10M and USD 2.68M	2040
	reporting requirements on mitigation and adaptation actions, or demand rapid adoption of technologies.	TGI	4.88	High - Between USD 3.75M and USD 5.82M	2030
		Enlaza	3.96	High - Between USD 2.10M and USD 2.68M	2030
		ElectroDunas	2.39	High - Between USD 2.10M and USD 2.68M	2040
Political and legal	Policies or laws that require the adjustment of the infrastructure for adapting to climate change.	TGI	5.00	High - Between USD 3.75M and USD 5.82M	2040
		Conecta	1.85	Very High - Between USD 1.72M and USD 1.97M2040Very High - Between USD 0.35M and USD 0.55M2040Medium - Between USD 1.64M and USD 2.10M2040Very High - Between USD 1.72M and USD 1.97M2040	2040
		Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2040
	Legal claims related to the non-compliance with policies and regulations concerning climate change and the inaction or insufficient	ElectroDunas	1.87	Medium - Between USD 1.64M and USD 2.10M	2040
	regulations concerning climate change and the inaction or insufficient action in facing the challenges of climate change.	Conecta	1.85	Very High - Between USD 1.72M and USD 1.97M	2040
Technological risks		Conecta	1.85	Very High - Between USD 1.72M and USD 1.97M	2040
	renewable energies, battery storage, energy efficiency, carbon capture	Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2050
Market risks	Increase in the cost of high-carbon-footprint raw materials (e.g.,	Enlaza	3.96	Medium - Between USD 2.79M and USD 4.66M	2030
	cement, steel, copper) for infrastructure construction.	Conecta	1.85	Very High - Between USD 1.72M and USD 1.97M	2040
	Reduction in the demand for natural gas, due to the acceleration of the energy transition.	Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2050
	Changes in insurance contract policies and conditions due to increased climate risks.	Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2040
Reputational risks	Lack of awareness of stakeholder expectations regarding climate change mitigation and adaptation measures.	Conecta	1.85	Very High - Between USD 1.72M and USD 1.97M	2030

Table 9. Financial impact of transition risks on GEB subsidiaries.

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Physical risks		Subsidiary	Financial Impact in Millions USD:	Financial impact level	
	Acuto ricko	Extreme weather events, including increased intensity of weather events	TGI	6.54	Very High - Between USD 5.82M and USD 9.04M
	Acute fisks	Acute risks (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.) Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	
Ch	Change in winder	Long-term shifts in weather patterns that degrade gas transmission infrastructure and	TGI	5.65	High - Between USD 3.75M and USD 5.82M
	Chronic risks	necessitate its adaptation to conditions of climate uncertainty and volatility.	Enlaza	4.66	High - Between USD 4.66M and USD 7.78M

Table 10. Financial impact of physical risks.



# Time horizon 2040

2040

2050

2050



	Opportunity	Subsidiary	Financial Impact in Millions USD:	Financial impact level	Time horizon
	Promote the use of LED lighting in facilities and urban areas to decrease energy consumption.	ElectroDunas	2.33	High - Between USD 2.10M and USD 2.68M	2030
Efficient Use of Resources	Implement sensors and monitoring systems to regulate energy flow in real-time and detect failures more rapidly.	ElectroDunas	2.33	High - Between USD 2.10M and USD 2.68M	2030
of Resources	Upgrade and digitalize infrastructure to minimize energy losses and optimize distribution.	ElectroDunas	2.33	High - Between USD 2.10M and USD 2.68M	2030
	Policies and regulations that promote energy efficiency in the generation, transportation, distribution and final consumption of energy	Enlaza	4.43	Medium - Between USD 2.79M and USD 4.66M	2030
	Development of the alternative energy market such as hydrogen and biogas	TGI	5.71	High - Between USD 3.75M and USD 5.82M	2040
Power Source		Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2050
Market	Increased demand for gas as a transition fuel	TGI	5.07	High - Between USD 3.75M and USD 5.82M	2030
Market		Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2030
	Restrictions on the use of mineral coal and liq- uid fuels in the industry for electricity generation.	Contugas	0.45	Very High - Between USD 0.35M and USD 0.55M	2030
	Increase in the supply and demand of renewable energy that must be	Enlaza	5.44	High - Between USD 4.66M and USD 7.78M	2030
Products and Ser- vices	transported	Conecta	1.61	High - Between USD 1.50M and USD 1.72M	2040
	Implementation of best practices in technology that enhance efficiency and risk control in the transmission service provision.	Conecta	1.83	Very High - Between USD 1.72M and USD 1.97M	2050
Resilience	Transformation of the gas transportation business by leveraging technological, regulatory, cultural, and market opportunities, etc., to ensure its long-term adaptability and competitiveness in a changing climate.	TGI	4.89	High - Between USD 3.75M and USD 5.82M	2040

Table 11. Financial impact of the opportunities of the Grupo Energía Bogotá subsidiaries.

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The financial analysis of climate change risks and opportunities for the subsidiaries of Grupo Energía Bogotá concludes the following:

At the Group level, the main risk is political and legal, as it has been prioritized by all subsidiaries, and the financial impact assessment could amount to up to USD 8.84 million by 2030 and USD 15.38 million by 2040

After political and legal risks, chronic physical risks are those that could have the most financial impact on Grupo Energía Bogotá. Between TGI and Enlaza, this impact was valued at USD 10.31 million by 2050.

The main financial risk assumed by one of the subsidiaries is the risk of extreme weather events, including the increased intensity of meteorological phenomena (hurricanes, overflows, storms, landslides, heatwaves, droughts, floods, etc.), assumed by TGI (USD 6.54 million by 2040).

The most financially impactful opportunity for the Group is the development of alternative energy markets, such as hydrogen and biogas at TGI. Its valuation is projected at USD 5.71M by 2030.

The second most impactful opportunity is Enlaza's with the increase in the supply and demand of renewable energy that will need to be transported, with an assessment of USD 5.44M.

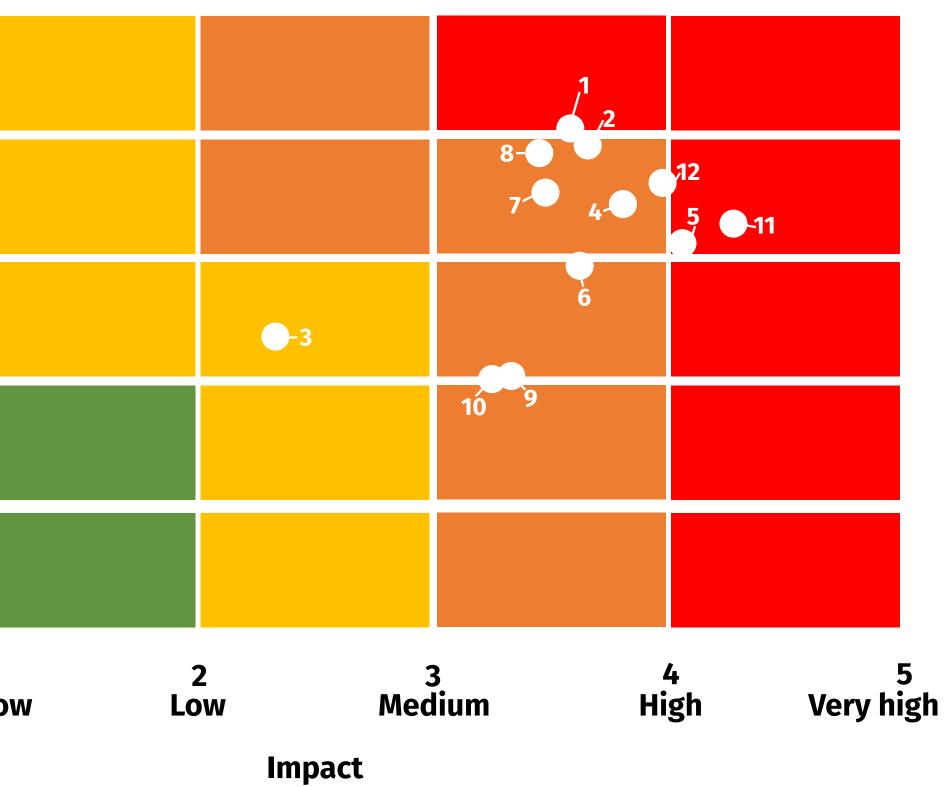


# **Prioritization of Climate Risks for TGI:**

No.	Identified risks	5
1	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)	
2	Policies or laws that require adjusting gas transmission infrastructure for adaptation and mitigation to climate change	4
3	Lawsuits related to actions to combat climate change	
4	Technological improvements or innovations that accelerate the transition towards cleaner fuels (biogas, hydrogen)	
5	Inflation in prices of raw materials (with a high carbon footprint, such as cement, steel, polyethylene, iron, etc.) used in the construction of gas transmission infrastructure.	۶ آiit
6	Reduction in the demand for natural gas, due to the acceleration of the energy transition	robabilit
7	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	Å 2
8	High level of awareness of stakeholders about climate change	
9	Inadequate identification and management of potential risks and opportunities associated with climate change	
10	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures for climate change	1
11	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.)	
12	Long-term shifts in weather patterns that degrade gas transmission infrastructure and necessitate its adaptation to conditions of climate uncertainty and volatility	0 0 1 Very Lov

Figure 21.

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





## **Prioritization of Climate Risks for Enlaza:**

No.	Identified risks
1	Policies or laws that heighten restrictions and demands in combating climate change.
2	Policies or laws that require the adaptation of gas distribution infrastructure to climate change mitigation and adaptation.
3	Lawsuits related to actions to combat climate change
4	Technological improvements or innovations that accelerate the transition to cleaner fuels
5	Rise in commodity prices (with high carbon footprint e.g., cement, steel, copper, etc.) for infrastructure construction
6	Changes in policies and in the conditions of insurance contracts and low appetite of investors and financiers
7	High level of awareness of stakeholders about climate change
8	Inadequate identification and management of potential risks and opportunities associated with climate change
9	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures
10	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.)
11	Long-term changes in weather patterns, leading to uncertainty and volatility in the supply of wind, solar and hydraulic energy sources
12	Long-term changes in weather patterns, leading to the need to adapt infrastructure to conditions of weather uncertainty and volatility
13	Long-term changes in weather patterns, which affect and deteriorate transmission infrastructure in vulnerable areas (coastal, mountainous, steep slopes, etc.)

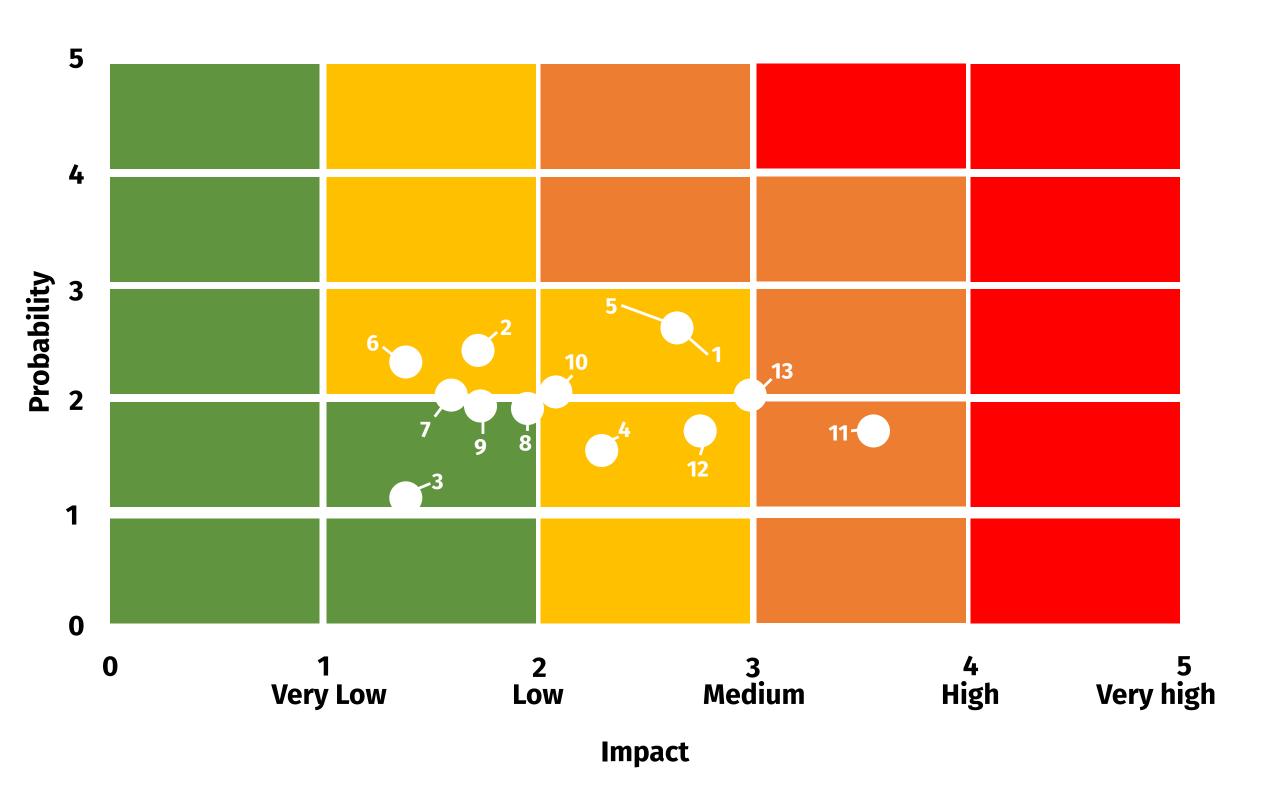


Figure 22.



## Prioritization of Climate Risks for Contugas:

No.	Identified risks
1	Policies or laws that increase restrictions on methane emissions; raise the price of carbon credits; enhance reporting requirements on mitigation and adaptation actions; demand accelerated adoption of technologies (smart monitoring systems in gas pipelines, etc.)
2	Policies or laws that require the adaptation of gas distribution infrastructure to climate change mitigation and adaptation.
3	Legal claims related to occasional events or accidents that cause large methane leaks; non-compliance with policies and regulations related to climate change; inaction or insufficient action in the face of the challenges of climate change
4	Technological improvements or innovations that accelerate the transition towards cleaner fuels (biogas, hydrogen)
5	Inflation in prices of raw materials (with a high carbon footprint, such as cement, steel, polyethylene, iron, etc.) used in the construction of gas distribution infrastructure.
6	Reduction in the demand for natural gas, due to the acceleration of the energy transition
7	Changes in insurance contract policies and conditions due to increased climate risks.
8	High level of awareness of stakeholders about climate change
9	Inadequate identification and management of potential social and environmental risks associated with climate change.
10	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures for climate change
11	Extreme weather events, including increased intensity of weather events (overflows, storms, landslides, floods, etc.)
12	Long-term changes in climate patterns (higher average temperatures, sea level rise, unpredictability in weather patterns).

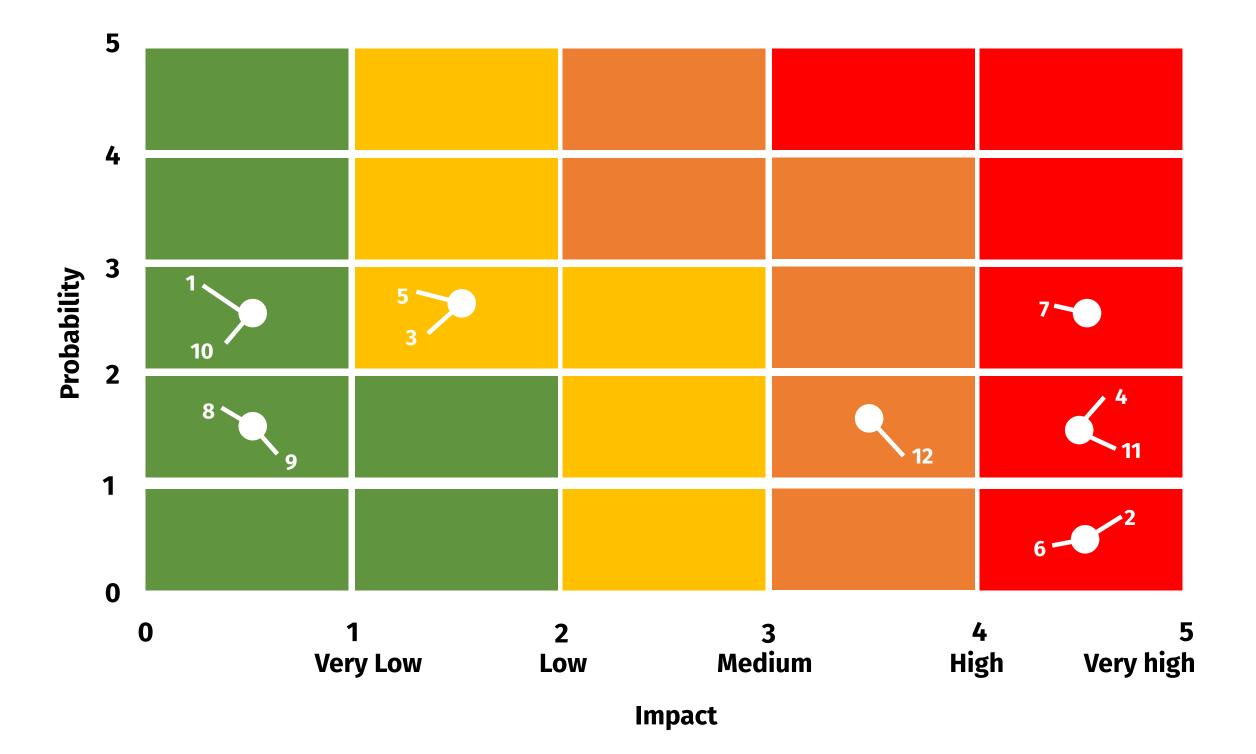


Figure 23.



## **Prioritization of Climate Risks for ElectroDunas:**

No.	Identified risks
1	Policies or laws that increase the price of carbon credits; heighten reporting demands on mitigation and adaptation actions; require the fast adoption of technologies (such as smart grids, etc.).
2	Policies or laws that require the adjustment of the infrastructure for adapting to climate change.
3	Judicial demands related to non-compliance with policies and regulations related to climate change; or inaction or insufficient action in the face of the challenges of climate change
4	Changes and/or modifications in the current legal regulations applicable to operations in Peru
5	Technological improvements or innovations that accelerate the transition to a lower carbon and more energy-efficient economic system, such as renewable energy, storage, energy efficiency, and carbon capture and storage
6	Increase in the prices of raw materials (with a high carbon footprint e.g., cement, steel, copper, etc.) for the construction of infrastructure
7	Changes in insurance policies and contractual terms due to the enhanced perception of climate risks and reduced investor and financier interest amid the tarnishing reputation of fossil fuels.
8	High level of awareness of stakeholders about climate change
9	Inadequate identification and management of potential social and environmental risks associated with climate change.
10	Extreme weather events, including increased intensity of weather events (strong winds, overflows, storms, landslides, heat waves, droughts, floods, etc.)
11	Long-term changes in climate patterns (higher average temperatures, sea level rise, unpredictability about weather patterns)

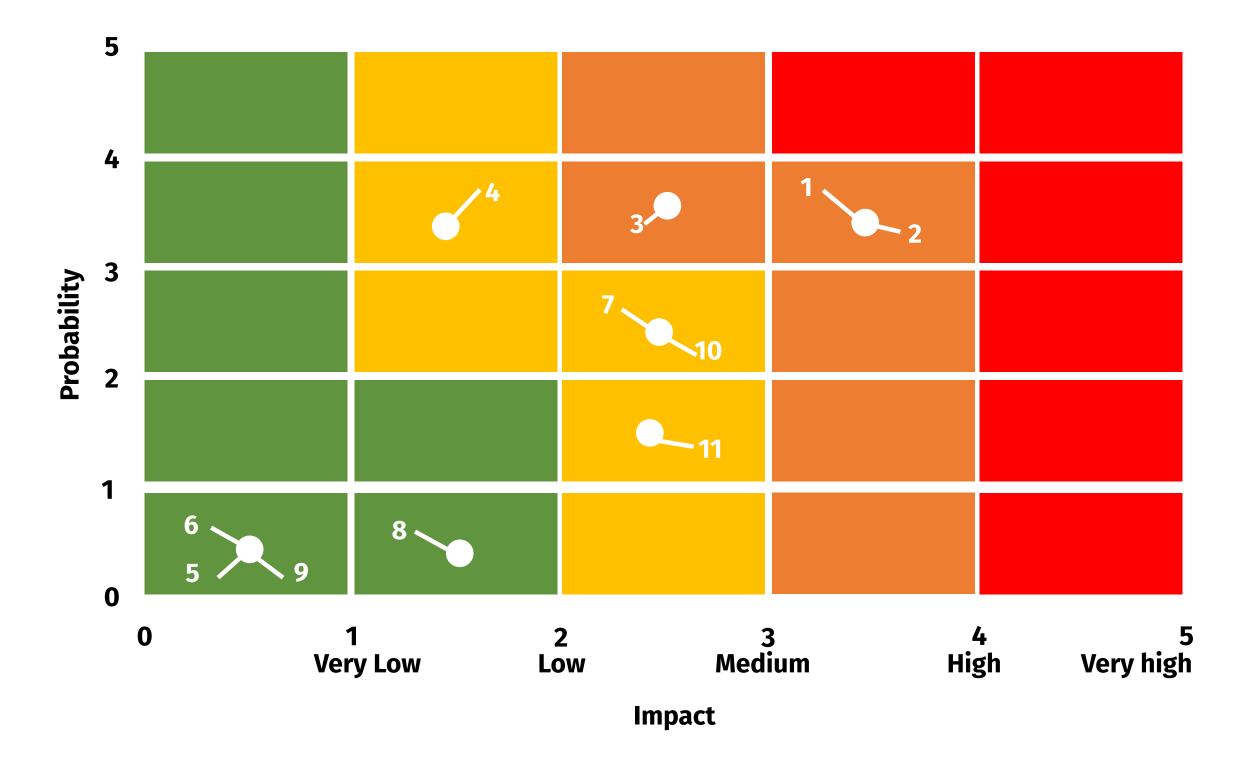


Figure 24.



## Prioritization of Climate Risks for Conecta:

No.	Identified risks
1	Policies or laws that increase the price of carbon credits; heighten reporting demands on mitigation and adaptation actions; require the fast adoption of technologies (such as smart grids, etc.).
2	Policies or laws requiring the adaptation of energy transmission infrastructure to climate change.
3	Judicial demands related to non-compliance with climate change policies and regulations; and inaction or insufficient action in the face of the challenges of climate change
4	Technological improvements or innovations that accelerate the transition to an economic system with less carbon and more energy efficiency, such as renewable energy, storage, energy efficiency, and carbon capture and storage
5	Rise in commodity prices (with high carbon footprint e.g., cement, steel, copper, etc.) for infrastructure construction
6	Changes in the terms of insurance agreements due to the increase in extreme weather events.
7	High level of awareness of stakeholders about climate change
8	Inadequate identification and management of potential social and environmental risks associated with climate change.
9	Ignorance of stakeholders' expectations in relation to mitigation and adaptation measures for climate change
10	Extreme weather events, including increased intensity of weather events (hurricanes, overflows, storms, landslides, heat waves, droughts, floods, etc.)
11	Long-term changes in climate patterns (higher average temperatures, sea level rise, unpredictability in weather patterns).

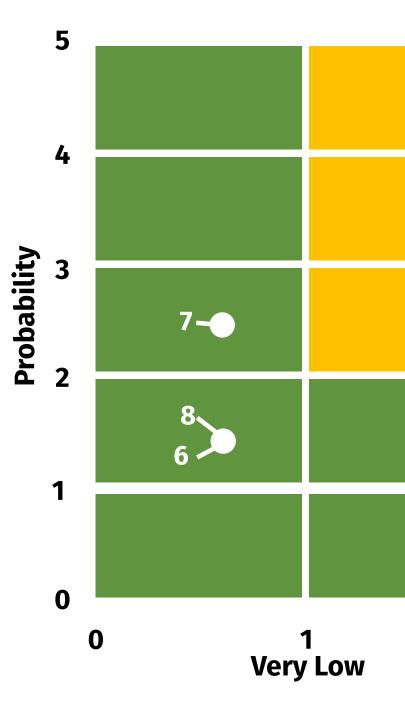
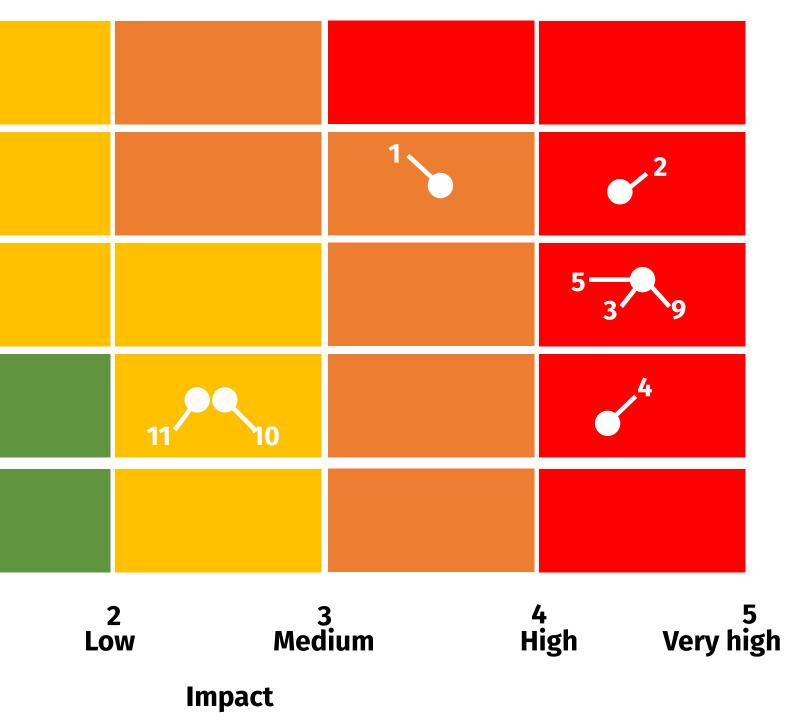


Figure 25.

Prioritization of Climate Risks for Cálidda: View Cálidda's TCFD report at the following link: https://www.calidda.com.pe/media/3solorly/report-calidda-tcfd.pdf

A weighted average of the values provided was calculated.





450,000

400,000

350,000

300,000

250,000

200,000

150,000

100,000

50,000

0



## 5.1 Climate Change-Related Goals for 2024:

2024 Goals			
1. Reduce 11% of operating emissions (scope 1 and 2) vs BAU 2024 (Strategic Indicator)	2. Compensate 100% of Enlaza's emissions.	3. Compensate all emissions caused by emergencies at TGI	4. At least one greenhouse gas emissions reduction pathway mitigation project, ongoing or formally approved by management, in at least 4 subsidiaries

Table 12. Climate goals for GEB.

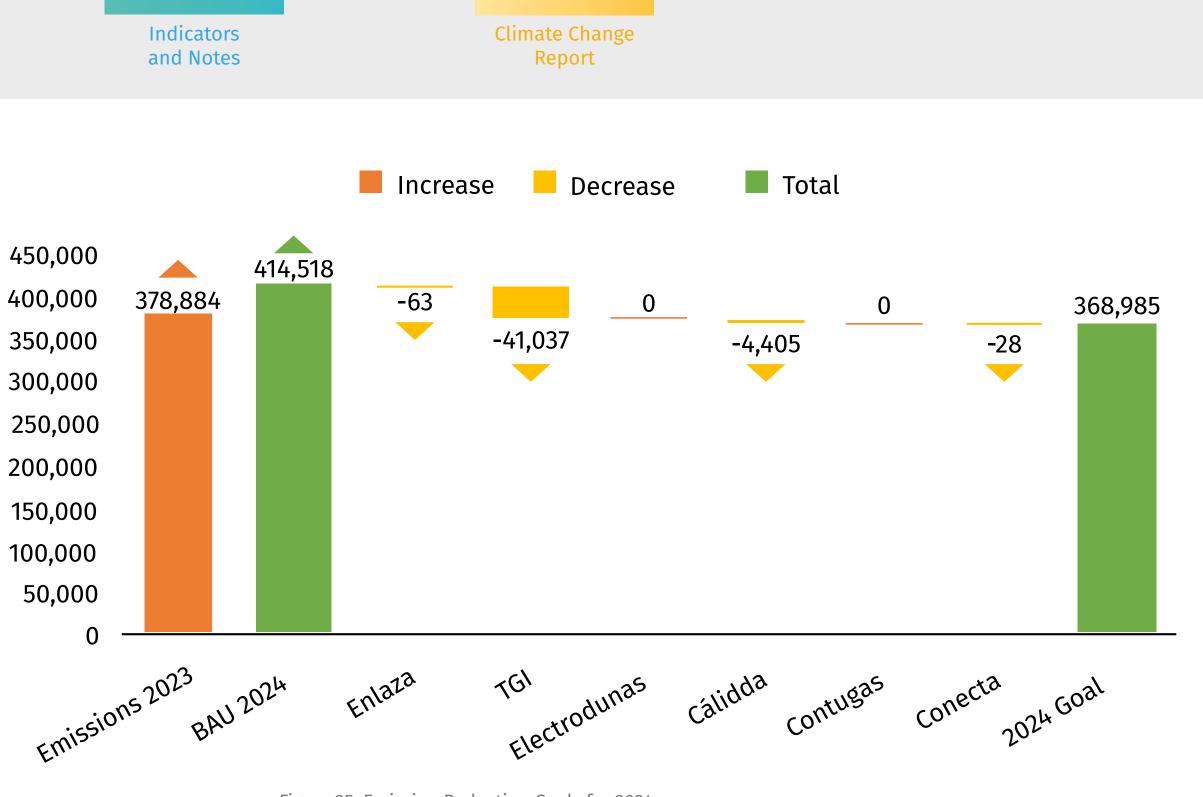


Figure 25. Emission Reduction Goals for 2024:

The projected emissions by 2024 (Business as Usual) amount to 414,518 tCO2eq, this value was projected based on the organic growth of the businesses. (Emissions from emergencies in TGI's gas pipelines are not included).

The emission reduction goals for the Greenhouse Gas emissions of the subsidiaries are as follows:

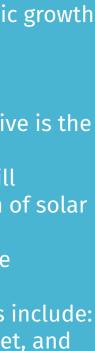
• Enlaza aims to reduce its emissions by 1% compared to BAU 2024, equivalent to 63 tCO2eq. Enlaza's main reduction initiative is the control of SF6 gas leaks.

• TGI will reduce its emissions by 18% compared to the BAU 2024, equivalent to 41,037 tCO2eq. The reduction initiatives it will prioritize include the plan to tighten and adjust fugitive emissions, operational shutdowns of Teas and Pilots, installation of solar panels at the City gates, and scheduled maintenance.

• ElectroDunas will not have a reduction target in the year 2024. Likewise, reducing distribution losses is expected to reduce emissions of energy.

• Cálidda will reduce 19% of its emissions compared to BAU 2024, equivalent to 4,405 tCO2eq. The main reduction initiatives include: energy efficiency in heaters, installation of solar panels at stations, substitution of Diesel consumption in own vehicle fleet, and hydrogen injection pilot in heaters.

• Conecta will reduce its emissions by 1.8% compared to BAU 2024, equivalent to 28 tCO2eq. The main reduction initiatives of Conecta are the control of SF6 gas leaks and energy consumption efficiency.







## **5.2 Climate Change-Related Initiatives for 2024:**

- Report under ISO 14064 of the GHG emissions inventory for all subsidiaries.
- Increase the measurement of Scope 3 categories in all subsidiaries.
- Include climate criteria in the processes of recruitment, assessment, and management of suppliers and contractors.
- Achieve carbon neutrality for Enlaza.
- External verification of GHG emissions inventory for all subsidiaries.
- Improving the "B" rating on the Carbon Disclosure Project (CDP).
- Define the corporate climate change risk for Contugas, ElectroDunas, and Conecta.
- Update of the emissions reduction paths of each subsidiary.
- Conduct the pre-feasibility study of a REDD+ project.
- Promote training for employment and entrepreneurship in areas that contribute to the energy transition and climate change in the areas of influence of GEB in Colombia.

## **5.3 Climate-related Indicators**

		Business Group		
Energy Transition	2021	2022	2023	
GEB's participation in the energy transition	170,675,409	\$ 826,373,411	225,068,649	
Local reporting currency	USD	USD	USD	

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

Table 13. Investment in Energy Transition.

Indicators and Notes

Scopes	2020	2021	2022	20
Scope 1	135.687,2	355.156,77	312,430.6	452.0
Scope 2	1,465.3	2,076.6	2.013,34	36.6
Scope 3	311.4	16.697,81	11.768,6	17.37
TOTAL	137.463,89	373.919,38	326.212,47	506.0

Table 14. Greenhouse gas emissions from GEB (tCO2eq).

Efforts have been made to achieve reductions in greenhouse gas emissions through technological improvements, operational enhancements, fuel substitution, energy efficiency, etc. However, in cases where, due to financial, technological, operational, regulatory constraints, etc., it was not possible, the acquisition of carbon credits was pursued. The following table represents the carbon credits that had to be acquired to achieve the goals:

Policy	2020	2021	2022	2
Purchase of carbon bonds	20,226	85,057	88,098	14

Table 15. Emission Compensation.

Scopes	2020	2021	2022	2
Net GEB Emissions.	117.237	288.861	238,113	36

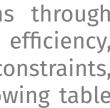
Table 16. Net GHG Emissions of GEB (tCO<sub>2</sub>eq).

.094,9

608,1

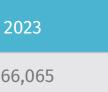
370,2

5.073,2





40,008



# **6. CONTENTS OF THE TCFD RECOMMENDATIONS**

	Recommendation	Progress in 2023	2024 Plan	
		Governance		
Disclose the organization's governance of climate change-related risks and opportunities.	<ul> <li>a) Describe the board's control over climate-related risks and opportunities.</li> <li>b) Describe the role of management in assessing and managing climate-related risks and opportunities.</li> </ul>	<ul> <li>2.1. In 2023, the strategic risk of climate change was included in the subsidiaries of Transportadora de Gas Internacional S.A.</li> <li>E.S.P. (TGI), Enlaza, and Cálidda. This necessitates that, beyond supervising the organization's climate strategy, the Board of Directors of these controlled subsidiaries actively monitors the risks, controls, and action plans needed to manage impacts and capitalize on climate opportunities.</li> </ul>	2.1. Include Contugas, Conecta, and Electrodunas' strategic climate change risk.	RI - Goverr
		Strategy		
Disclose the current and potential impact of climate-related risks and opportunities on the organization's business, strategy and financial planning where such information is material.	a) Describe the climate-related risks and opportunities identified by the organization in the short, medium and long term.	<ul> <li>3.1. GEB updates its 2023 management report on climate change <ul> <li>TCFD, describing its most impactful risks and</li> <li>opportunities associated with climate change.</li> </ul> </li> <li>3.4 In 2023, initiatives to adapt the energy transmission and gas <ul> <li>transportation infrastructure in Colombia to physical</li> <li>climate risks commenced.</li> </ul> </li> </ul>	3.4 The adaptation plans for the energy	
	b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning.			RI - Annex Ma
	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			
		Risk Management		
Disclose how the organization identifies, assesses and man- ages weather-related risks.	a) Describe the organization's processes for identifying and assessing weather-related risks.	In 2023, climate risks and opportunities assessment was conducted for the subsidiaries of Contugas, Conecta, and Elec- troDunas.		
	b) Describe the organization's processes for managing weather-related risks.			RI - Anne
	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.	In 2023, Enlaza was certified as Carbon Neutral and TGI certified 10 of its operating centers as carbon neutral. The nathways for reducing GHG emissions by 2030 aligned with In 2024, the		Climate ch
	b) Disclose Scope 1, Scope 2 and, if applicable, Scope 3 greenhouse gas (GHG) emissions and their related risks.		In 2024, the goal is to Reduce 11% of operating emissions (scope 1 and 2) vs BAU 2024	
	c) Describe the targets used by the organization to manage weather-related risks and opportunities and performance against targets.			RI - Annex C

TCFD (Task Force on Climate-Related Financial Disclosures) 2023

#### Expansion of IR-2023

#### vernance Chapter of Climate Change Management Report 2023 Annex.

#### K Management Report on Climate Change - Strategy Chapter.

#### nnex Climate Change Management Report - Risk Management Chapter.

#### e change chapter and environmental performance

GRI 305-1 GRI 305-2 GRI 305-3 GRI 305-5 GRI 303-3 GRI 303-5 GRI 306-3 GRI 306-4 GRI 306-5 GRI 302-1 GRI 302-4

#### ex Climate Change Management Report - Goals and Metrics Chapter



