PROMIGAS

CLIMATE CHANGE RISKS - TCFD

Agosto - 2023

CONTENIDO

TCFD Report

01

Importance of implementing the TCFD Framework

Climate change affects everyone and it is imperative for companies to reduce vulnerabilities as well as take advantage of the associated opportunities.

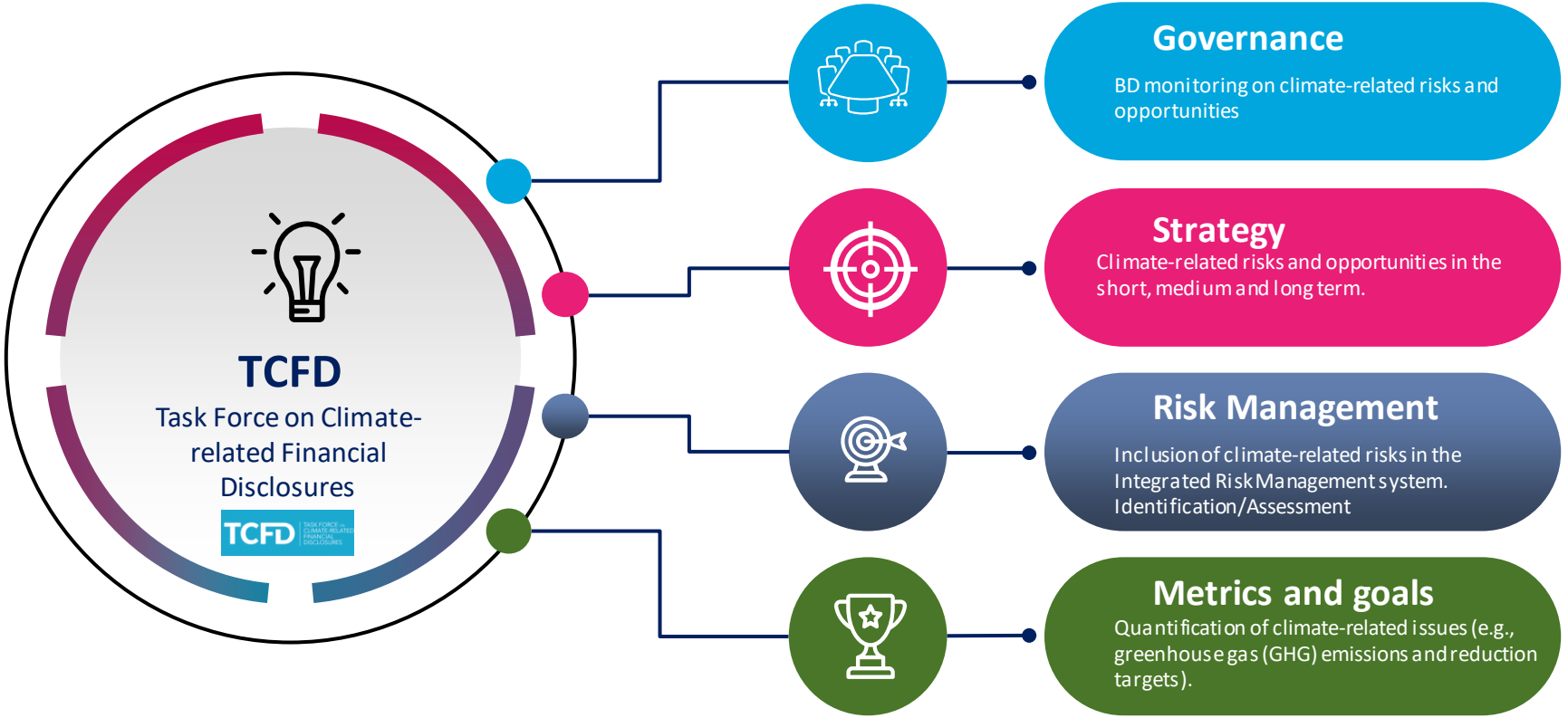
1. Transparency to financial markets and investors who demand quality information on financial impact and climate risk management.

2. Responding to increased information requirements from various stakeholders with respect to climate management and risk and opportunity management.

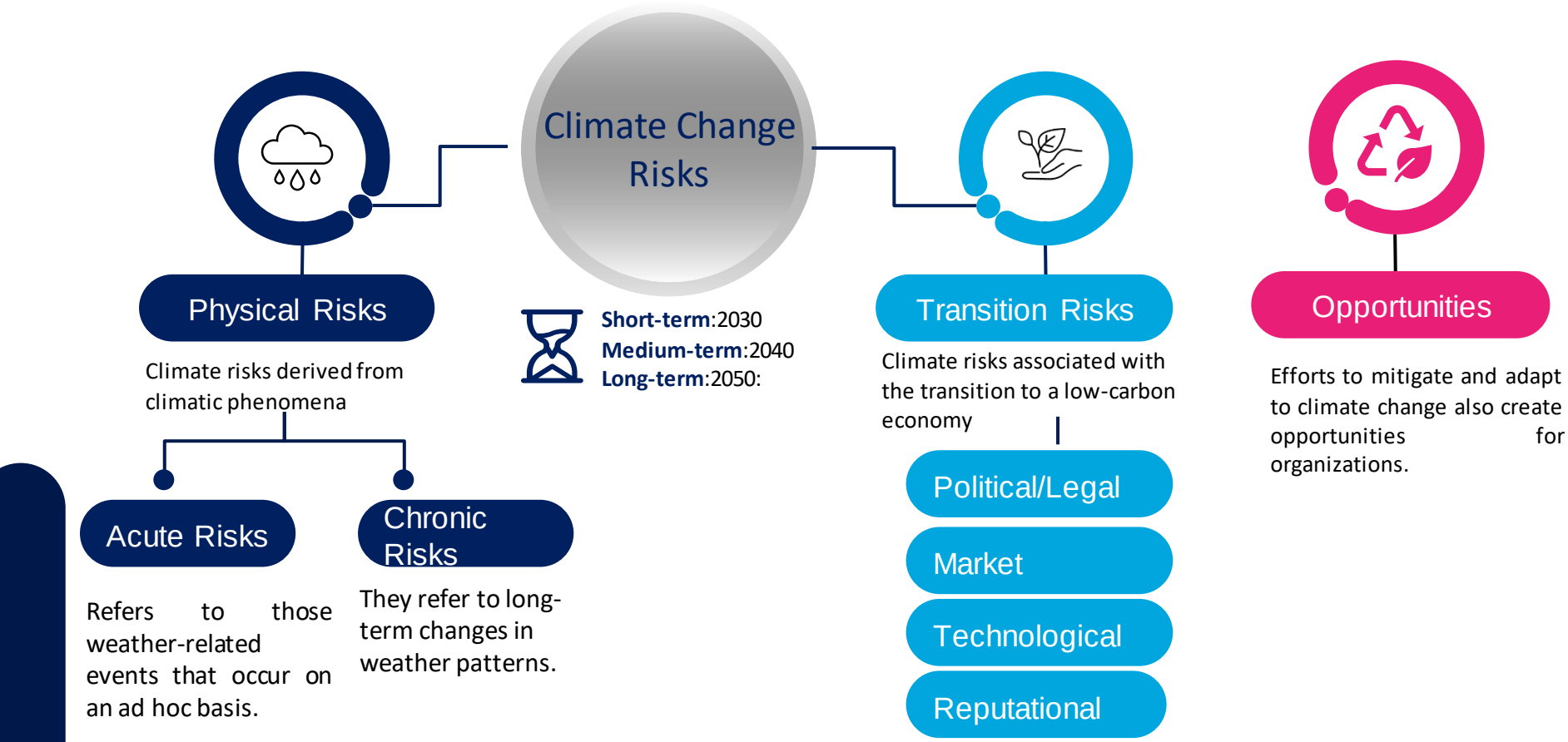
3. Compliance with the provisions of the governing bodies: Superfinanciera in its Circular 031 of 2021 requires that management reports include information that follows the guidelines of the TCFD framework.

TCFD Report's Structure

The four pillars recommended by the TCFD framework are:



Climate-related risks and opportunities




1. Government
01

1. In Governance

We have a strengthened Corporate Governance process, which for decision making is based on the results of the analysis made by the following committees:

STRATEGY, SUSTAINABILITY AND RISK COMMITTEE

1) Regularly monitor the progress and implementation of the decarbonization strategy.
2) Oversee the identification and management of material climate-related risks and the treatment of environmental issues where they have the potential to significantly affect the company's long-term value.
3) Oversee the progress and development of action plans to deliver on climate-related objectives.

PROJECTS COMMITTEE

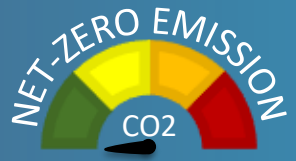
1) Review the impact that the new businesses being evaluated could potentially have on the organization's carbon footprint and their alignment with the organization's decarbonization commitments, objectives and goals.

2. Strategy

2.1 Climate Scenarios

The 3 scenarios that served as the basis for the quantification of climate risks and opportunities are as follows. These weretaken from TCFD guidelines and best market practices, combining the IEA and IPCC scenarios is recommended as a source to obtain complete climate scenarios.

Accelarated transition - SSP1 – 1.9 + NZE

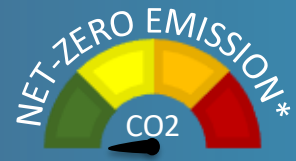


2050

⇧T<1.5°C

- ✓ Major international effort and cooperation.
- ✓ Ban on new internal combustion vehicles, phas out coal and oil-fired power plants by 2040.
- ✓ Key players: hydrogen and hydro generation, among other low-emission technologies.

Moderate transition ***SSP1 – 2.6 + SDS***

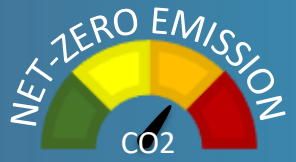


2050
DEVELOPED ECONOMIES

⇧T<1.65°C

- ✓ Adoption of policies, initiatives and regulatory frameworks developed in favor of environmental care.
- ✓ Decrease in the price of fuels and increase in the price of CO2 (higher opportunity cost of emission).

Slow transition ***SSP2 - 4.5 + STEPS***



2050
NOT MET

⇧T<2.8°C

- ✓ Adoption of policies to reduce the use of fossil fuels, but high demand for fossil fuels remains, leading to an increase in the value of fossil fuel
- ✓ Moderate increase in the price of CO2.

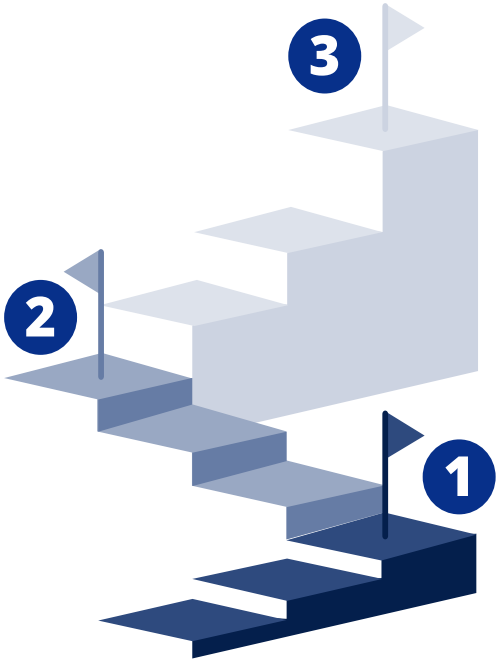
2.1 Climate Scenarios

There are currently several recognized organizations that propose different models and scenarios for making climate change projections

The most recognized climate scenarios

IEA

- The IEA uses a WEM model to make projections that replicate the functioning of the energy market in different scenarios (WEO Scenarios).
- There are four scenarios where the outcome of the policies implemented for 2100 varies.



IPCC

- The AR5 Report: Climate Change (2014) uses RCPs.
- Its latest report (AR6 Climate Change, 2021) implements the use of SSP scenarios.
- The new scenarios represent different socio-economic developments, as well as different concentrations of greenhouse gases in the atmosphere.

NGFS

- Association of 66 central banks and supervisors with the objective of defining, promoting and contributing to the development of best practices on climate change and green finance.
- It was established in 2017 during the “One Planet Summit” in Paris.
- It has six scenarios with similar socio-economic assumptions.

2.1 Climate Scenarios

IEA scenarios

The International Energy Agency (IEA) models four scenarios according to the policies and times at which they are implemented

Stated Policies

In the STEPS scenario, the announced policies and objectives are considered, but taking into account the measures that are being currently adopted to achieve their implementation. Unlike the Announced Pledges, mere commitment is not enough for a policy to be included, it does not assume that governments will achieve all announced climate targets.

Announced Pledges

This scenario envisages that all the climate commitments that governments have made will be met.

- It includes emission reduction targets for 2050.
- It includes 2030 and long-term target announcements.

Sustainable Development

Within this scenario, it seeks to achieve 3 sustainable development goals (SDGs):

- SDG 7: Affordable and clean energy.
- SDG 3.9: Reduce the number of deaths and illnesses caused by air pollution.
- SDG 13: Effective actions to combat climate change.

It is also based on increased clean-energy policies and investments that put the energy system on the path to the major SDGs. This scenario is consistent with limiting the global temperature rise to 1.65°C

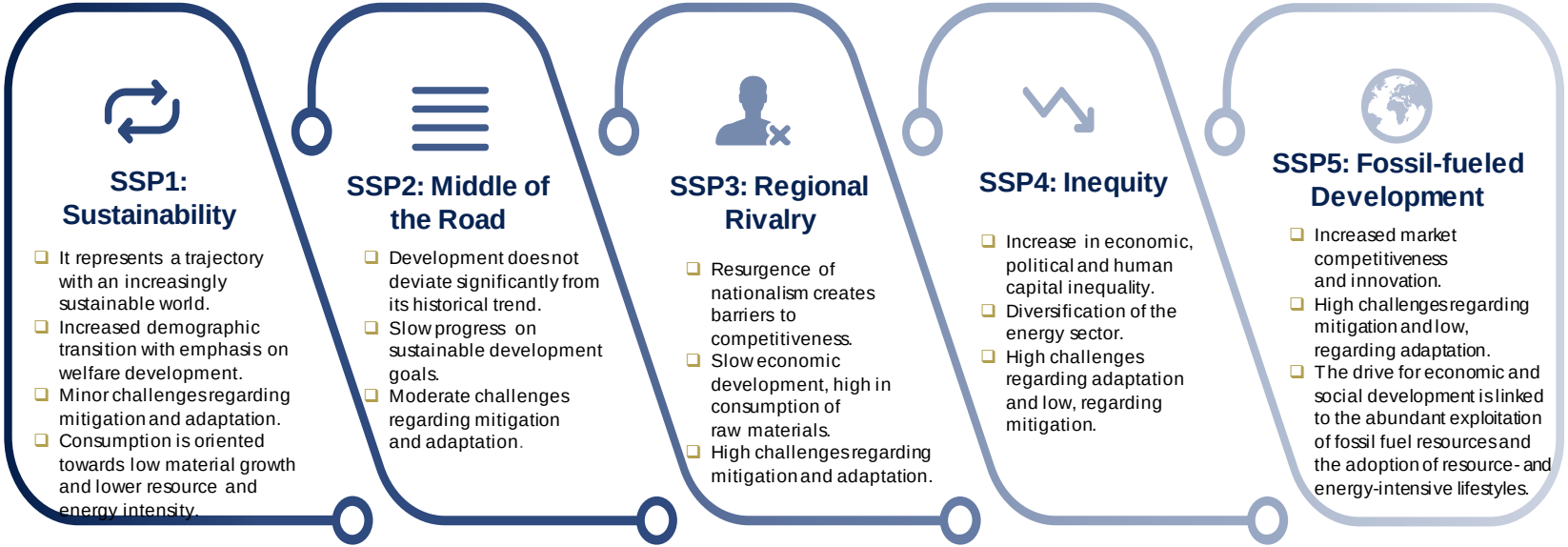
Net Zero Emissions by 2050

Scenario in which zero net CO_2 emission by the energy sector is achieved in 2050. In particular, achieving universal access to energy by 2030 and significant improvements in air quality. This scenario is consistent with limiting the global temperature rise to 1.5°C without temperature overshoot. It shows a regulatory scenario of the path needed to achieve this goal.

2.1 Climate Scenarios

IPCC scenarios

IPCC presents five different SSP scenarios, varying the relationship between mitigation and adaptation challenges and covering physical and transition aspects



2.1 Climate Scenarios

NGFS scenarios

The NGFS has six different scenarios with similar socio-economic assumptions intended to cover a wide range of physical and transition risks

Net Zero 2050

- ✓ Limits global warming to 1.5°C.
- ✓ Strict policies and innovation achieve net zero CO_2 emissions by 2050.
- ✓ Low physical risks but high transition risks.

Below 2ºC

- ✓ Strict policies are gradually increasing.
- ✓ 67% probability of maintaining temperature rise below 2º C.
- ✓ Relatively low physical and transition risks.

Nationally Determined Contributions

- ✓ It includes announced policies even though they have not been implemented.
- ✓ Temperature rise by about 2.5ºC.
- ✓ Moderate to severe physical risks and low transition risks.

Divergent Net Zero

- ✓ This scenario reaches net zero in 2050 but with higher costs due to divergent policies and early elimination of fossil fuels.
- ✓ At least 50% probability of temperature rise below 1.5°C.
- ✓ High transition risk but lower physical risks.

Delayed Transition

- ✓ Assumption on new policies not introduced until 2030. Need for strong policies to maintain temperature rise below 2º C.
- ✓ Physical and transition risks higher than in "Net Zero 2050" and "Below 2ºC" scenarios.

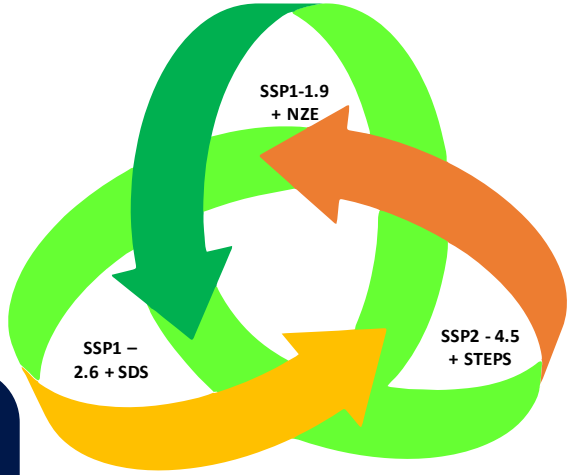
Current Policies

- ✓ It assumes that the current policies are kept. This creates high physical risks.
- ✓ Temperature rises by about 3ºC and emissions rise up to 2080.

2.2 Climate scenarios

Climate scenarios framework: General narratives

The 3 scenarios that served as the basis for the quantification of climate risks and opportunities are as follows:
***SSP1 –1.9 + NZE*; SSP1 –2.6 + SDS; SSP2 –4.5 + STEPS**



Accelerated transition

This scenario considers that **the world energy sector** will achieve **zero net emissions in 2050, with global temperature rising no more than 1.5 ºC. Zero net emissions are achieved in 2050** through major international effort and cooperation, with very high social involvement and the public sector working closely with the private sector and citizens. **There will be a rapid and decisive decline in the use of fossil fuels** and flourishing of low-emission industries. **The evolution of the energy sector will focus on a system based on renewable energies, electricity use and energy efficiency**. In this scenario, an unprecedented investment is expected **for the deployment of existing clean technologies**, especially solar and wind, and the development and evolution of new technologies such as hydrogen, batteries, electric vehicles, CCUs, among others. Finally, **economic growth will be high thanks to the use of sustainable energy sources** and the creation of millions of jobs linked to sustainability.

Moderate transition

This scenario considers that **only developed economies will achieve zero net emissions by 2050,** with **temperature rising no more than 1.65º C.** Non-developed nations are expected to reach net zero emissions by 2070 through a major effort to create an energy system that is resilient to change and clean of emissions. **Technological investments will be made in the development of renewable energy (solar and wind) and fossil fuel substitutes (hydrogen, biogas, batteries, among others).** Economic growth will be accompanied by **a cleaner energy system, providing access to clean and sustainable energy solutions.** For this economic growth, a gradual decline in the use of fossil fuels and other polluting sources will be necessary, causing fossil fuel prices to fall, while CO_2 prices will rise.

Slow transition

This scenario considers that developed economies **will not achieve zero net emissions in 2050,** with temperature **rising no higher than 2.8ºC.** It does not assume that governments will achieve all announced climate targets and tries to interpret where the energy system could go without a big push from political actors. Investments and policies will be targeted at the sectoral level of industries, including pricing policies, efficiency standards and schemes, electrification programs and specific infrastructure projects. Investments will also be made in technological development and renewable energy, but they will be conservative. All of this will lead to sustained economic growth by adopting economic policies to reduce the use of fossil fuels, but demand for fossil fuels will remain high.

2.2 Methodology for Risk Quantification

The quantification has been performed under the TCFD recommendation by risk type, climate scenario and time horizon.

Timeframe: 2030 – 2040 - 2050

Scenarios

Geography

Colombia

Perú

Risks/Opportunities

- Physical Risks
- Transition Risks
- Opportunities

Technical sources used to estimate impacts:

- ✓ Climate models for physical climate variables/Scenario - Copernicus.
- ✓ Thermal sector revenue projections according to Enersinc, UPME and XM.
- ✓ Current exploration and production/exploitation contracts from ANH as of July 2023.
- ✓ UPME statistical bulletin 2016-2021.
- ✓ Hydrogen roadmap in Colombia

2.2 Climate risks - Slow Transition Sc. - 2030

Physical Risks	Identified Risks	Likelihood	Estimated Financial Impact– V@R
Acute Risks: originated by **extreme weather phenomena** whose frequency and intensity have been increasing due to the gradual increase in global temperature.	Landslide Extreme events - rains/floods Extreme events - fires (Forest) Heatwaves Drought periods Extreme events - hurricanes	**High**	**Risk Value: COP $270.093 M** • Infrastructure failures that impact business continuity. • Increased maintenance costs **Higher impact** in financial impact
Chronic Risks: changes in weather patterns and increase in average temperature and sea levels	Temperature increase Sea level rise Wind availability Precipitation Solar radiation Ocean acidification		

Risk levels
Extreme
High
Moderate
Low

The risks that have the greatest probability and impact on the corporate

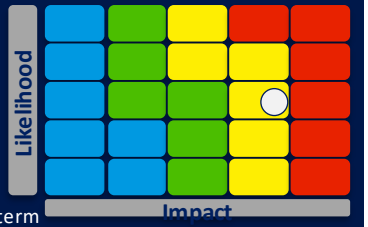
See detailed evaluation R. Physi...

CORPORATE STRATEGIC RISKS*

TECHNICAL DATA SHEET

Failures in the implementation of the climate mitigation and adaptation strategy.

Exposure of the company to negative impacts in its value chain, as well as its capacity to implement measures for the reduction and compensation of carbon emissions and implementation of climate change adaptation measures.



*Short-term

DEFINIITON OF LIMITS

Evaluation Period:
2023-2025

KEY CONTROLS

- Pipeline integrity risk analysis.
- Follow-up on the execution of the activities associated with the high priority equipment defined in the maintenance plan.
- Monitoring and follow-up of banks and slopes through bathymetry and topography.
- Activation of the Business Continuity Plan.
- Activation of business continuity strategies.
- Follow-up on the expiration of all-risk policies.
- Follow-up to the Decarbonization Roadmap initiatives.

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Adaptation Plans

Short-term (2 years)

- Promioriente Early Warning Project.
- Geotechnical Works Construction Plan - AVR Project (2018-2025).
- Río Negro - Cubugón Bypass.

Medium-term

- Adaptation plans for strategic assets in the face of climate change.
- Cabica Variant (Engineering Phase).
- Construction of spurs in Ciénaga and Tasajera wave breaker valve.

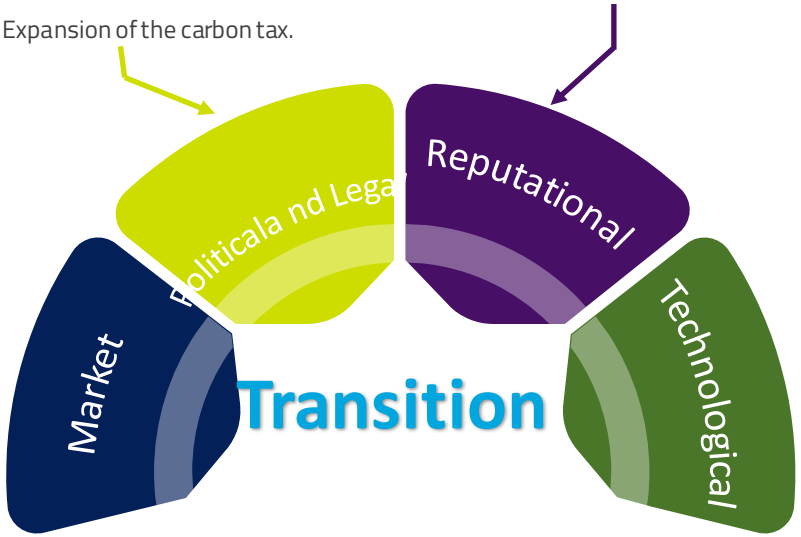
2.2 Climate Change Risks - Transition

- Decrease in residential NG demand due to utilities promoting full electric buildings.
- Decrease in industrial NG demand in the industrial sector due to energy transition and electrification of industrial processes.
- Decrease in NGV demand due to the electrification of light vehicles.
- Migration of industrial clients to their own photovoltaic equipment, generating energy for their recurring consumption.
- Decrease in residential natural gas demand due to the implementation of self-generation solutions.
- Restriction in meeting residential demand due to the need to direct gas flows to electricity generation in the event of an extreme El Niño phenomenon*.

- Dismantling of tax benefits for energy solutions projects.
- Suspend the operation of new exploration and production contracts.
- Environmental constraints/oc. to new infrastructure.
- Expansion of the carbon tax.

- Loss of opportunity (higher cost) of financing or insurance for being in a fossil fuel business.

- Increased participation of renewable sources in the electricity generation matrix.
- Decrease in gas consumption due to decarbonization of liquid fuels.
- Increased value of investments for the reduction of business emissions
- Increase AOM expenditures to reduce fugitive emissions.

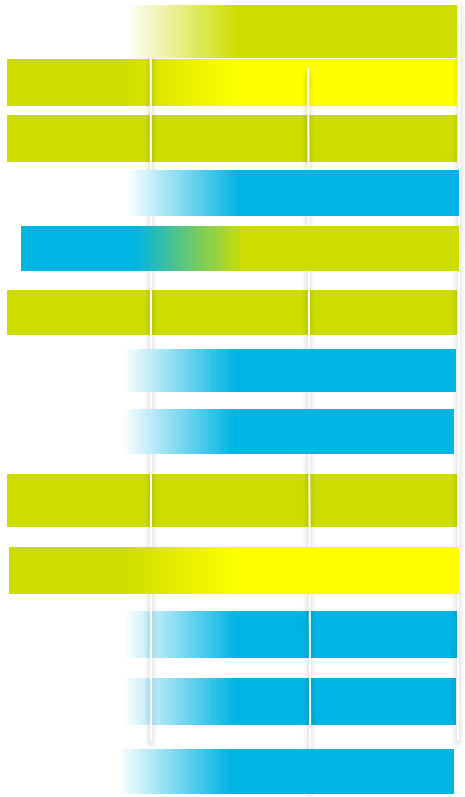


*Qualitative value

2.4 Risk evolution 2030-2040-2050 Slow / Moderate Transition Scenario

TRANSITION RISKS

		2030	2040	2050
1	Dismantling of Tax Benefits S.E.			
2	Environmental constraints			
3	Carbon tax extension			
4	Full electric buildings			
5	Accelerated industrial transition			
6	Decrease in NGV demand due to vehicle electrification			
7	Industrial migration to competitive photovoltaic equipment(EE)			
8	Residential self-generation(GN)			
9	Increase in the participation of renewable sources in the electricity generation matrix			
10	Liquid fuel decarbonizations			
11	Increasing AOM expenditures to reduce fugitive emissions			
12	Increased value of CAPEX investments for the reduction of business emissions			
13	Higher financing cost			



Risk levels

- Extreme
- High
- Moderate
- Low

2.3 Climate Change Opportunities - Transition

INCREASE IN DEMAND FOR GNV IN THE HEAVY VEHICLE FLEET

- ✓ Increase vehicle fleets for public transportation and especially cargo transportation.
- ✓ In Colombia, a significant future penetration of GNVs is expected, mainly leveraged on the competitiveness gains expected with the eventual introduction of diesel subsidy dismantling and the implementation of a financing tool.

Likelihood: High
Impact: Between the range of (12.000-100.000 millions/year COP)

A growth of the cargo vehicle fleet was estimated based on the initiative to renew the fleet from Diesel to GNV.
Penetration was estimated based on the tons of cargo generated in the different regions of the country and a penetration percentage of around 3.4% was assumed.

HYDROGEN INPUT

Hydrogen is identified by multiple stakeholders as an important future energy carrier. Many transportation and industrial equipment could run on hydrogen.

Likelihood: 2030 – Moderate
2040 – High
2050 – Very High

Impact: Approximately in the range of (450,000 - 600,000 Million COP)

The current production of tons/year was taken into account, a growth in demand was assumed for each evaluation horizon and from this growth a % of catch was assumed at a previous sale price of US$/kg.

ENERGY SOLUTIONS

- Distributed Solar.
- Auto/Co-generation & Trigeneration Carbon.
- Management.
- Energy Efficiency.
- Commercialization.
- Thermal Districts.

BIOGAS INPUT - BIOMETHANE

Participate in the emerging biogas and biomethane market, in the first instance by transporting it, but in the future also by taking a position in its production.

Likelihood: 2030 – Low
2040 – High
2050 – Very High

Impact:
Approximately in the range of (50.000 – 70.000 Million COP)

Volumes are estimated on a market basis and the percentage that can be replaced by Biogas-biomethane. From that volume a % capture rate is assumed and the estimated transport rate is applied.

Risk Management

03

Alignment of Climate Risks to the Integrated Risk System

The process of identifying, assessing and responding to climate-related risks is part of Promigas' Integrated Risk Management System

STRATEGIC

- **Key and Emergent**
- RIMI "Riesgo Inherente de Mayor Impacto"

Catastrophic Infrastructure Breakdown due to the threat of climate change phenomena

Failures in the implementation of the climate mitigation and adaptation strategy

TACTICAL

- Operational ERM
- **Climate Change Risks**
- ASG (Environment, Social and Human Rights)

Physical Risks (Acute and Chronic)

Transition Risks
- Political and Legal
- Market
- Reputational
- Technology

OPERATIVES

Especialized models

Description of the process for identifying and assessing Climate Risks

PLANNING

- Context analysis.
- Definition of time horizons and construction of climate scenarios.

IDENTIFICATION AND ANALYSIS

- Identification of climate risks with all business areas.
- Identify the physical climate and market variables associated with each climate scenario and according to the geographical area.

EVALUATION

- Perform the Risk Valuation according to the V@R (Value at Risk) according to the climate scenario and time horizon.

TREATMENT

- Prioritization of climate risks (Physical and Transition based on their estimated financial impact).
- Physical risks we define adaptation measures and Transition risks we define mitigation measures when applicable.

MONITORING AND FOLLOW-UP

- Monitoring is performed from the three lines of defense according to their scope.
- Controls and treatment measures are monitored from the second line, as applicable for climate risks.
- Report to senior management and the Board of Directors on the results of monitoring.