



THE SKY IS THE LIMIT

# TCFD REPORT 2023

CLIMATE CHANGE  
RISKS AND  
OPPORTUNITIES







*Grenergy's business model plays a key role in mitigating and adapting to climate change by moving towards an energy system free of fossil fuels and adapting its processes in the most efficient and predictive manner to the possible effects of climate change.*

Climate change is a global phenomenon that manifests itself in an increase in the Earth's average temperature, with effects such as melting glaciers, rising sea levels and the intensification of extreme weather phenomena such as droughts, floods, heat waves and tropical cycles.

In May 2023, the World Meteorological Organization published its *Annual to Decadal Global Climate Outlook*<sup>1</sup>, which warns that there is a 66% chance that temperatures will exceed pre-industrial levels by more than 1.5°C between 2023 and 2027. These projections indicate an acceleration of global warming, with devastating consequences. In Spain, the signs of climate change are already apparent.

The country is particularly vulnerable due to water scarcity in several regions. In this regard, the State Meteorological Agency (AEMET) warns of worrying trends such as the decrease in river flows, the expansion of semi-arid areas and the increase in heat waves.

The importance of acting is fundamental to avoid an increasingly adverse scenario at both the national and global levels.

In the context of climate change and actions to address the environmental crisis, Grenergy has established and successfully met the objectives outlined in its ESG Roadmap 2021-2023. The objectives address governance structure, ESG objectives in the Strategy, risk management, ESG impacts and ESG communication.

With the recent update of the 2024-2026 Sustainability Strategy, more ambitious climate objectives have been set, which will be summarized at the end of this chapter.

Having more climate information is key for Grenergy to properly assess its exposure to the various physical and transitional risks and thus be able to correctly design its future business strategy.

<sup>1</sup> <https://library.wmo.int/viewer/66224/?offset=4#page=1&viewer=picture&o=&n=0&q=>

## Climate-related risks and opportunities

Greenergy follows the recommendations of the TCFD<sup>2</sup>, to disclose climate issues.

### GOVERNANCE

Disseminate the organization's governance around climate-related risks and opportunities.



### STRATEGY

Disclose real impacts and potential risks and opportunities related to the business climate, strategy and financial planning of organizations where such information is material.



### RISK MANAGEMENT

Disclose how the organization identifies, assesses, and manages climate-related risks and opportunities.



### METRICS

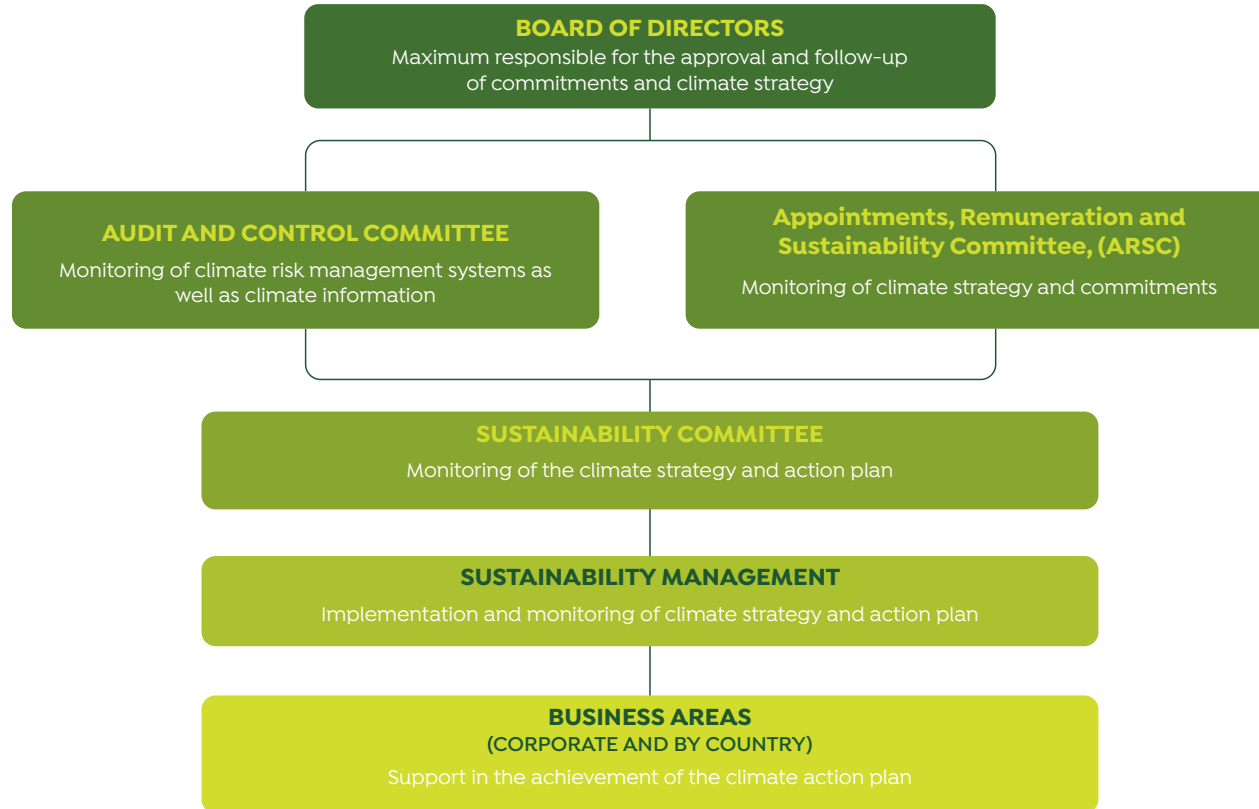
Disclose the objectives and metrics used to assess and manage risks and opportunities relevant climate-related information when such information is material.



<sup>2</sup> The Financial Stability Board (FSB) created in 2015 the Task Force on Climate-related Financial Disclosures (TCFD), a Group of to encourage companies to inform stakeholders about climate change-related risks and how to manage them.

## Governance

Climate governance is structured at several levels, starting with the Sustainability Department and ending with the Board of Directors, through the Sustainability Committee, the Management Committee and the Audit and Control Committee (ACC) and the Appointments, Remuneration and Sustainability Committee, (ARSC).







Grenergy, in its 2024-2026 Strategy, also sets **targets for climate change adaptation**, such as the update of the climate risk matrix and the specific adaptation roadmap, as well as an impact assessment for business climate derivatives and for financial planning

### Climate strategy

Grenergy's strategic plan responds directly to climate-related opportunities through its goal of reaching 5 GW in solar PV construction and operation by 2026 in various markets. In 2023, the company has continued to make progress towards its strategic targets with a project pipeline of 15.3 GW at year-end, an increase of 3.6 GW in the last 12 months. The company is implementing several strategic initiatives, including the introduction of new storage systems, such as battery systems in plants, and the evaluation of green hydrogen projects in the long term. To strengthen its position in the market and respond to emerging opportunities, the company has decided to enter new markets to geographically diversify its operations, and in addition, it plans to implement an evaluation prior to contracting suppliers in its supply chain. Grenergy's climate change mitigation and adaptation strategy focuses on the complete decarbonization of its business model and the implementation of best adaptation practices. In the definition of its 2024-2026 sustainability strategy, approved by the Board of Directors in November 2023, Grenergy sets ambitious mitigation targets such as **carbon neutrality in 2040 for Scopes 1, 2 and 3**.

To this end, absolute emissions are to be reduced by 60% by 2030 in Scopes 1 and 2, and a 50% reduction in relative emissions (relative to sales) in Scope 3 by 2030 (targets to be validated by SBTi during 2024). This will contribute to the energy transition and help to avoid millions of CO<sub>2</sub> tons every year. In terms of adaptation, the plants of Grenergy makes efforts to adapt to the potential effects of climate change through regular assessment of climate change risks and opportunities. Grenergy identifies, quantifies and manages different types of risks such as those arising from regulatory changes, rising raw material costs and changes in weather and climate patterns, with their associated potential financial impact. Grenergy considers all geographies where it operates and values different time horizons. In line with the established objectives and the definition of its new Sustainability Strategy 2024-2026, Grenergy also plans to implement new measures, including the development of a decarbonization strategy for scope 3 of the carbon footprint, the development of a climate change action policy, the implementation of a climate change adaptation plan in the business strategy and the development of an emissions compensation strategy for 2040, as well as the establishment of an internal carbon price.

## Climate risk management

The control and management of climate change risks is treated in the same way as the company's global risk management. Governance is based on several levels of defense, involving the Management Committee, the Compliance functions, Internal Audit and the Audit and Control Committee. It should be noted that Grenergy plans to incorporate a risk manager, whose functions, among others, will be global risk management and control, who will monitor the risk management process, integrating climate risk management into the system and into his or her responsibility. However, the company ensures that the methodology and criteria used to quantify risks are homogeneous and common to the entire organization. Therefore, the business unit management teams will work in collaboration with the new corporate function in charge of ensuring consistency in risk identification. Grenergy has an ESG risk map scheduled to be updated in 2024. The current map was drawn up in collaboration with the

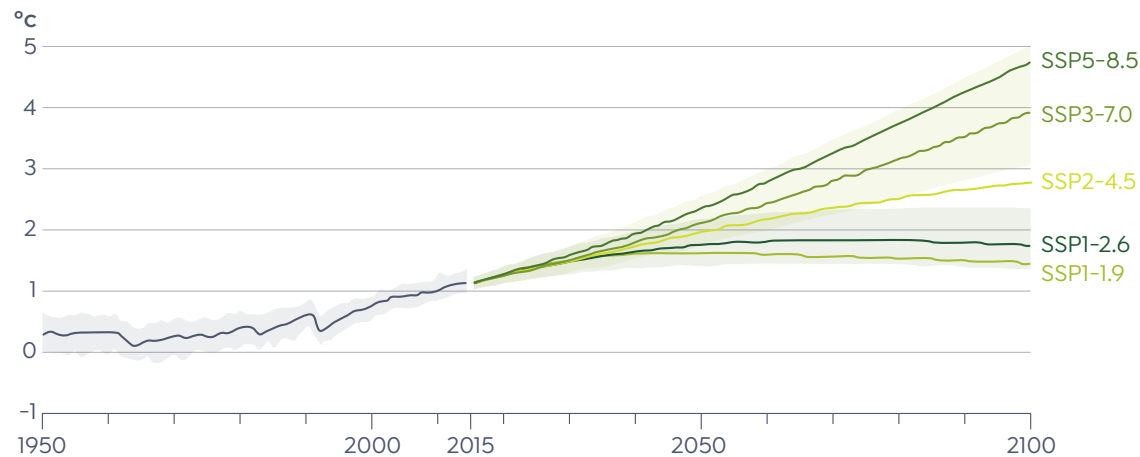
different business areas and corporate functions, which identified the main risks and assessed them in terms of probability and impact according to the corporate methodology. Subsequently, specific action plans were established to address each of these risks.

Grenergy assesses, among other things, emerging regulatory risks when planning new projects, considering the energy transition and is exploring markets with emerging legislation in favor of renewable energies, such as Austria, Hungary, the Czech Republic and Romania.

In 2023, Grenergy has conducted a physical climate risk assessment for each of its economic activities according to the Environmental Taxonomy, as well as a vulnerability analysis of projects based on the climate scenario that best suits Grenergy's economic activities. This assessment aims to address environmental concerns and promote initiatives to adapt to the impacts of climate change.

## Analysis and identification of climate scenarios for physical climate risk assessment:

The following graph shows a representation of the global surface temperature projection to 2100 with respect to the pre-industrial era (1850-1900) under the 5 IPCC climate scenarios.



IPCC AR6 Report "Climate Change 2021: The Physical Science basis" IPCC Working Group 1



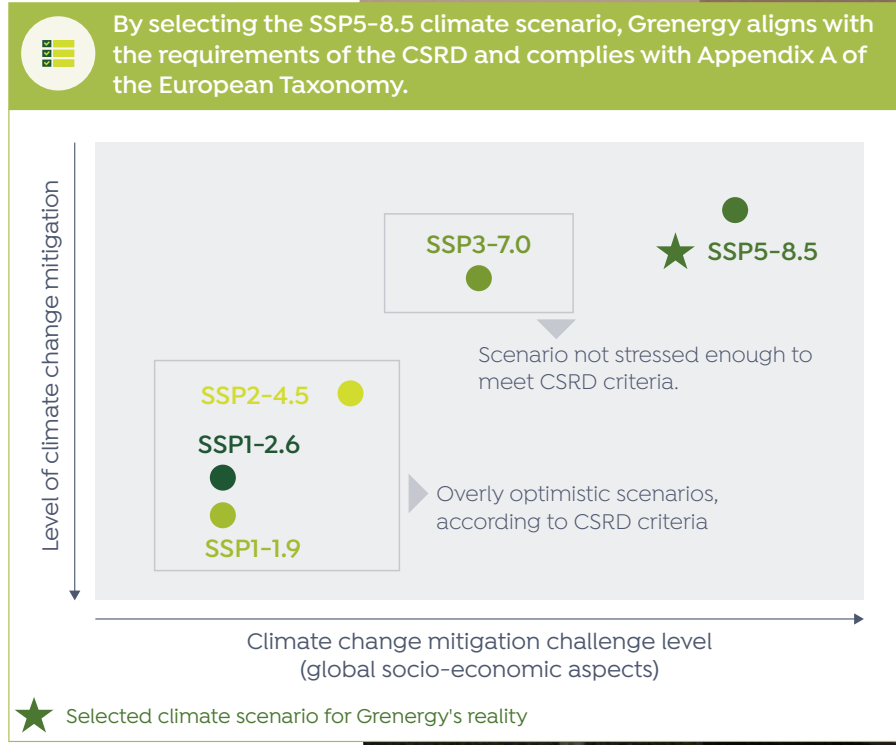


Grenergy has chosen to use the IPCC SSP5-RCP8.5 stressed climate scenario for physical climate risk analysis. This decision responds to the requirements of the new Corporate Sustainability Reporting Directive (CSRD), which aims to provide a strategic approach to company business. In addition, other reporting frameworks, including the new ISSB (International Sustainability Standards Board) IFRS-S216 disclosure recommendations on compliance with the TCFD guidelines, together with other regulatory frameworks such as the EU Taxonomy and Law 7/2021 on climate change and energy transition, give companies the freedom to select the climate scenario they deem appropriate for their business reality.

Along these lines, Grenergy's physical climate risk analysis selects an SSP5 socioeconomic narrative, satisfying the prudence criterion. This involves the use of a high emissions climate scenario to analyze the exposure and sensitivity of the company's operations to physical climate risks, which has a trajectory of GHG concentrations RCP8.5. The selection of this scenario (SSP5-RCP8.5) allows the company to comply with the CSRD point described above and at the same time satisfy the principle of prudence, since the impacts may fall on both employees and the infrastructure deployed.

Ultimately, the choice of the climate scenario is based on the strategic importance provided by the requirements of the new CSRD, as well as the recommendations of the TCFD framework led by the IFRS Foundation and the requirements of the EU Taxonomy and Law 7/2021 on climate change. This analysis includes possible changes in climate trajectories up to 2050, which provides an adequate time horizon for a full analysis of the impact of potential climate risks on Grenergy's operations.

*Grenergy has chosen to use the IPCC SSP5-RCP8.5 stressed climate scenario for the analysis of physical climate hazards in accordance with the CSRD*



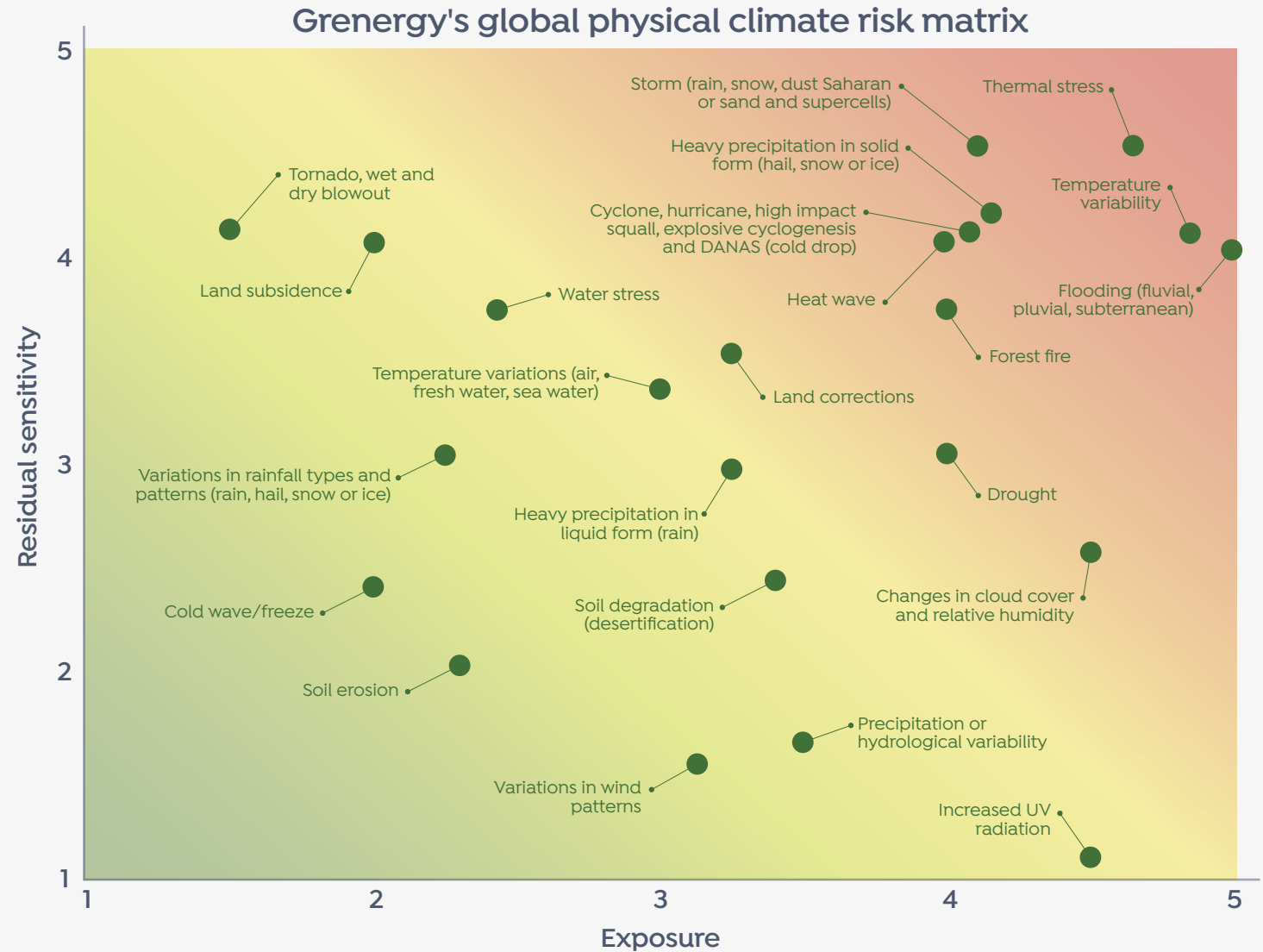
Comparison of SSP-RCP scenarios

The **critical physical climate change hazards** for Grenergy are **flooding, thermal stress and temperature variability**

Quantitative assessment of physical hazards and climate vulnerability

Through the different sources of climate information analyzed (bibliographic and documentary analysis, cartographic analysis, statistical analysis and internal documentation), it has been possible to identify those risks that have the potential to affect Grenergy's assets in the future.

The analysis considered the exposure, sensitivity, adaptive capacity and finally the climate vulnerability of the activities to physical climate risks applicable to Grenergy's reality.



Heat map reflecting the company's overall climate vulnerability or residual risk with respect to each climate risk according to the selected climate scenario (IPCC SSP5-RCP8.5) aligned with EU taxonomic requirements. The exposure reflects the probability of occurrence of the risk and the residual sensitivity the residual impact on the entity's global activity.



Mitigation and adaptation measures for critical climate risks.

Adaptation measures against critical climate risks, designed to specifically address the hazards identified in Grenergy's economic activities, are presented below.

**Table 8. Physical climate risk mitigation and adaptation measures 2023**

Type of physical risk	Risk description	Magnitude of impact	Impact	Mitigation/adaptation measures
<b>Floods</b>	River and rainfall flooding is a climatic risk to be taken into account. In regions prone to heavy rainfall, such as Colombia and parts of Peru, flooding can cause damage to plant infrastructure, affecting electrical systems and component connectivity. In addition, excess water can cause interruptions in production and, in extreme cases, put the physical integrity of the facilities at risk.	Very high	Damage to solar panels and electrical equipment.	<p><b>Location design for new projects:</b> Selection of elevated and less flood-prone sites.</p> <p><b>Sustainable drainage systems incorporation:</b> Design of green and blue infrastructures<sup>1</sup> for sustainable drainage and natural flood zones or "sponge" spaces including substrate permeabilization and water harvesting.</p>
<b>Thermal stress</b>	Thermal stress can generate an increase in ambient temperature, negatively affecting the efficiency of solar panels and reducing energy generation. This phenomenon can be especially critical in regions with high temperatures, such as parts of Mexico and Spain.	Very high	Reduced efficiency of solar panels, damage to plant installation (inverters/-transformers) and increased heat stress on EPC and O&M employees.	<p><b>Cooling systems:</b> Implementation of cooling technologies for solar panels.</p> <p><b>Thermal monitoring:</b> Monitoring of the temperature of the panels to adjust the operation, and generate high temperature warnings for workers.</p>
<b>Temperature variability</b>	Temperature variability is another crucial factor to consider. Extreme fluctuations in temperature can lead to wear and tear on plant equipment and components, which could result in additional maintenance and repair costs. In addition, these thermal variations can influence the efficiency of cooling systems, compromising the ability of the facilities to maintain an optimal operating temperature.	Very high	Abrupt changes affecting production	<p><b>Energy storage and management:</b> Integration of storage systems to compensate for variations in energy production.</p> <p><b>Weather forecasting:</b> Use of weather forecasts to adjust production.</p>

*Adaptation solutions to the physical climate risks assessed.*

<sup>1</sup> Green and blue infrastructure: planning and design of natural areas and water bodies in or around solar PV projects.

In addition, there are not only critical physical climate risks, but also **transitional risks** that have a significant impact and a high probability of occurrence, as detailed below:

**Table 9. Mitigation and adaptation measures climate transition risks 2023**

Type of transition risk	Risk description	Magnitude of impact	Impact	Mitigation/adaptation measures
<p><b>Technological</b></p>	<p>The Paris Agreement aims to keep the global average temperature increase below 2°C and to continue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. Energy production and use is the largest source of greenhouse gas (GHG) emissions, making the energy sector crucial to achieving this goal. As countries reach very high shares of renewable energy, the need for flexibility will shift to longer periods of time (several days or weeks) during which systems are over- or under-supplied.</p> <p>High adoption of solar energy may pose a challenge for utilities in balancing supply and demand on the grid, due to the increased need for electricity generators to quickly ramp up power production when the sun goes down and the contribution of photovoltaic power decreases. Considering this analysis, the company identified a strategic risk related to energy storage capabilities and interference with medium- and long-term strategic growth objectives.</p>	<p>Very high</p>	<p>Intermittency in power generation Loss of income due to reduced demand for products and services</p>	<p>Greenergy has established a <b>diversification strategy</b> to reduce dependence on solar and wind energy production, <b>evaluating investments in new technologies</b> linked to energy storage systems, as well as other emerging clean energies such as <b>green hydrogen</b>.</p>



The correct management of climate risks, as well as the definition of new opportunities, have allowed Grenergy to increase its resilience, promoting the diversification of its business portfolio, with investments in new technologies such as storage.

**Table 10. Opportunities associated with climate change 2023**

Type of transition risk	Risk description	Magnitude of impact	Impact	Magnitude of impact
<b>Products and services</b>	The company has a balanced and geographically diversified project portfolio based on an assessment of risks and opportunities. The company benefits from its experience in countries where it has a track record, such as Chile and Spain, which represent around 80% of the company's operating target for 2023, and where there is a growing demand for renewable energy encouraged by the policies in force. In 2025, the geographical distribution (by MW) is expected to be 53% in Latam, 43% in Europe and 4% in the USA.	Very high	Increased revenues because of higher demand for products and services	<b>Strategic growth plan with an installed capacity target of 5GW in 2026.</b>
<b>Resilience</b>	Grenergy recognizes the key role that battery innovation is playing in the transition to clean energy technologies. The International Energy Agency (IEA) estimates that by 2040, around 10,000 GWh of batteries across the power system and other forms of energy storage, 50 times the size of the current market. Although this technology is currently not fully on track, both in terms of deployment and cost, Grenergy identifies an opportunity to increase the resilience of its business compared to its peers by incorporating this technology into its strategy to improve the performance of variable, weather-dependent renewable energy sources.  Additionally, according to the IEA, about 10,000 GWh of batteries will be needed annually across the energy system and other forms of energy storage by 2040, up from about 200 GWh today.	Very high	Increased revenues as a result of higher demand for products and services	Creation of a <b>storage division with senior talent</b> and development of a pipeline of 11.3 GW of projects at different stages of development in 12 countries.
<b>Market</b>	Grenergy proactively seeks opportunities in new markets to diversify its activities and better position itself for the transition to a lower carbon economy. Wind and solar power are expected to account for 30% of global installed capacity by 2040, and electrification and green hydrogen generation will increase global electricity demand. Global installed capacity is projected to increase from about 6.7 TW in 2016 to 12.0 TW in 2040, with 30% of installed capacity renewable (17% solar PV and 14% wind).  Opportunities arise in very diverse markets and the company's project portfolio is well balanced geographically across three platforms: Latin America, Europe and the United States. Following an analysis, the company decided to expand its presence into new markets, such as Italy and the UK, and more recently Poland, the US and Germany. In Germany, for example, the company has set a target of developing a 3 GW wind farm by 2025.	Very high	Access to new markets	Agile and scalable business model with the ability to capture opportunities through <b>public-private partnerships</b> and innovative financing solutions by <b>raising green</b> finance to support expansion and growth in new and existing markets.

## FEATURED CASE

### 9.9 MW SOLAR PROJECT IN CERRITOS, COLOMBIA

Grenergy develops risk management plans for its projects. For example, for the Cerritos solar project, secondary information was obtained from official sources, technical studies previously conducted in the area, and applicable regulations.

The risk management plan established the procedures to be followed to deal with emergency situations of any magnitude, to avoid affecting the physical integrity of people, the environment and the project's infrastructure.

For the formulation of this plan, analyses of the socioeconomic conditions of the area were included to measure the degree of impact on the resources during the construction and operation of the project.

The methodology used for the design of this plan was based on the identification of the most significant risks, an analysis of their impact and probability, and the preparation of specific programs detailing the actions to prevent and address the risks to which the project is subject.



Mass movement hazard



Flood hazard



Fire threat



Thunderstorm threat







## Metrics and objectives

### Metrics

The Science Based Targets (SBTi) initiative, led by the Carbon Disclosure Project (CDP), United Nations Global Compact, World Resources Institute (WRI), World Wildlife Fund (WWF) and We Mean Business, aims to guide companies in setting ambitious science-based climate targets for GHG emissions reductions. It focuses on ensuring that businesses contribute to keeping global temperature rise below 2°C compared to the pre-industrial era, a target set in the Paris Agreement. Adherence to this initiative requires prior validation of the proposed targets by companies to ensure alignment with the established objectives.

In 2023, Greenergy joined the SBTi initiative and was able to validate its near-term targets for Scope 1 and 2 with a 42% reduction in 2030, taking 2021 as the base year. These reduction targets were based on the SBTi default reduction trajectory for small and medium-sized enterprises (SMEs). During 2024, work will be carried out on SBTi validation for the new scope 1, 2 and 3 emission reduction targets proposed under the net zero strategy, approved by the Board of Directors in 2023 (for more information, see the Net Zero Strategy section).

### THE CARBON FOOTPRINT OF OUR BUSINESS

Greenergy has carried out the verification of its carbon footprint for the year 2023, for the second consecutive year, following the criteria of the international standard ISO 14064, which guarantees the credibility of an organization's greenhouse gas (GHG) emissions reports.

In addition, the Ministry for the Ecological Transition and the Demographic Challenge has revalidated the recognition of the results obtained in Greenergy's Carbon Footprint for the year 2022. For the second consecutive year, the *Calculo* seal has been awarded.

### DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS

The period analyzed for the emissions calculation is from January 1 to December 31, 2023, and the GHG inventory boundaries follow the operational control approach<sup>1</sup>. Calculations are presented in tons of CO<sub>2</sub> equivalent and include all GHGs relevant to the company: CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. GHG emissions are calculated following the criteria defined in the GHG Protocol.

The conversion factors used are as follows:

- UK Department for Environment, Food and Rural Affairs (DEFRA)
- Intergovernmental Panel on Climate Change (IPCC) 2006 IPCC guidelines for national greenhouse gas inventories
- Spanish National Greenhouse Gas Inventory (GHG)
- Ministries of Energy and Environment of Latin American countries

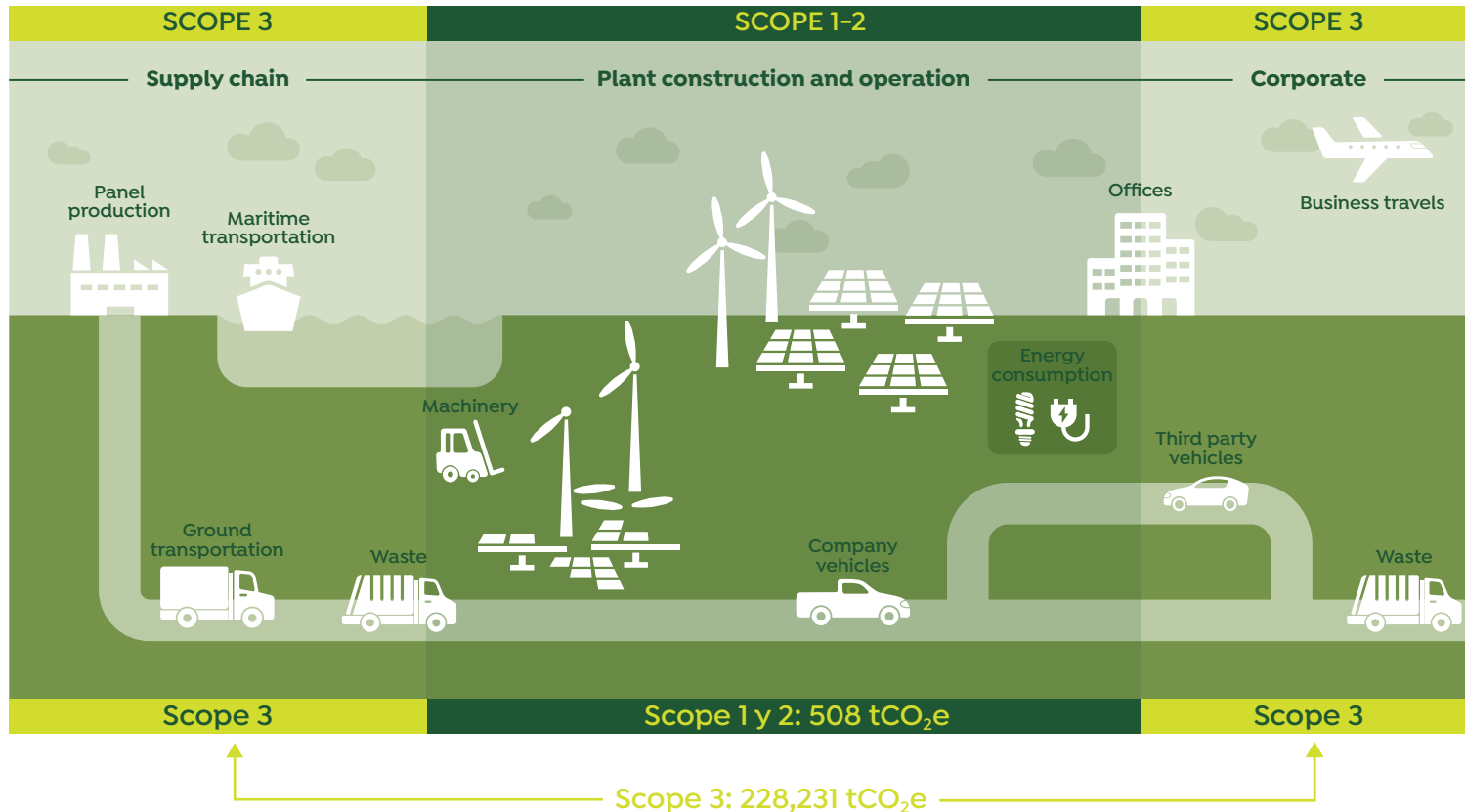


<sup>1</sup> Control approach: Greenergy accounts for 100% of its GHG emissions attributable to operations over which it exercises operational control.

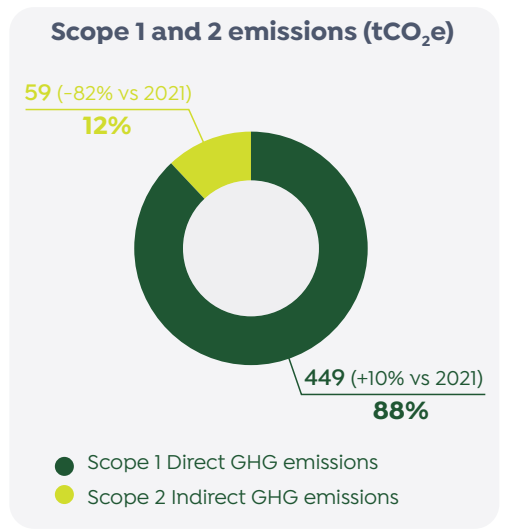
### Breakdown of Scope 1 and 2 emissions

In 2023, our activity generated 448.9 tCO<sub>2</sub>e of Scope 1 direct emissions which represents a 10% increase of our Scope 1 emissions compared to the base year, 2021. However, with the recent net zero strategy, we expect to replace the diesel/gasoline vehicle fleet with electric vehicles in the coming years (76% of the overall Scope 1).

As for the indirect Scope 2<sup>1</sup> emissions of 58.9 tCO<sub>2</sub>e, we made a significant reduction of 82% regarding the base year. As part of our net zero strategy, we have acquired International Renewable Energy Certificates (IRECs) to reduce the entire Scope 2 emissions from Chile and México. In this way, we have reduced Scope 2 emissions from 285.4 tCO<sub>2</sub> to 58.90 tCO<sub>2</sub>. This initiative aligns with Grenergy's commitment to reduce and neutralize our carbon emissions.



Grenergy has **reduced in 2023 36% of the Scope 1 and 2 emissions compared to 2021 (base year)**, thus demonstrating its commitment to the emission reduction targets set in the net zero strategy



<sup>1</sup> Scope 2 - market-based. The Scope 2 location based emissions reached 231 tCO<sub>2</sub> which represent a 41% reduction vs 2021 (base year)



### Breakdown of Scope 3 emissions

In 2023, the Scope 3 emissions sources were categorized according to the different categories indicated by the GHG Protocol methodology (4 Scope 3 categories, both upstream and downstream), resulting in total emissions of **228,231.35 tCO<sub>2</sub>e**.

The following table shows the most significant greenhouse gas (GHG) emissions according to the categories established by the GHG Protocol.

<b>Table 11. Scope 3 emission breakdown of 2023</b>		
	<b>Tm CO<sub>2</sub>e 2023</b>	<b>Variation vs 2021 (%)</b>
<b>Category 1: Goods and services purchased</b>		
Purchase of solar panels	221,414.13	18%
Machinery operated by third parties and fuel consumption in vehicles owned by subcontractors	4,010.48	97%
Water supply Offices	0.53	41%
<b>Category 4: Transportation and distribution</b>		
Logistics: land	1,974.74	72%
<b>Category 5: Waste generated in operations</b>		
Water treatment Offices	0.60	6%
Water supply Projects	1.71	37%
Hazardous waste Projects	1.04	-79%
Non-hazardous waste Projects	386.82	78%
Non-hazardous waste Offices	0.0006	-
Hazardous waste Offices	0.00	-
<b>Category 6: Business travel</b>		
Flights	371.27	16%
Trains	2.45	49%
Rental vehicles	67.58	49%
<b>Total</b>	<b>228,231.35</b>	<b>20%</b>



In 2023 Grenergy has **reduced its indirect scope 3 emissions by 54%** (in relative units, by sales) compared to 2021 (base year), committing to a reduction target of 50% Scope 3 emissions by 2030

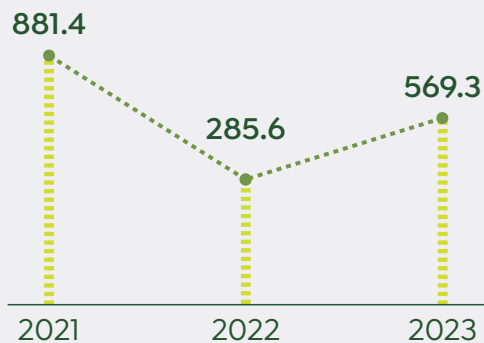
### Emissions intensity

Emissions intensity indicates the amount of pollutants or greenhouse gases released in a given period. It is calculated in terms of quantity of emissions per economic unit (sales).

The intensity of Scope 3 emissions, which represent the amount of indirect emissions related to activities outside the direct control of the organization, shows a decreasing trend, reaching 569.5 tCO<sub>2</sub>e/M€.

This represents a **54% decrease vs. 2021** on the pathway agreed with the net zero strategy targets of 50% reduction of relative scope 3 emissions by 2030.

**Emissions intensity tCO<sub>2</sub> eq/sales (M€)**



### Other emissions<sup>1</sup>

In the detailed analysis of carbon emissions, other emissions also need to be addressed.

Such as Nitrogen dioxide (NO<sub>2</sub>), Methane (CH<sub>4</sub>) and Sulfur Hexafluoride (SF<sub>6</sub>) due to their significant climate impact.

In 2023 the total emissions were 563.6 tons of CH<sub>4</sub> and 71.75 tons of NO<sub>2</sub>.

**Table 13. Avoided Emissions by Country 2022-2023**

	2021	2022	2023
Tm CH <sub>4</sub>	0.37	0.50	563.60
Tm N <sub>2</sub> O	11.14	10.08	73.75
Tm SF <sub>6</sub>	-	-	0

### The emissions we avoid

Grenergy has played a fundamental role in reducing greenhouse gas emissions into the atmosphere through its renewable energy production activities.

In 2023, through the generation of electricity from our wind farms and solar plants, which amounts to 1,045 GWh (773.3 GWh solar and 271.7 GWh wind), we will avoid the emission of 325,408 tCO<sub>2</sub>e, an amount higher than that of the previous year, 245,398 tCO<sub>2</sub>e avoided in 2022. This amount translates into the annual emissions associated with the energy consumption of 333,287 households.

**Table 13. Avoided Emissions by Country 2022-2023**

Countries	TN CO <sub>2</sub> avoided 2022	TN CO <sub>2</sub> avoided 2023
Spain	48,348.95	60,206.36
Chile	87,615.42	99,567.81
Peru	52,845.32	68,106.94
Mexico	32,113.81	33,395.12
Argentina	52,209.11	50,637.42
Colombia	4,346.99	13,494.08

<sup>1</sup> Other emissions refer to direct emissions corresponding to other refrigerant gases. Specifically, in 2023 there has been no recharge of SF<sub>6</sub> gas due to loss of leakage. - <sup>2</sup> Avoided emissions have been calculated using production by country and emission factors of the national electricity mix published by official sources and for equivalence of energy consumption in households (IDAE 2022).

## Energy consumption

Energy consumption comes both from the consumption of fuels from generators, machinery and company vehicles and from the consumption of electricity purchased or acquired. In this sense, the following is a breakdown of energy consumption and electricity generation from renewable and non-renewable sources by type of use.

**Table 14. Energy consumption 2023**

	Renewable consumption	Non-renewable consumption	Total consumption
Fuel consumption (generators, machinery and vehicles Grenergy)	0 MWh	1,928 MWh	<b>1,928 MWh</b>
Purchased electricity consumption or acquired	339.7 MWh	970,6 MWh	<b>1,610.3 MWh</b>
<b>TOTAL ENERGY CONSUMPTION (MWh)</b>	<b>339.7 MWh</b>	<b>2,898.6 MWh</b>	<b>3,538.3 MWh</b>
<b>TOTAL ELECTRICITY GENERATION (MWh)</b>	<b>1,044,570 MWh</b>	<b>0 MWh</b>	<b>1,044,570 MWh</b>

## NET ZERO Strategy

Grenergy prepared its Net Zero Strategy at the end of 2023 and in early 2024 it was approved by the Board of Directors. This roadmap established 12 actions to significantly reduce Scope 1, 2 and 3 emissions and, therefore, commit to medium- and long-term emission reduction targets. The strategy arose in response to the current climate emergency and defines a decarbonization pathway aligned with the 1.5C objective, covering the main direct and indirect emissions.

Specifically, a **60% reduction in absolute GHG emissions** was established **for Scopes 1 and 2 by 2030 and a 50% reduction in relative GHG emissions (relative to sales) for Scope 3 by 2030, taking 2021 as the base year**. Grenergy is also committed to achieving **carbon neutrality for Scopes 1, 2 and 3 by 2040**, ten years ahead of European and national commitments such as the EU Green Deal and PNIEC. These ambitious, science-based targets will be validated by SBTi throughout 2024.

For more information on emission reduction and offsetting measures see the Net Zero Report on our website.

As of today, Grenergy is on the right path to decarbonization, as well as meeting the targets set. The status is summarized below:

*In 2023, thanks to the generation from our projects, Grenergy has managed to avoid the emission of 325,287tCO<sub>2</sub>eq, which is equivalent to the energy consumption of 333,287 households*



# Net Zero by 2040

**-60%**

**BY 2030**

GHG direct and indirect own emissions **scopes 1 & 2**

**-50%**

**BY 2030**

GHG indirect emissions from our value chain **scope 3/sales**

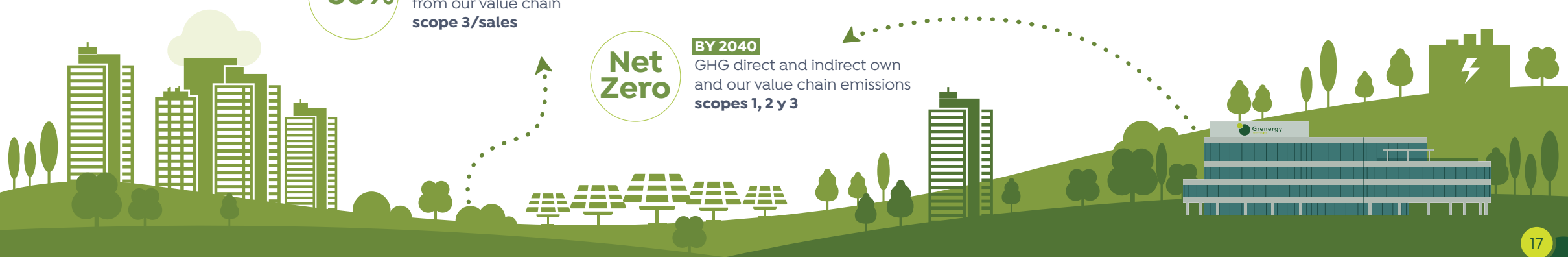
**Net Zero**

**BY 2040**

GHG direct and indirect own and our value chain emissions **scopes 1, 2 y 3**

**Table 15. Grenergy's Net Zero Strategy**

	2021	2022	2023	Variation vs. 2021	Target 2030	Target 2040
Scope 1 y 2(t CO <sub>2</sub> )	728	793	506	-36%	60%	
Scope 3 (t CO <sub>2</sub> /M€)	878.1	283.1	569	-54%	50%	
Scope 1, 2 y 3 (tCO <sub>2</sub> )	193,899	83,739	228,231	16%	-	







# **SOLAR PV + STORAGE**

EUROPE - USA - LATAM