

# Audit and Risk Committee

Ordinary

**Meeting No.**

119

**Date**

April 20, 2023

# 2023

# 3

## INFORMATIVE ISSUES

1. Audit Report
  - a. 2023 Annual Audit Plan Monitoring
  - b. Follow-up Data Migration Process (Contracts)
  - c. Audit Self-Assessment – Quality Assurance and Improvement Program (QAIP)
2. Risk Report
  - a. **Follow-up on the strategic risk matrices of the company and subsidiaries**
  - b. Follow-up on contingency matrices
3. Statutory Auditor's Report
  - a. Follow-up on the 2023 Statutory Auditor's Work Plan
4. Compliance Report

Topic:

Follow-up on the strategic risk matrices of the company and subsidiaries

Type of Request:

Informative



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## Conclusions and/or Requests

Inform the Committee about GEB's risk management and that of the affiliated companies



## Reasons and/or arguments

It is the Committee's function to continuously monitor the risk management of GEB and its Subsidiaries in accordance with the risk appetite framework approved by the Board of Directors on December 20, 2021.

# Key Risk Management Topics

## ➤ EFFECTS ON GEB'S REPUTATION

1. Follow-up Energy Demand Monitoring 2025

## ➤ REGULATORY CHANGES THAT ARE UNFAVORABLE TO THE COMPANY'S INTERESTS

2. Regulatory Management
  - a) CREG Resolution No. 175/2021
  - b) National Development Plan 2022 - 2026
  - c) Amendment to Law 142 of 1994
3. Labor Reform (GEB, Enlaza and TGI)
4. Average Transportation Cost (Contugas)

## ➤ BREACH OF CONTRACT BETWEEN TRECSA AND THE GOVERNMENT OF GUATEMALA (PET 001/2009)

5. International Investment Arbitration (Conecta)

## ➤ NON-CONTINUITY OF THE BUSINESS

6. Nevado del Ruiz Volcano Alert (TGI and Enlaza)





# 6. Business Non-continuity: Alert Volcano Nevado del Ruiz – Enlaza and TGI

April 2023



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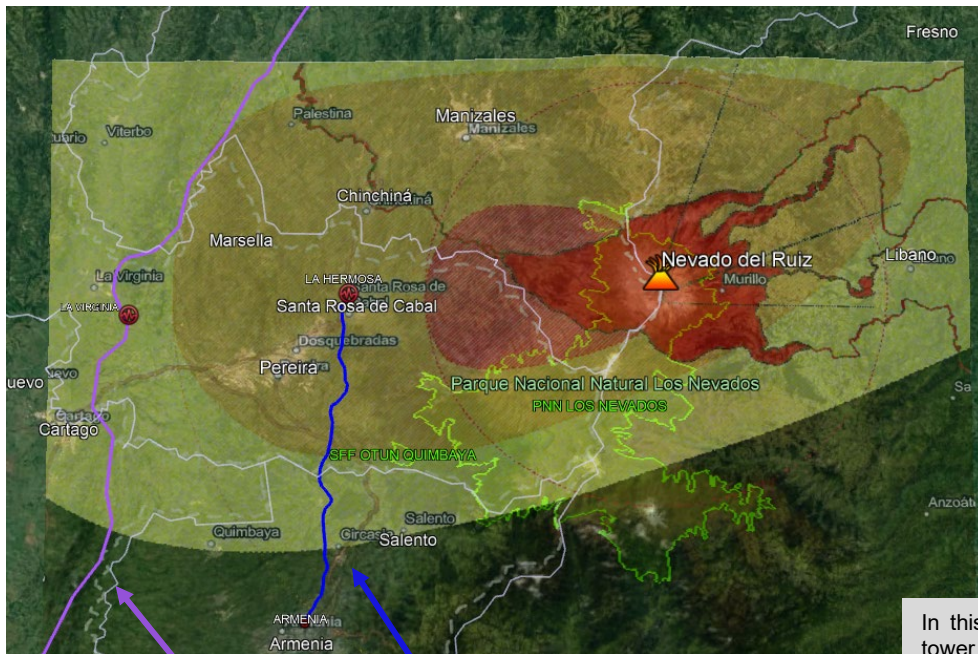
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energy*





# Nevado del Ruiz Volcano Alert Notice – Enlaza

## Identified Critical Points



- It corresponds to the area that would be affected by ash and lapilli falls, representing an area with accumulations greater than 10 cm (overlaid load  $> 100 \text{ kg/m}^2$ ), with an approximate radius of 25 km, within which rural areas of the municipalities of Villamaría, Herveo, Casabianca, Villahermosa, Murillo, and Santa Rosa de Cabal could be affected.



- It corresponds to the area that would be affected by ash and lapilli falls with accumulations between 1 and 10 cm (over imposed load between 10 and  $100 \text{ kg/m}^2$ ), with an approximate radius of 54 km, within which the municipalities of Pereira, Dosquebradas, Marsella, Santa Rosa de Cabal, Chinchiná, Belalcázar, Palestina, Risaralda, Villamaría, Manizales, Neira, Marulanda, Herveo, Casabianca, Villahermosa, Murillo, and Santa Isabel may be affected.



- It corresponds to the area that would be affected by falls of ash and lapilli with accumulations of 0.5 mm to 1 cm (overload between 0.5 and  $10 \text{ kg/m}^2$ ), with an approximate radius of 88 km.

In this area, 22 kilometers of the Armenia 230kV Transmission Line between tower 45 and 83A would be affected, as well as the La Hermosa Electrical Substation in the municipality of Santa Rosa de Cabal (Risaralda); also, in this affected area, there would be towers 282 to 332 of section 1 of the Southwest Reinforcement Project, with towers 286 and 287 near the Claro River crossing with a possible impact of lahars, although it is located in high areas.

Infrastructure under construction  
RTS 500 kV Project

Operating Infrastructure  
Armenia 230 kV Project



# Nevado del Ruiz Volcano Alert Notice – Enlaza

## Identified Alert Points



### Nevado Del Ruiz Volcano Volcanic Threat

Fall of Pyroclasts (ash and lapilli) transported by the wind

#### Impact on infrastructure in Operation Project Armenia 230 KV

**Hazard Zone Medium** - Colombian Geological Service (SGC)

It corresponds to the area that would be affected by ash and lapilli falls with accumulations between 1 and 10 cm (superimposed load between 10 and 100 kg/m<sup>2</sup>), with an approximate radius of 54 km, within which the municipalities of Pereira, Dosquebradas, Marsella, Santa Rosa de Cabal, Chinchiná, Belacazar, Palestina, Risaralda, Villamaría, Manizales, Neira, Marulanda, Herveo, Casabianca, Villahermosa, Murillo, and Santa Isabel may be affected.

#### Impact on infrastructure in Building Project RTS 500 KV

**Threat Zone low** - Colombian Geological Service (SGC)

## Impacts



Impact on operational transmission infrastructure causing unavailability

Impact on the construction transmission infrastructure caused defaults in the operational start date and expected profitability

## Action Plans



- Monitoring of the alert level established by the Colombian Geological Service
- Following up on the recommendations and instructions of the authorities - National Unit for Disaster Risk Management (UNGRD) and local authorities
- Analysis of potential impacts carried out by the safety area - Management of Administrative Synergies - apply the Communication Flowchart in the event
- Analysis of potential impacts conducted by the sustainability department
- If the event materializes, apply the established controls:

Before catastrophic events of nature and terrorism, carry out the relevant procedures with the competent entities to:

- i. To exempt from compensations for asset unavailability and extend regulatory deadlines for restoration (replacement or rebuilding)
- ii. Recognition of higher costs in those unforeseeable and irresistible cases that affect the Base System Assets and call for bids of the substations and lines, in cases where the risk is not transferable to the insurance market.

# Nevado del Ruiz Volcano Alert Notice – TGI



## Identified Critical Points



According to the Volcanic Threat Map of the Nevado del Ruiz Volcano, the **high** threat areas that cross the infrastructure of TGI are:

- Sections in the gas pipeline in some sectors of Mariquita Gualanday and Letras – Marsella.
- The Rio Lagunilla Sector is where avalanches have descended with a height of 5 meters.

## Action Plans

- If the presented event is large-scale, the use of resources from other areas of the infrastructure should be considered.
- Consider the possibility of using alternative transportation (air transport) for the displacement of technicians to attend critical points and shut-off valves due to collapses, blockages, or other factors that hinder staff mobility, thus requiring the consideration of alternative routes.
- The incident commander, according to the PGRD, is the Superintendent or the Director of O&M, who will be the emergency coordinator or will participate when the Regional or National Risk Management Committee meetings are called upon the threat of the Nevado del Ruiz Volcano.
- Manage the purchase and/or rental of communication equipment. (due to the risk of lack of communication via telephone).
- Periodic follow-up led by the Vice President's Office.
- The layer of the Volcanic Hazard Map of the Nevado del Ruiz Volcano from the SGC is available in the company's viewers for information cross-referencing and analysis.
- Associated with seismic activity and heavy rainfall in the area. Signum crew 7 was instructed to carry out crack sealing at PK78+400 Sabinas.
- Performance of inspection PK73-PK76, PK77+600, PK78+400 (Sabinas) Tesorito PK79+100 and PK79+800.
- Carrying out a topographic and geotechnical monitoring campaign at PK51+000 (Tap Herveo), PK77+600 PK78+630 (Sabinas) PK79+100 Tesorito.
- Availability of crews from district 2 and district 7.
- If support is required, team 8 can be mobilized to the Manizales area to inspect from Manizales towards Chinchiná, Villamaría, and Santarosa, and mobilize team 7 to Fresno, Herveo, Manzanares, and Mariquita



# Nevado del Ruiz Volcano Alert Notice – TGI



## Identified Critical Points

➤ Crossing sites vulnerable to volcanic threat over or under water bodies

GAS PIPELINE	SECTION	DISTRICT	CROSSING TYPE	CURRENT	PK	DEPTH
Mariquita-Cali	Mariquita-Letras	7	Subfluvial	River Gualí	2+182	4.10 m
Est earn Central	Mariquita-Gualanday	2	Subfluvial	River Lagunilla	327+000	10 m
Est earn Central	Mariquita-Gualanday	2	Air	River Recio	348+248	N.A.
Mariquita-Cali	Letras-Marsella	7	Subfluvial	River Chinchiná 1	97+100	5.40 m
Mariquita-Cali	Letras-Marsella	7	Parallel	River Chinchiná 2	99+700	1.80 m
Mariquita-Cali	Letras-Marsella	7	Subfluvial	River Chinchiná 3	99+990	6.40 m
Mariquita-Cali	Letras-Marsella	7	Subfluvial	River Chinchiná 4	103+980	8.00 m

➤ Sites susceptible to earthquakes induced by volcanic threat due to mass removal activation

GAS PIPELINE	SECTION	DISTRICT	PK
Mariquita-Cali	Mariquita-Letras	7	51 + 750
Mariquita-Cali	Letras-Marsella	7	78 + 400
Mariquita-Cali	Letras-Marsella	7	179
Mariquita-Cali	Letras-Marsella	7	79 + 630



# Grupo Energía Bogotá



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