



# Integrated Report

**2023**

Executive Summary



# About the report

**W**e at Serena are happy to publish our 2023 Integrated Report. This document is in compliance with the principal methodologies and frameworks adopted worldwide for sustainability reporting, including the indicators of the Global Reporting Initiative (GRI).

The publication also takes into consideration the directives of the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB). Furthermore, the information reported has received full limited assurance from an independent third party, whilst no omissions have been reported in relation to any of the abovementioned norms.

We have used the materiality matrix as a base for structuring the scope and content of this report. The indicators relate to 2023 (January 1 to December 31, 2023) and cover all the businesses pertaining to Serena Energia S.A. (“Serena” or “Company”) and its subsidiaries, except for those where exclusions have been justified in the respective indicators. This document as well as the organization’s financial report are both published on an annual basis.

GRI 2-1, 2-2, 2-3

This integrated report has been developed by the ESG team, which ensures its completeness and accuracy, as well as the recognition of the application of the collective efforts made for its development and presentation in accordance with the principles and framework of the IIRC, in adherence with the other abovementioned standards and frameworks (GRI and SASB). The material has been prepared with the involvement of cross-sectional support from all of Serena’s departments, having also been submitted for external checking, followed by a final revision supervised by the Board of Directors and the Executive Board.

GRI 2-5, 2-14, 2-23

**We invite you to read the full Integrated Report 2023.** In the first two chapters, we explain the process involved in the launch of our new brand, whilst also presenting the Company and the highlights from 2023.

In the third chapter, we look towards the future, with the presentation of the 2023-2027 Plan and provide a comprehensive report of the technology employed to improve efficiency in the creation of solutions for our customers. Next, aware of their role as the drivers of an irreversible global energy transition, we highlight our climate strategy initiatives, which are closely connected to the topic of energy efficiency and the previous chapter as a whole.

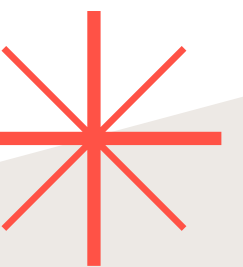
In the fifth and sixth chapters, the focus turns to the Serena Community. The values shared by the Serena co-entrepreneurs extend to the communities neighboring our assets, our suppliers and partners, the associations of which we are a member, our customers, and all the other stakeholders. A corporate governance that both incorporates and promotes transparency, as addressed in the final chapter, is the structure that ensures all the milestones presented in the report along with those that we are still to experience.

Clean and accessible energy allows us unlimited room to prosper. Our mission is to be the source of this energy.

**Happy reading!**

For additional information relating to this report, and the organization’s sustainability and ESG strategy and management, please write to: [esg@srna.co](mailto:esg@srna.co).

GRI 2-3



# A message from the CEO

GRI 2-22

Over 15 years, we've learned that being a source of renewable energy means being in the best position to (i) make it increasingly accessible to every consumer and (ii) free businesses and families from the dilemma of expensive or environmentally harmful energy. Clean and accessible energy allows us to thrive without limits, and being the source of that new energy is our mission.

In 2023, we stepped out of our comfort zone once again, embarking on a new chapter under an exciting new brand, Serena. This move has already yielded results by (i) strengthening the intense sense of community that motivates us, encouraging thousands of people to support the cause of clean energy and share the benefits generated, such as through an innovative program aimed at expanding our community – the Serena Community, (ii) improving our communication to connect with a broader audience, especially small and medium-sized businesses and residential consumers, which have already grown from hundreds to thousands, and (iii) adopting a single brand both in Brazil and the USA, with clear attributes that express our essence and vision.

Throughout the year, we faced the challenge of completing the most ambitious investment program

since our foundation (R\$ 4.5 billion), in a scenario of uncertainty and high interest rates. And once again, solid planning and hard work led us to a record result. Our EBITDA reached R\$ 1.638 billion, marking a growth of 39% compared to the previous year. In addition, we achieved an EBITDA margin of 75%, exceeding the 2022 value by 370 basis points. Our net profit came to R\$ 62.2 million and cash flow from operations amounted to R\$ 1.5 billion.

We successfully concluded the expansions of Assuruá and Goodnight 1 (721 MW in total), leading to a 17x growth in EBITDA between our IPO in 2017 and 2023. Completing the commissioning of 148 new wind turbines in 2023 on time and within budget confirms our position as industry leaders in Brazil and establishes a solid foundation for future ventures in the USA.

Our journey is just beginning, and we are excited about the opportunities the future holds. In this regard, we recently shared with the market our 5-year plan, which is based on the premise of an irreversible global energy transition that is happening faster than expected. We strongly believe that the new energy equation of the world will be based on wind and solar energy, along with effective solutions for storage, electric mobility, and green molecules. Therefore, our core objectives for 2027 include:

1. Further consolidating our company as a reference in capital allocation, maintaining a rigorous approach to the use of our growing cash flows from operational assets (over 93% of our production for the next 10 years is contracted via inflation-adjusted supply contracts), including returning capital to investors via dividends and share buybacks if no accretive investments are identified.
2. Pursuing an annual growth of 20% in installed capacity through investments that create value above our investment hurdles.
3. By 2025, having the capacity to offer digital and analog renewable energy to any consumer profile in all our markets, paving the way to being the first choice for consumers in clean and sustainable energy, with:
  - a. Over 20,000 consumers as members of our community.
  - b. A leading role in structuring projects and supplying renewable energy to the key industries in our markets.
4. Achieving an annual growth of 30% in Gross Profit from our Energy Platform between December 2022 and December 2027, including distributed generation and direct sales to residences.
5. Securing the number 1 position in our markets in terms of (i) availability and efficiency of our assets under management (ii) execution timing and cost per megawatt of our new plants.
6. Continuing to manage the company with strict financial discipline, maintaining a debt coverage ratio greater than 1.2x.
7. Being a reference player in the ESG agenda aligned with our values, aiming to achieve a new upgrade to AA rating in our MSCI ESG score and maintaining a low-risk rating in Sustainalytics.
8. Continuing our carbon neutralization agenda, aiming to avoid 35 tons per GWh of energy produced between December 2022 and December 2027.
9. Being good neighbors to the communities near our operations surpassing a 75% approval rate in all our regions in third-party surveys.
10. Expanding our social program with the objective of reaching 3,000 youth in our educational programs (a 135% increase from the current) and achieving a Social Return on Investment (SROI) for the Window to the World Institute above 5 BRL.

We recognize the challenges of achieving such ambitious goals, but we remain highly enthusiastic and determined to fulfill our mission of leading the energy transition towards a more sustainable world, where guilt-free energy consumption aligns with society's call

for sustainability. This Integrated Report presents our journey, accomplishments, and outlook towards energy prosperity and the achievement of our long-term objectives, embodying the significant transformation we have contributed to fostering.

# 2023 Highlights

## Prosperity WITHIN

### Long-term vision

Development of the business plan for the **2023–2027 cycle**.

R\$ **4.5** bi invested in **721 MW** over the last two years, concluding the Company's biggest ever investment program.

Expansion of the client base with the first distributed solar energy generation projects.

**24** new talents at the beginning of their careers hired for the **Solar and Wind Power Program**.

### Innovation and Technology

Optimization of the development of commercial proposals.

Contracting of an automated system for management and control of the Company's risk matrix.

**84%** of the **1,804 actions managed were concluded**. These actions were managed following 1,393 filings enabled by the implementation of incident and health and security real time safety reporting management software/ application in 2023.

### Governance and Risks

Entry into **the Corporate Sustainability Index (ISE B3)** portfolio.

**Reduction of our risk rating to "low"** by the **Sustainalytics** ratings agency.

**90%+** average adherence to the protocols in the implementation and evaluation of the Critical Activity Requirements (CAR).

### Operational and Financial results

**8,668.4** GWh of clean energy produced.

R\$ **1,637.5** mi in EBITDA

R\$ **62.2** million in net income

## Prosperity OUTSIDE

### In operations

Beginning of operations at the Assuruá 4 (211.5 MW) and Assuruá 5 (243.6 MW) projects.

**Internationalization:** start of operations at Goodnight 1 (265.5 MW) in the United States.

**34** projects approved (**89.5 MW**), with **eight (20 MW) already having been energized**, through investments<sup>1</sup> in distributed solar generation, such as that of Arco Energia, in partnership with Apolo.

### With partners

**172** MWm in new long-term energy supply **businesses**, with important partners such as White Martins and Cargill.

**100%** participation of the suppliers selected for the second cycle of the Suppliers Development Project.

**89%** satisfaction amongst the groups questioned in Brazil and the United States, going significantly beyond the desired minimum of 75%.

This year we joined the Advanced Power Alliance (APA), the local electricity sector association in Texas.

### With society

**93%** growth in the number of people supported on free courses at *Janela para o Mundo* Institute Education Centers compared to 2022, totaling 1,331 students.

For each R\$ 1.00 invested in the *Janela para o Mundo* Institute, R\$ 6.51 in benefits for the society are generated, as measured by the Social Return on Investment (SROI) methodology.

Beginning of the EcoAssu heritage education and social entrepreneurship project.

**62%** reduction in the total carbon emissions related to operations in Brazil compared to the base year of 2021, with the implementation of the Decarbonization Plan.

<sup>1</sup> The Company ended 2023 with a share of 72%. 84.5 MW from the joint venture with Apolo (70%) and 5 MW through Serena's own investment (100%).

# Business Model

GRI 2-6

Our business model was developed using the directives of the Integrated Report (IIRC) as a base. In this, we demonstrate how Serena delivers prosperity by means of the six capitals.

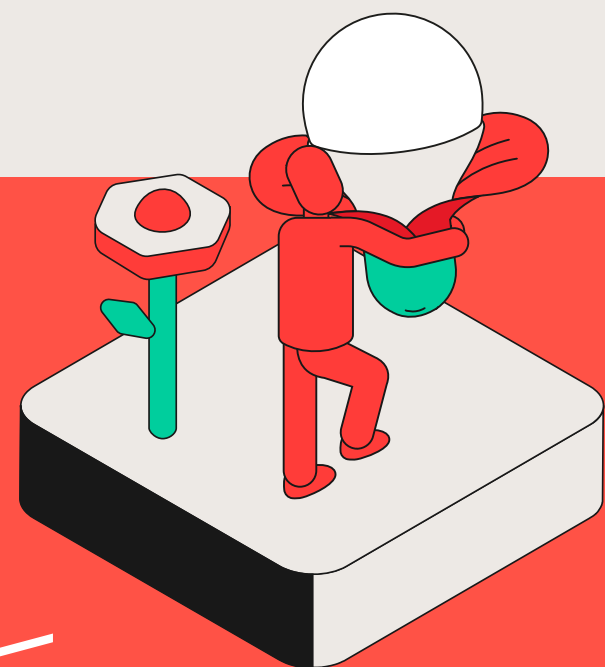
## Natural Capital

### INPUTS

- The generosity of nature is transformed into prosperity.
  - The wind drives our turbines (Wind Energy).
  - The sun feeds our panels (Solar Energy).
  - The rivers keep our generators constantly engaged (Small Hydroelectric Power Stations).

### OUTPUTS

- **333,741.10 tons of CO<sub>2</sub>** emissions avoided through the generation of clean energy in 2023.



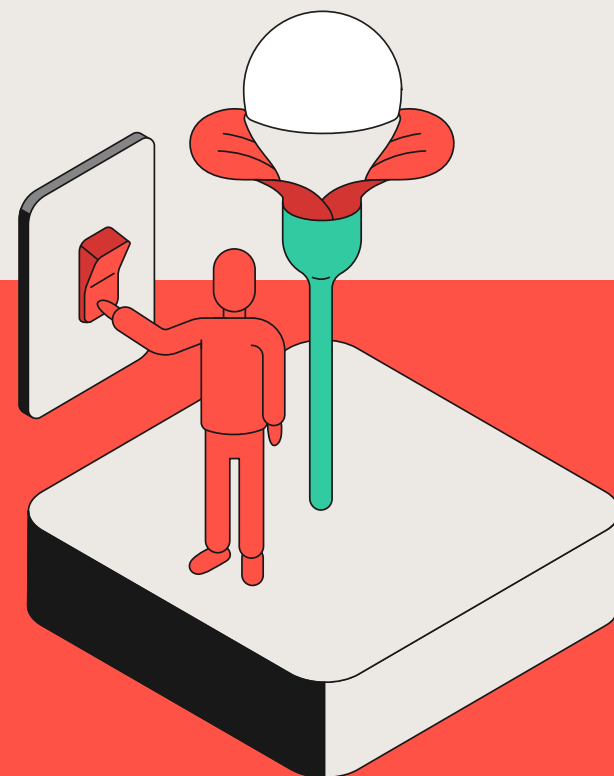
## Manufactured Capital

### INPUTS

- 112 assets; 104 centralized generation units in operation (Brazil and US); 8 energized distributed generation units (Brazil).
- **2.7 GW** of 100% renewable installed capacity in operation.
- **6,541 MW** in construction + development pipeline.
- **R\$ 11.8 billion** in fixed assets.

### OUTPUTS

- **8.668.4 GWh** of energy generated, equivalent to 4,479,092 houses supplied<sup>1</sup>;
- **+900 MW** in renewable installed capacity in the last three years.



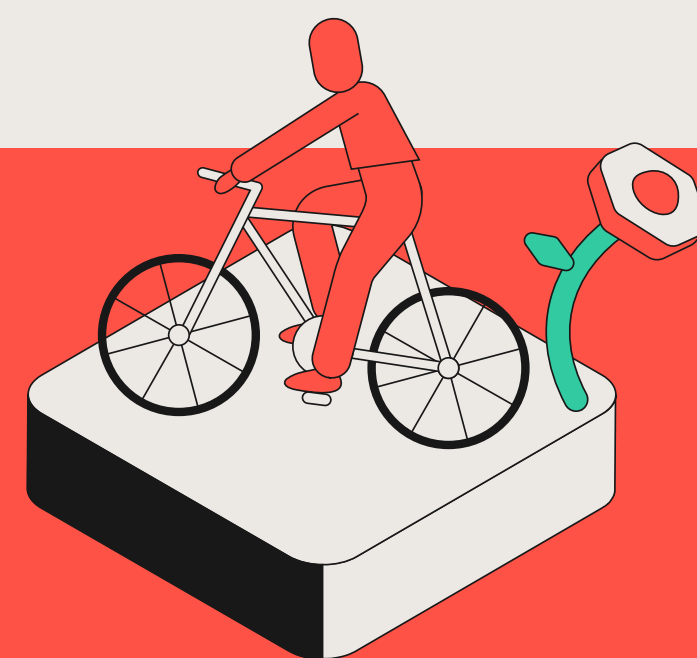
## Human Capital

### INPUTS

- **382 co-entrepreneurs<sup>2</sup>** in Brazil and the United States and 911 third party employees active in Brazil.
- **24 individuals** hired for the Wind and Solar Power Program.

### OUTPUTS

- **Zero accidents**, with or without time off work, amongst our co-entrepreneurs
- 1,393 proactive correction initiatives opened, with 1,804 proactive actions created.
- **7,407 total hours of training** (co-entrepreneurs).



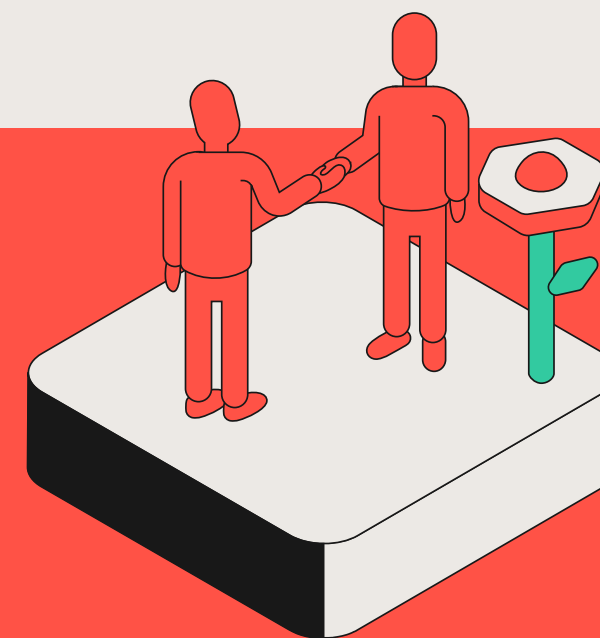
## Social and Relationship Capital

### INPUTS

- Banco do Tempo Program.
- **R\$ 1,85 million** in private social investment.
- **43 suppliers** participating in the ESG practices development project.

### OUTPUTS

- **281 hours of mentoring** performed by co-entrepreneurs for students at the *Janela para o Mundo* Institute, through the Banco do Tempo Volunteer Program.
- **1,331 students** enrolled in courses offered by the *Janela para o Mundo* Institute in 2023.
- **64% approval rate in higher education** amongst students preparing for Higher Education, and 85% of the essay writing scores in the national high school Enem exam higher than the national average.
- **97% of selected suppliers' nominated employees** trained in "Understanding the Serena Ecosystem".
- **1000+ new clients attracted** as a result of the opening of sales to the retail sector.



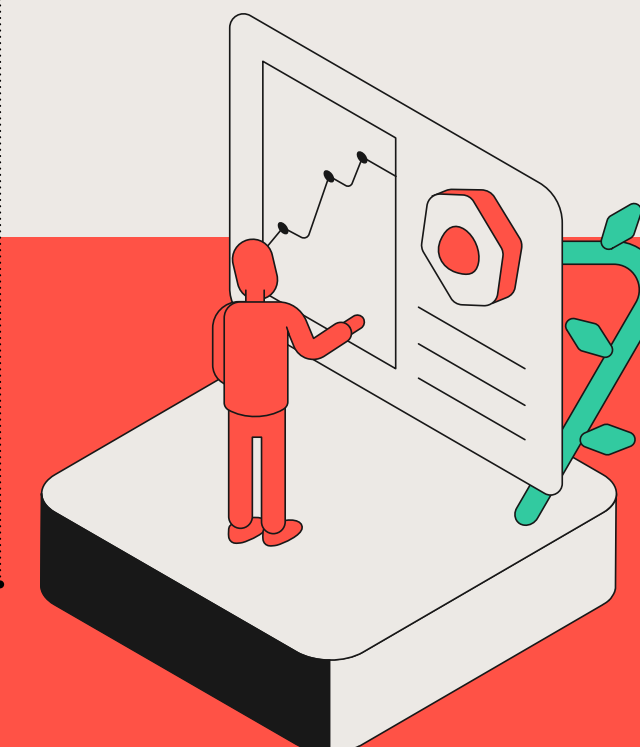
## Financial Capital

### INPUTS

- **R\$ 13.3 billion** invested in expanding the portfolio since the IPO in 2017.
- **Recurrent access to funding sources:** R\$ 6.1 billion issued since the IPO, R\$ 850 million from Actis primary investment, a GNI funding package: R\$ 914 million<sup>3</sup> (US\$ 184.7 million) in tax equity funds from the AEG Goodnight Wind 1 LLC ("Goldman Entity") and a term loan of R\$ 187 million<sup>2</sup> (US\$ 37.8 million) from a syndicate of banks (MUFG, Mitsui and Rabobank).
- **R\$ 0.9 billion** in sums contracted as part of projects funded via the Equator Principles.
- **R\$ 2.1 billion** issued in green bonds.

### OUTPUTS

- **R\$ 3.04 billion** in invoicing.
- **R\$ 1.64 billion** EBITDA in 2023.
- Enterprise value of **R\$ 16.1 billion** (the highlight being the recently concluded investment plan).



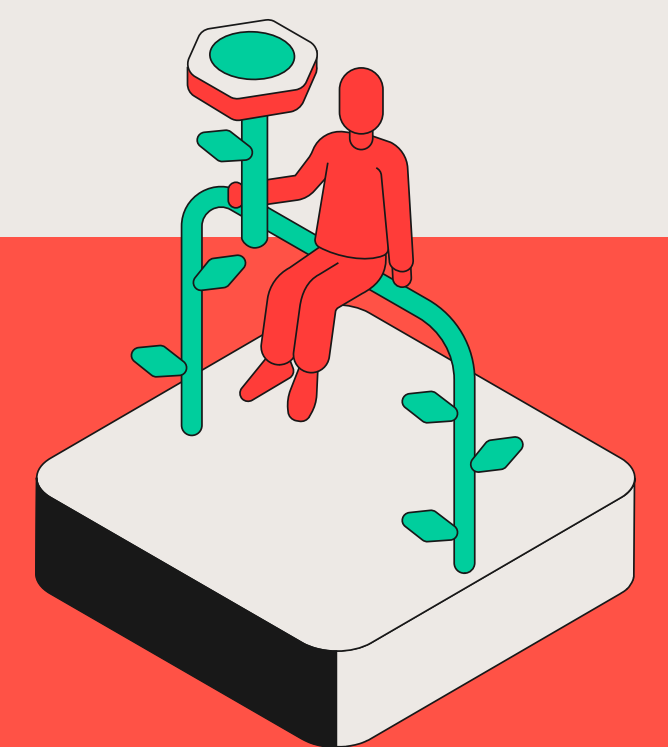
## Intellectual Capital

### INPUTS

- We are a Clean Tech: **an intensive use of technology** is adopted from the planning of the assets through to the energy trading.
- **Partnerships with Tech companies** for optimized algorithms.
- Dissemination of knowledge in the development of software and data through internal working groups;
- **79.5% Tech budget** applied to the development of new technologies.

### OUTPUTS

- **7 products** developed for our customers;
- Agility and autonomy in the development of **Tech solutions**;
- Pioneers in providing **our clients with digital autonomy**, meaning they can purchase energy without human contact (an energy contract in five clicks).



1 Includes data from the "2023 Electrical Energy Statistical Yearbook" and the total sum of consumption and residential consumers in Brazil.  
 2 Includes employees (GRI 2-7) and interns.  
 3 Includes a PTAX of R\$ 4.9468.

# Serena's portfolio of assets

GRI EU1, EU30,  
SASB IF-EU-000.D,  
IF-EU-000.E

## LOCATION

Brazil  
Bahia  
Maranhão  
Mato Grosso do Sul  
Minas Gerais  
Piauí  
Rio de Janeiro  
Rio Grande do Sul

United States  
Texas

Operational assets:  
**2,683.3 MW**

Assets under construction:  
**89.5 MW**

Portfolio at the end of 2023:  
**2,772.8 MW**

Portfolio under development:  
**6,451.3 MW**

## ASSETS

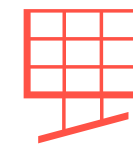
CONTRACTED CAPACITY

 **3%**  
Water

 **9%**  
Solar\*

 **88%**  
Wind

\* with 6% from Centralized Generation and 3% from Distributed Generation.



## SOLAR

### Centralized generation

#### Southeast/Center-West Cluster

##### 1. Pirapora (MG)<sup>1</sup>

2018

50%

160.5 MW

### Distributed Generation

#### Approved projects: 89.5 MWac

#### Energized assets: 20.0 MWac

### 2023

#### Assets under construction: 64.5 MW

#### Solar generation capacity: 250.0 MW

#### Percentage of the solar grid: 9%



## HYDRO

### Southeast/Center-West Cluster

#### 2. Indaiá Grande and Indaiazinho (MS)

2012

100%

32.5 MW

#### 3. Serra das Agulhas (MG)

2017

100%

30.0 MW

#### 4. Pipoca (MG)<sup>2</sup>

2010

51%

20.0 MW

#### Hydroelectric generation capacity: 82.5 MW

#### Percentage of the hydroelectric grid: 3%



## WIND POWER

### Delta Cluster

#### 5. Maranhão Delta (MA)

2017/2019/2020

100%

426.0 MW

#### 6. Delta Piauí (PI)

2014/2017

100%

147.8 MW

### Bahia Cluster

#### 7. Ventos da Bahia 1, 2 and 3 (BA)<sup>3</sup>

2020/2022

50%

182.1 MW

#### 8. Assuruás 1, 2, 3, 4 and 5 (BA)

2019/2020/2023

100%

808.1 MW

### Southeast/Center-West Cluster

#### 9. Gargaú (RJ)

2012

100%

28.1 MW

### Chuí Cluster

#### 10. Chuí (RS)

2020

100%

582.8 MW

### Goodnight Cluster

#### 11. Goodnight 1 (Texas)

2023

100%

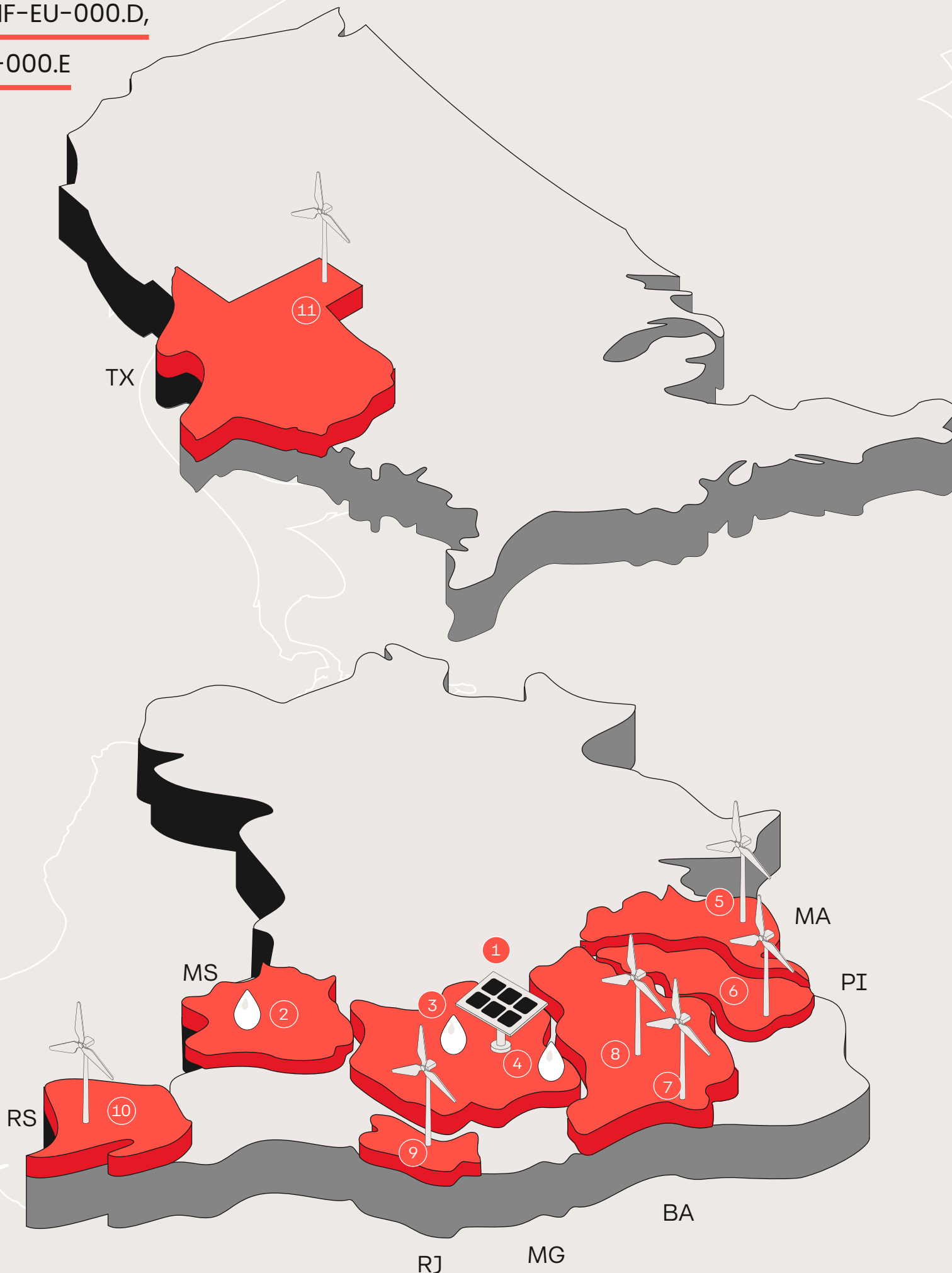
265.5 MW

#### Wind generation capacity: 2,440.4 MW

#### Percentage of the wind grid: 88%

The date of the start of operations and/or incorporation of the assets was considered, whilst we only considered the energization date for Distributed Generation.

- <sup>1</sup> Serena Energia holds just 50% of the equity interest in the Pirapora Solar Complex and is not responsible for its operational management. On October 2, 2023, the market was informed of the signing of a contract establishing the exchange of Pirapora for the Ventos da Bahia complex, including its three phases. The share exchange operation was concluded on March 28, 2024. Find out more in the [Release to the Market](#).
- <sup>2</sup> Includes 100% of the installed capacity.
- <sup>3</sup> Includes the proportional participation of 50% of the installed capacity, prior to the exchange.



# Performance and results

We ended 2023 with a record EBITDA<sup>1</sup> of R\$ 1.64 billion, equaling annual growth of 39% and surpassing our guidance for the year by 9%. This result represents a 17x increase since our IPO in 2017 and reinforces Serena's ability to foster: (i) increased margins via new energy contracts; (ii) efficient cost management; and (iii) additional results via the optimization and restructuring of those of its assets that are already operational, even in a period of energy production that is lower than forecast due to the availability of natural resources being lower than envisaged, unavailabilities, and alterations in the commissioning curves of the new projects.<sup>2</sup>

We concluded our most extensive ever cycle of investment, delivering large scale projects (Assuruá 4, Assuruá 5 and Goodnight 1, totaling 721 MW) to expand our portfolio, whilst we also signed new contracts with large clients which will optimize our margins and revenue model, as well as increase our long-term contractual cover.

The increase in revenue associated with the new capacity meant that our indebtedness was reduced over the course of the year. The Net Debt/EBITDA indicator from the operational wing (Serena Geração) dropped from 4.2x in the second quarter of the year to 3.9x in the following period (3Q23), ending 2023 at 3.7x. As the new projects began operations, the consolidated debt began dropping gradually, just as our team had planned.

Our financial statements follow the International Financial Reporting Standards (IFRS), issued by the International Accounting Standards Board (IASB), and are prepared in accordance with the practices adopted in Brazil (Law 6,904/76, the Brazilian Securities Commission [CVM], and the Accounting Pronouncements Committee [CPC]). For more information access the [4Q23 and 2023 Earnings Release](#) and [Financial Statements - December 31, 2023](#).

<sup>1</sup> Adjusted. Includes the proportional participation of Serena in its investments.

<sup>2</sup> The unavailability and alterations in the commissioning curves of the new projects were largely offset by our suppliers.

## GREAT ACHIEVEMENTS IN 2023

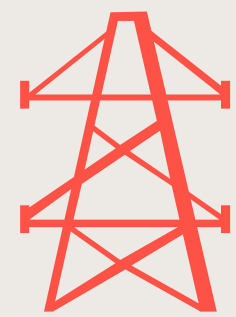
Committed to transparency, we are one of the few renewable generation companies that publishes its annual EBITDA and Energy Production estimates for the year. For more information, visit the [Investor Relations page](#) to read our Quarterly Releases.

- Conclusion of the biggest ever investment plan in the Company's history, with the investment of R\$ 4.5 billion in the expansion of the Assuruá 4 and 5 and Goodnight 1 complexes, adding 721 MW to the Company's operational portfolio.
- Advances in the Generated Distribution initiatives, with the approval of 34 projects (89.5 MW), 8 (20 MW) of which have already been energized, through investments<sup>2</sup> such as that from Arco Energia, in partnership with Apolo.
- Beginning of operations in the US with the Goodnight 1 unit (265.5 MW), ensuring entry into the United States' second biggest free energy market. As a result, we received tax equity financing through the AEG Goodnight Wind 1 LLC ('Goldman Entity') and the term loan from the syndicate of banks;
- Publication of our five-year Business Plan (2023-2027), developed on the premise of a global energy transition, aligned with the Company's long-term objectives.
- Establishment of a partnership with new clients, allowing optimization of the margins of our assets and achieving our energy contracting level of 93%<sup>1</sup> for the entire portfolio in the coming 10 years;
- Launch of our market positioning, providing us with the opportunity to extend Serena's reach to a broader consumer base, now including small and medium-sized companies and retail businesses.

<sup>1</sup> Weighted average of the contracting level of the physical guarantee between 2023 and 2032.

<sup>2</sup> The Company ended 2023 with a share of 72%. 84.5 MW from the joint venture with Apolo (70%) and 5 MW through Serena's own investment (100%).

# Performance Indicators

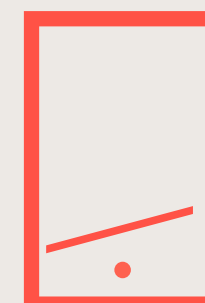


ENERGY PRODUCTION

8,668.4 GWh

↑ 27% variation

6,805.3 in 2022



ENERGY PLATFORM – GROSS EARNINGS

R\$ 58.8 million

↑ 24% variation

R\$ 48 mi in 2022

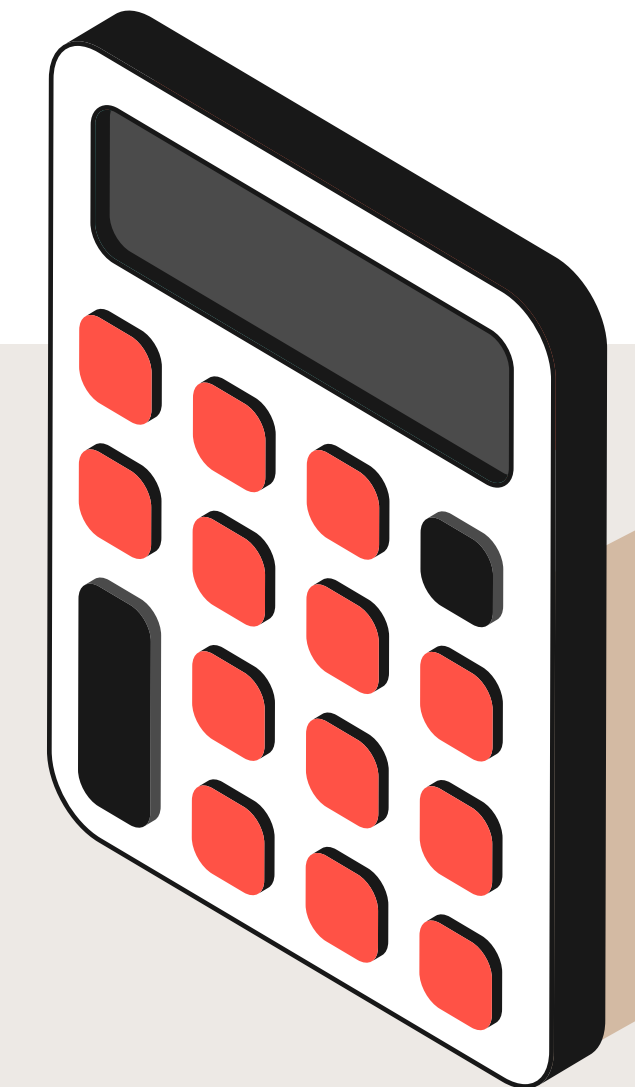


NET INCOME

R\$ 62.2 million

↑ 70.2 million variation

R\$ - 8 mi in 2022



ENERGY – GROSS EARNINGS

R\$ 2.19 bi

↑ 32% variation

R\$ 1.66 bi in 2022

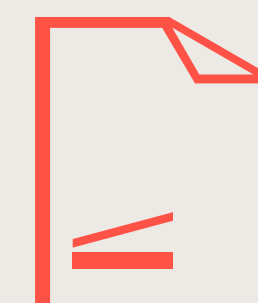


ADJUSTED EBITDA

R\$ 1.64 bi

↑ 39% variation

R\$ 1.18 bi in 2022



OPERATIONAL WING NET DEBT/  
EBITDA RATIO

3.7x

↓ 16% variation

4.4x in 2022

Space of 0.8x compared to the Covenant (4.5x)



EBITDA 2024 GUIDANCE

Interval

R\$ 1.72 bi to  
R\$ 2.1 bi

Center

R\$ 1.92 bi



# Solutions for each client

One of our challenges lies in becoming recognized as the best partner in solutions for future demands for large companies, small and medium-sized businesses and residential customers, considering the irreversible global energy transition to the generation of clean energy sourced from wind and the sun.

As such, our team is constantly striving to offer the best options for customized and technological solutions, aligned with the ESG strategies of our partners, which share the same sustainability objectives as Serena, whilst always maintaining a transparent dialog. This opens up paths for long-lasting connections focused on shared values that increase the profitability of our clients and guarantee a clean energy future.

Amongst our solutions, we provide a digital platform that simplifies the purchase of renewable energy for companies, making the whole process more accessible and efficient. We also have customized solutions for large-scale consumers and new areas for electrification, such as green hydrogen.

In 2023, we celebrated the conclusion of the initial long-term customized operations designed for clients such as White Martins and Cargill, which are now receiving clean energy produced by Serena's renewable assets. Our experience with this type of business allowed us to take part in an 'Energy Trading Week' roundtable, one of eight events that we took part in the United States this year.

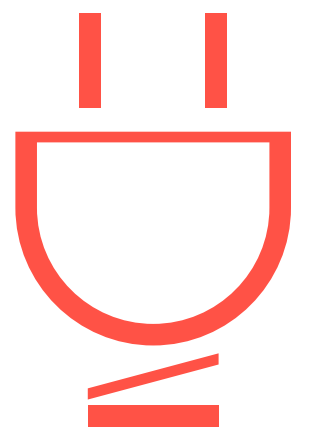
'The formalization of this partnership reinforces Cargill's efforts to use clean energy and more efficiently manage its operations, whilst also being aligned with our sustainability targets and our aim to reduce greenhouse gas emissions.'

**Gabriel Garbin**  
REGIONAL ENERGY DIRECTOR AT CARGILL



'The partnership with Serena is an important project for White Martins, which is in line with the company's global strategy for sustainable development. By means of this alliance, we are advancing in terms of our actions focused on clean and renewable energy that make effective contributions in the form of innovative solutions for the decarbonization and competitiveness of different segments in industry.'

**Gilney Bastos**  
CEO OF WHITE MARTINS AND LINDE IN SOUTH AMERICA



# A diverse portfolio

GRI 2-6

CUSTOMERS WHICH ARE ALREADY A PART OF, OR COULD JOIN, THE FREE ENERGY MARKET (HIGH VOLTAGE)

## 100% flexible energy

brings with it the long-term price advantage with full consumption flexibility as optional insurance, now with digital monitoring

## A clean and renewable energy digital sales platform

reduces the need for support from third parties in the purchase of energy



SMALL BUSINESSES AND INDIVIDUALS

## Retail

Increasing of our operations with small and medium-sized companies and home residences through the offsetting of energy credits on the electricity bill. The contracting is performed online, involving cost reductions, without any construction work or initial investments.

COMPANIES WITH INTENSIVE ENERGY CONSUMPTION

## Structured Negotiations

Customized, long-term operations.

## RECs and Carbon Credits

All clients are eligible to receive certification for consuming 100% clean and renewable energy (REC) or neutralizing their carbon footprint (carbon credits).

# Climate strategy

GRI 3-3

SASB IF-EU-110A.3

The centrality of the innovation and efficiency is accompanied by the prioritization of the climate strategy and socioenvironmental responsibility. Without these elements, we would not have the direction necessary to lead the energy transition.

As such, our Decarbonization Plan, approved in 2022, is a strategic document which establishes concrete actions to reduce direct greenhouse gas (GHG) emissions and improve access to data on indirect emissions. Developed in such a way as to involve the entire company, with the participation of a multi-disciplinary team, the plan defines the strategic pillars for reduction by 2030, focusing on obtaining data on indirect emissions, as well as the engagement of the chain of suppliers and dissemination of the Company's good practices.

We concluded 100% of the actions planned for reducing the intensity of the direct emissions in 2023, with the:

- Implementation of the optimization of the tests on the stationary combustion equipment at the Assuruá cluster;
- Transition from the use of fossil fuels to biofuels, achieving a 40% consumption of ethanol in relation to the total consumption in the first year; and
- Development of the standardization of the Maintenance and Operation Plan for air-conditioning units.

The only premises adopted by the approved Plan are the emissions of the operation in Brazil and exclusion from the calculation of fugitive emissions from the equipment that uses Sulfur Hexafluoride (SF<sub>6</sub>), since, in 2021, the consumption of this gas was registered as a one-off event. However, in 2022, with the maturing of the direct emissions data collection actions, we noted that the fugitive emission of SF<sub>6</sub> is a material topic for the company and should be reflected in the Plan in question.

In 2023, we observed a reduction of around 80% in the direct emissions of carbon (Scope 1 + Scope 2) in the Brazilian operations in relation to the emissions of the 2021 base year, which can be seen in the reduction of around 80% in the intensity (tCO<sub>2</sub>/GW generated) when compared to 2021.

In relation to the intensity reduction target in the Decarbonization Plan, we had aimed to reduce the intensity of our direct (Scope 1 + Scope 2) emissions by 1% in 2023. This goal was not achieved, however, due to the aggressive target that did not consider the calculation of the SF<sub>6</sub> fugitive emissions, but which is now a material topic for Serena.

In relation to the actions taken to improve the collection of data on indirect emissions, in 2023, we implemented an automated waste management system and adopted environmental control measures, in line with the EMS standards.

In relation to our indirect emissions (Scope 3), we believe that the most effective approach involves raising the awareness of our suppliers, encouraging them to begin GHG inventory processes, and, consequently, reduce their own emissions.

To implement this strategy, we selected a number of suppliers for training, using the number of days they operate within the operational assets as criteria. In total, 15 suppliers participated in the training, sending in their emissions data, meaning that 62% of the total number of partners present at Serena's operational assets were involved.

We use our internal communication platform to highlight the infrastructure available for the use of alternative transport, and disclose Serena's initiatives focused on reductions in the use of fossil fuels, as well as the campaign to use ethanol in our own vehicles, and the creation of a ride-sharing online group for those co-entrepreneurs working at the São Paulo office.

We are committed to continuing to push forward towards achieving the targets established in our decarbonization plan, evaluating the inclusion of the fugitive emissions of Sulfur Hexafluoride (SF<sub>6</sub>) and the US operation in the reduction calculations by the end of 2025, as well as constantly seeking innovative ways of reducing our environmental impact and promoting sustainable practices in all areas of our operation.

## GHG Protocol

**GRI 2-23**

Since 2021, we have been affiliated with the Brazilian GHG Protocol Program, which has adapted the international methodology of the GHG Protocol and was responsible for development of the GHG emissions calculation tool. This public registration of our emissions facilitates the publication and transparency of the GHG emissions results.

In 2023, we once again received the **GHG Protocol Gold Seal**, the program's highest level of certification, demonstrating recognition for our efforts and commitment to sustainable development.

### Recognition

In September, the Serena Decarbonization Plan received the ESG Awards from Actis, one of our shareholders and a global benchmark for investment in infrastructure and sustainability, due to the quality of the project developed by our team.



# Environmental Management

Serena's Environmental Management System (EMS) follows the precepts of the ISO 14.001 standard. This tool is essential for implementation of our Socioenvironmental and Sustainability policies, whilst it also ensures fulfillment of the environmental conditions and regulatory norms of all our operational assets.

The significant impacts related to waste are concentrated in the processes related to our own activities, especially those arising from the use of those inputs necessary for maintenance and operation of the assets. [GRI 306-1](#)

By means of a dedicated management system, our environmental managers work diligently to control the time frames of the environmental licenses and authorizations governing our portfolio, thus ensuring that we are always in full compliance with the conditions and properly managing the different environmental aspects.

In line with our action plan, in 2023 we revised all the EMS procedures and implemented the system in every one of our operational assets. The EMS currently involves 13 management procedures, which operate alongside associated operational procedures, including the Solid Waste Management Program

(PGRS), the Management of Water Resources, and Management of Energy Consumption, amongst others.

Each month we monitor seven different indicators relating to environmental performance, including water consumption, electricity, waste generation, and carbon emissions (mobile, fixed and fugitive).

The EMS can be accessed by all the co-entrepreneurs through our knowledge library in our internal communication platform. The first internal EMS audit is planned for 2024, focusing on the continued improvement of our environmental control systems and identification of improvements in the established procedures.

This set of measures guides our management of the waste that is not generated by third parties, in all the operations. By using data collection technology, we can guarantee the precise nature of the information and provide training focused on the identification, separation and reduction of waste. We therefore manage to explore sustainable disposal alternatives. [GRI 306-2](#)

To find out more about this topic, please access our Indicators Panel.



# Biodiversity

GRI 304-2

Our Socioenvironmental and Sustainability policies, approved by the Board of Directors, are powerful tools for communicating our commitment to promoting and disseminating a culture that protects biodiversity and the ecosystems in which we have been so successful.

Over the course of the life cycles of our projects, from conception through to the operation of our energy plants, we are dedicated to identifying and complying with all the legal provisions related to biodiversity. Furthermore, we rigorously abide by the environmental stipulations of the licenses issued by the responsible authorities.

Our commitment goes beyond the identification and management of the environmental aspects of each project, since we constantly aim to improve our environmental performance. At the heart of our mission is a commitment to preserving biodiversity and safeguarding the essential services of our ecosystem. We pursue not only domestic standards, but also international ones, whenever applicable.

Three of our operational assets are located within or near Conservation Units (CUs): GRI 304-1

- 
- Piauí Delta (PI), a wind generation unit, covering an area of 2.2 km<sup>2</sup>, is located within the Parnaíba Delta Environmental Protection Area (EPA), a Federal Conservation Unit, notable for its Marine Coast biome features.
  - The Maranhão Delta (MA), a wind generation asset, covering an area of 39.5 km<sup>2</sup>, located within the Foz do Rio Preguiça EPA, a State Conservation Unit located 9 kilometers from the Lençóis Maranhenses National Park, notable for its Coastal Marine biome features.
  - Assuruá (BA), a wind generation asset, covering an area of 8.41 km<sup>2</sup>, partially located within the Lagoa de Itaparica State Conservation Unit EPA, notable for its Caatinga biome features.
-

## Agroforestry Project

In 2023, the first 100% voluntary Planting Project was approved, this being an initiative that aims to restore an area of approximately 10 hectares. Based upon the principles of agroforestry systems, the project is to focus in reintroducing native species with the potential to offer extractive opportunities, such as mangaba, cashew, puçá and murici. The aim is not only to revitalize the region, but also to complement the support provided to local families and stimulate economic development. Implementation of this project is expected to begin in 2024 and be completed by 2026.

The project consists of an initial stage involving a diagnosis of the communities neighboring the Assuruá Wind Complex, followed by the creation of a saplings nursery, with the capacity to produce 55,000 saplings/year, and construction of a honey center, focused on beekeeping and honey production.

## Connectivity Corridor

In 2019, in compliance with a request from the Environment and Water Resources Institute (INEMA/BA), an ecological corridor was established for the Assuruá Wind Complex located in Bahia. This Ecological Corridor, as defined by the National System of Conservation Units (SNUC), performs a crucial role as a management tool. The aim of the corridor is to create a connection between different preserved areas, thus ensuring that the essential ecological processes are maintained.

By means of this corridor, we hope to allow species to spread and interact, ensuring the viability of those that need large areas in order to survive and guaranteeing that the area does not suffer significant impacts as a result of the expansion of the wind complex. In 2023, maintenance work was performed on the ecological corridor, with the inclusion of an additional area containing 14 wind farms implemented between 2021 and 2023, bringing the total up to 27 farms. The delimitation study is expected to be completed during the second half of 2024.

This initiative reflects our commitment to balancing the development of wind-power projects with the preservation of biodiversity and the maintenance of ecosystems. By implementing and improving the ecological corridor, we are contributing to the protection of the local fauna and flora, and supporting the sustainable coexistence between our operations and the environment.



# EcoAssu

**E**coAssu is a project that unites and consolidates the actions planned to meet the conditions established by the National Institute of Historic and Artistic Heritage (IPHAN) relating to the archaeological heritage found within the grounds of the Assuruá Complex. Under development since 2022 and expected to be completed in 2026, in 2023, the project encompassed notable events, such as the cataloging of the archaeological findings in the region of Assuruá and the beginning of the Heritage Education Program, part of the Pedagogical Plan developed by the *Janela para o Mundo* Institute and implemented by its unit located at the head office of the Gentio do Ouro municipality (BA), the Bahia Education Center.

In 2023, as part of the educational plan, we visited the Toca do Tanto Queira, Lajedão and Toca da Onça archaeological sites to map the regions and support the decisions on the educational strategies that are to be adopted.

In August, **the Heritage Education Week** took place, an initiative that provided the participants with the opportunity to experience the four steps involved in the methodology of the recognition process of an

object, location and/or cultural asset - observation, registration, exploration and appropriation.

At this event, different activities were offered, including the *'Cine Janela'* - which involved the screening of a movie and a conversation circle for invited students - and the *'Janela Aberta'*, a gathering to present the EcoAssu project to educational directors, head teachers, coordinators and teachers, aimed at mobilizing, engaging and interacting with the local education system to firmly establish the heritage of the region as a collective symbol and reference point for the people's memory.

Another initiative that forms part of the EcoAssu project is the ***'Histórias da Minha Terra'*** podcast, which provides information, photos and sketches relating to heritage, legends and other cultural traditions drawn from an investigation of the history of the landscape, cave paintings, archaeological excavations, monuments and people in the region.

The objectives of this podcast are aligned with the Universal Declaration of Human Rights, as well as SDGs 4, 8 and 11, the current legislation, and the international charters of the International Board of Monuments and Sites (ICOMOS) relating to the conservation of the cultural heritage to which Brazil is a signatory.





# Local connections

GRI 2-25, 3-3 SOCIOENVIRONMENTAL RESPONSIBILITY

413-1, 413-2

The search for economically viable and environmentally responsible solutions for the Serena community involves recognition of the individuality of each stakeholder, which always forms the basis for the construction of our relationship. This recognition runs through the understanding of our potential impacts, influencing our ways of acting and our duty to listen to each and every one.

## The impact of our operations

We are committed to mapping the actions that could potentially affect the communities or the environment, even if only temporarily, as a means of avoiding any inconvenience.

During the development phase of these projects, we carefully evaluate all the significant actual or potential impacts – including negative ones – that our operations could cause, including a reduction of the vegetation or noise emissions, for example. We then plan the layout of our parks and their structures in such a way as to minimize the chance of such impacts occurring as much as possible. Furthermore, we present measures that aim to prevent, reduce, control, and, whenever necessary, compensate for the anticipated impacts within the

sphere of the environmental authorities responsible for issuing the licenses, thereby ensuring compliance with currently applicable environmental legislation.

In our projects, we generate positive impacts in the regions especially during the implementation phase through the increase in tax collection for the local governments, the increase in the amount of formal employment and hiring of the local labor, boosts for the economy due to the increased demand for businesses, accommodation and food services, whilst improvements to the local infrastructure are also commonplace.

We have dedicated Social and Environmental Management teams that collaborate with the development, implementation and operations teams, monitoring the entire life cycle of the projects. 100% of our operations are subject to engagement, impact assessments, and/or development programs focused on the local communities.

All of our assets are licensed in accordance with currently applicable environmental legislation, as are all the ongoing impact evaluations and monitoring following licensing. The results related to the environmental and social impacts, as set forth in legislation, are published.

## Way of operating and the duty to listen

2-23, 2-26, 2-29

The practices necessary to deal with the possible impacts and the manner in which we need to engage with our stakeholders are set forth in our Socioenvironmental Policy, Sustainability Policy, and Code of Conduct, all of which have been approved by the Board of Directors and are available on our [Sustainability Portal](#). In addition to the commitments on the position we take, we are also committed to listening, which takes the form of receiving and addressing information by means of the public service channels.

Our policies represent a lasting engagement with those who form part of our community and the manner in which we strive to actively listen, adopt an ethical stance and implement transformation as a means of innovation. By firmly establishing our commitments, we prioritize different groups of stakeholders, treating all as relevant interested parties. Our priority groups are made up of co-entrepreneurs, service providers, clients, consumers and local communities.

To listen, we continuously establish and review various ways to ensure a direct channel. Additionally, we maintain a Compliance Reporting Channel (Whistleblowing Channel) so that any stakeholder can report any irregularities or provide feedback. Next, learn how we engage with each stakeholder group, and then, more about the relationships we have built with each one.

GRI 2-25, 3-3 SOCIOENVIRONMENTAL RESPONSIBILITY

GRI 203-2, 413-1, 413-2

**W**e have a strong commitment to the communities in which we operate: to act and think as good neighbors. For us, this simple principle is of great importance: we aim to promote mutual development, take care of shared spaces, and demonstrate respect for one another. That's why we allocate financial resources and a specialized team, with a designated leader for each area, to ensure local coexistence.

Inspired by the vision of prosperity, we have developed our own approach to foster meaningful relationships with the surrounding communities. This involves, initially, careful analysis before the implementation or acquisition of an existing asset. We conduct a social diagnosis based on openness to dialogue, attentive listening, and the collection of relevant sociodemographic data. This information guides our private socioenvironmental investments and the creation of effective and lasting communication channels.

The channels are available on our [Sustainability Portal](#), as well as periodically promoted in each locality where we are present. It is also worth highlighting that, to foster the local connections we have, we structure, for example, dialogue routines with community representatives, meetings of Project Monitoring Committees, public forums, as well as public hearings scheduled in the environmental processes of our ventures.

We believe that the key to building prosperous and sustainable environments comes from dialogue and collaboration with the community. With the aim of recognizing the specificities and potentials of each region, only after these exchanges do we begin to plan and implement actions to promote sustainable transformation, building a legacy collaboratively.

The most important yardstick in this process was the creation of Education Centers, which began in 2017, and the founding of the *Janela para o Mundo* Institute, in 2022. The Education Centers are interdisciplinary spaces offering free courses and extracurricular activities to the communities, managed by the *Janela para o Mundo* Institute. They aim to prepare the students to enter Higher Education, offer vocational training adapted to the demands of the market, and promote actions designed to strengthen productive, entrepreneurial and job creation activities.

The first unit was inaugurated in Ilha Grande (PI) in January 2017. The second, in Paulina Neves (MA), began activities in January 2020. Activities at the third Education Center, located in Gentio do Ouro (BA), began in 2022. Due to the Covid-19 pandemic, the Tech Education Center was founded in 2020, this being an important initiative in terms of digital inclusion and as a means of optimizing the teaching and learning process at different levels.

The Education Centers' potential increased significantly in 2022, with the founding of the *Janela para o Mundo* Institute. The Centers now form the core of the Institute, a non-profit entity that seeks partners and undertakes fund-raising to scale up its results. Since their foundation, the Education Centers assisted more than 3,000 students. **In 2023, the Institute and its 32 educators welcomed 1,331 students onto its free courses, a 93% increase compared to 2022.**

Looking further forward, one of our targets for 2027 is to expand the Institute to reach a total of 3,000 students and obtain a result higher than 5 in the measurement and evaluation of the generated impact as gauged by the Social Return on Investment (SROI) methodology. Currently, our SROI is evaluated at R\$ 6.51, which means that for every R\$ 1.00 invested in the Institute, R\$ 6.51 in benefits are generated for society.

Explore more of our sustainability cases developed over the past years on the [TIMELINE](#).

2017

2019

2020

2021

TIMELINE

# Sustainability cases

**Janela para o Mundo Institute**

Opening of the Piauí Education Center in Ilha Grande.

**Ecolar**

Over 190 families from rural areas of Xique-Xique and Gentio do Ouro have benefited from a domestic sewage solution that safely returns water to the environment and irrigates backyard gardens through trenches, allowing the cultivation of fruits and vegetables. Additionally, over 50 bathroom structures were installed in households that previously lacked them, promoting well-being and improving the health of these individuals.

The Ecolar project was continued through **Aqualuz**, aimed at promoting access to clean water and water security through equipment with a treatment method based on solar disinfection. In that year, 100 devices were installed, benefiting over 400 people from eight communities in the region.

**Da Raiz ao Grão**

This is a project that aims to renovate or replace the equipment used at the *Casa de Farinha* granary belonging to the Residents' Association of the *Gameleira do Assuruá* community, and the training of 33 local farmers as 'Farm to Market' Manioc Crop Rural Agents, promoting improvements in the manioc production process.

In 2019, diagnosis, planning, construction from ground zero, and business planning for the *Casa de Farinha* was undertaken. In 2020, the first phase of the project was implemented, involving the renovation and automation of the facility. In 2021, the second module of the course aimed at training farmers to be agents was undertaken, and, in 2023, the renovation of the *Casa de Farinha* building and other structure improvements have occurred.

**Janela para o Mundo Institute**

Inauguration of the Maranhão Education Center in Paulina Neves and the Tech Education Center.

**Sementes do Delta**

This project is designed to meet the environmental conditions of the Delta PI Wind Complex, meaning the reforestation of 95 hectares, connected to the stimulation of sustainable extractivist activities and the creation of a seed collectors organization.

In 2021, the **Viveiro Sementes do Delta** ('Delta Seed Nursery') was constructed, and the community mobilized and trained as part of the *Acosemdelta* creation process. In 2022, 30 hectares were reforested, the **Acosemdelta** was founded, and a project development workshop offered.

In 2023, there were actions in support of *Acosemdelta*, such as a Social Media Workshop, development of the *Sementes do Delta* catalog and creation of a traveling exhibition to increase recognition of the work of the seed collector. Ongoing care was provided for the 30 hectares, and 1,000 saplings were donated. In 2024, the catalog will be published and three exhibitions staged, whilst the maintenance and reforestation actions will continue.

2024

2023

2022

**Agroforestry**

This is an Agroforestry project that was approved in 2023, involving the reintroduction of native species with extractivist potential, aiming to revitalize an area of approximately 10 hectares and stimulate the generation of additional income for the families neighboring the Assuruá Complex. In 2024, a Fast Participative Appraisal of the communities that are to benefit will be performed and the implementation of the project will begin.

**EcoAssu**

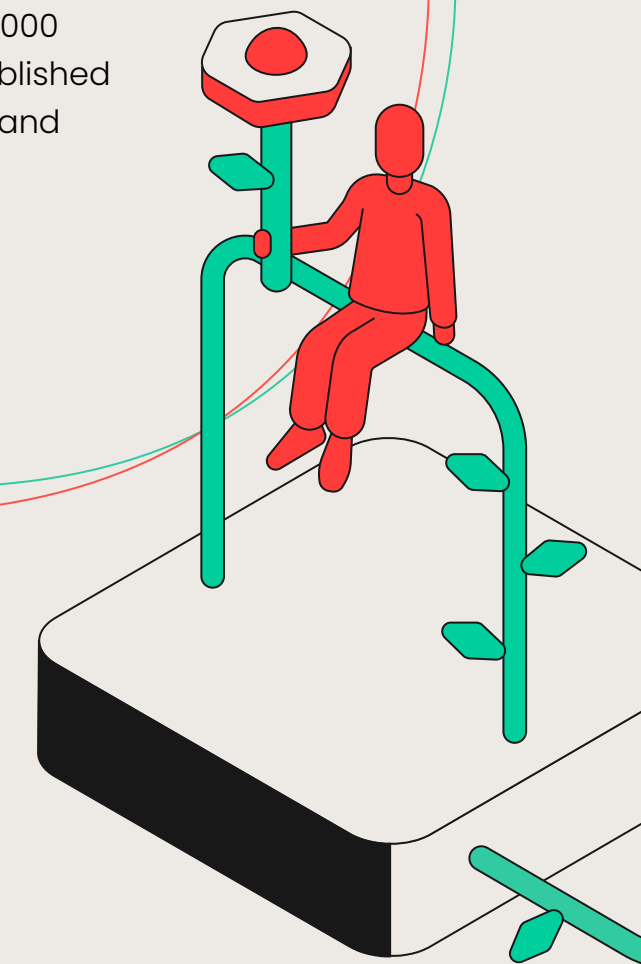
The project consolidates the actions planned to meet the IPHAN conditions related to the archaeological heritage found within the grounds of the Assuruá Complex. Its aim is to recognize the value and preserve the archaeological sites present in the area covered by the Wind Complex. The project is under development since 2022 and is expected to be completed in 2026. In 2023, the development and execution of the pedagogical project involved actions focused on heritage education, such as the Heritage Education Week, five editions of the '*Cine Janela*' and discussion group events, a cave art workshop, a rally and the '*Histórias da Minha Terra*' podcast. Altogether, 339 people participated.

**Cheias de Garra**

This is a project focused on women, providing them with empowerment actions, inclusion in the work market and the generation of income. In 2022, the **first stage** of the project began, with the undertaking of the fast participative appraisal and the training of 29 seamstresses for the upcycling (repurposing and reuse) of uniforms. In 2023, the refurbishment of the Santo Inácio community rooms began, incorporating the next steps of the *Cheias de Garra* project. In 2024, the Vila de Santo Inácio community's Public Rooms will be fully refurbished, equipped and ready for use.

**Janela para o Mundo Institute**

Establishment of the Bahia Education Center in Gentio do Ouro, and founding of the *Janela para o Mundo* Institute as a non-profit association.



To read about the projects in more detail, please visit our Sustainability Reports from previous years in our [Sustainability Portal](#).

# Supply chain

In 2023, we continued with our Suppliers Development Project, which involves three pillars: the ESG Radar, training sessions, and a satisfaction survey.

## ESG RADAR

GRI 2-6, 205-2, 308-2, 414-2

The selection of the suppliers participating in the ESG Radar privileges those whose activities involve greater exposure to risks involving health and safety, the environment, social issues and/or compliance.

Under the ESG Radar, we perform annual evaluations of the suppliers' performance using a questionnaire that varies depending upon their classification (implementation, development, large-scale or small-scale operation). The questionnaire involves 24 to 40 questions that address ESG matters, such as the use of Personal Protective Equipment (PPE), accidents at work, pollution control, waste, ethics and compliance, labor rights, compliance with legal requirements, and issues associated with human rights, such as child labor and forced labor.

During the process, once non-compliance has been identified, be it due for lack of evidence or failure to adhere to the ESG practices, an action plan is drafted and sent to the supplier to help them understand those aspects which they need to pay attention to,

with a deadline being established for them to bring themselves into line and up to date. This action plan is, in turn, monitored by the sustainability team and the respective managers of the contracts signed with the participating suppliers.

The main negative socioenvironmental aspects to be improved in the supply chain, identified through the ESG Radar project, include:

- Strengthening of the communication channel;
- Encouragement of the development of local socioenvironmental initiatives;
- Establishment of formal guidelines through policies and procedures;
- Implementation of internal awareness campaigns on socioenvironmental, global, and regional issues;
- Maintenance of updated and organized documentation for easy access.

In 2023, the ESG Radar addressed 43 suppliers who were evaluated under 53 contracts. With 100% participation, 452 opportunities for improvement were identified, with 75% of them being addressed in 2023, whilst the other 25% remain open with plans to address them in 2024.

This process demonstrates Serena Energia's commitment to the highest standards of integrity and socioenvironmental responsibility throughout its supply chain the participating suppliers.



*'The partnership with Serena has been getting stronger since 2020 through environmental consultation and assistance on strategic matters for the businesses located in the state of Bahia. The sustainable actions and practices in the environmental, social and governance areas proposed by Serena last year led to transformations at our company, which were reflected in our mission and business objective.'*

**CONEXXA**  
Local Environment Supplier

# Satisfaction survey

With the aim of gauging the level of satisfaction concerning the company's actions and communication with its stakeholders wherever Serena's assets are located, we have undertaken a satisfaction survey, for the second year running. This year, we have used the Customer Satisfaction Score (CSAT) methodology, which employs a scale of 1 (extremely unsatisfied) to 5 (extremely satisfied).

In 2022, we adopted the Net Promoter Score (NPS) methodology. The decision to alter the way of evaluating this survey was due to the fact that the CSAT has a better application for covering the particular features of the relations evaluated providing greater reliability in the results concerning the stakeholders' levels of satisfaction. In 2023, as well as in Brazil, the survey was undertaken in the US as a means of gauging the satisfaction of our new neighbors from the Goodnight 1 project. The survey did not include Distributed Generation assets.

Three types of form were used for each asset, each one of which addressed a different public group: the community, including the owners of the leased lands, suppliers and public authorities. In total, the survey received responses from 638 stakeholders located in Brazil and the United States, covering topics such as Occupational Health and Safety, Communication Channels and Private Social Investment.

We achieved a consolidated satisfaction index result of 89%, with the lowest and highest indexes among our assets being 79% and 92%, respectively, demonstrating Serena's prosperity among our stakeholders.

On the next page are a few of the comments collected during this year's survey.



‘It is a great pleasure to provide services to Serena Energia, [with] excellent communication, always aiming to make the suppliers feel good in the workplace and, mainly, being very committed to performing the work safely.’

Implementation supplier

‘Serena Energia works in the region, contributing to the development of the communities. I am very pleased to be able to talk about the contributions made in the areas of education, entrepreneurship, appreciation for the local culture, and women’s health, amongst others that the company has been working with. Congratulations for the work performed in the region.’

Bahia Cluster public authority

‘Meetings that are always objective and aimed at including civil defense in the activities to be performed by the plant.’

SHPP Pipoca public authority

‘I admire Serena for investing in social projects and education. As well as creating a lot of jobs, it is concerned about the environment and its own sustainability.’

Bahia Cluster Community

‘Serena’s Environment team is very competent and easy to communicate with. I work with more than 30 stakeholders in the electricity sector and I can safely say that you are very well served. Congratulations!’

SHPP Pipoca and Indaiás supplier

# Co-entrepreneur team

Amongst our most valuable assets are our co-entrepreneurs, procurements to as such because the principles upon which our culture is founded encourage each individual to approach each day with a spirit of entrepreneurship and responsibility, remaining focused on the clients to contribute dynamically and speedily to the growth of the business and the transformation of society. Without sticking to rigid or pre-established models, we are guided by six principles, that have been set out in our People Manifesto.

1.

**WE ARE FOCUSED ON THE CLIENT**

More than being committed to doing the very best for people, we fight to empower the consumer and nurture passionate clients.

2.

**WE ARE DARING**

We challenge the status quo every day and will never tire until clean energy is a reality for everyone.

3.

**WE ARE PROBLEM SOLVERS**

We use technology in our favor and thus become more creative and dynamic. Our actions are performed from an analytical, technical and sustainable perspective, focused on generating value.

4.

**WE THINK AND ACT LIKE OWNERS**

We share the same goals, assuming responsibility without relaxing financial discipline.

5.

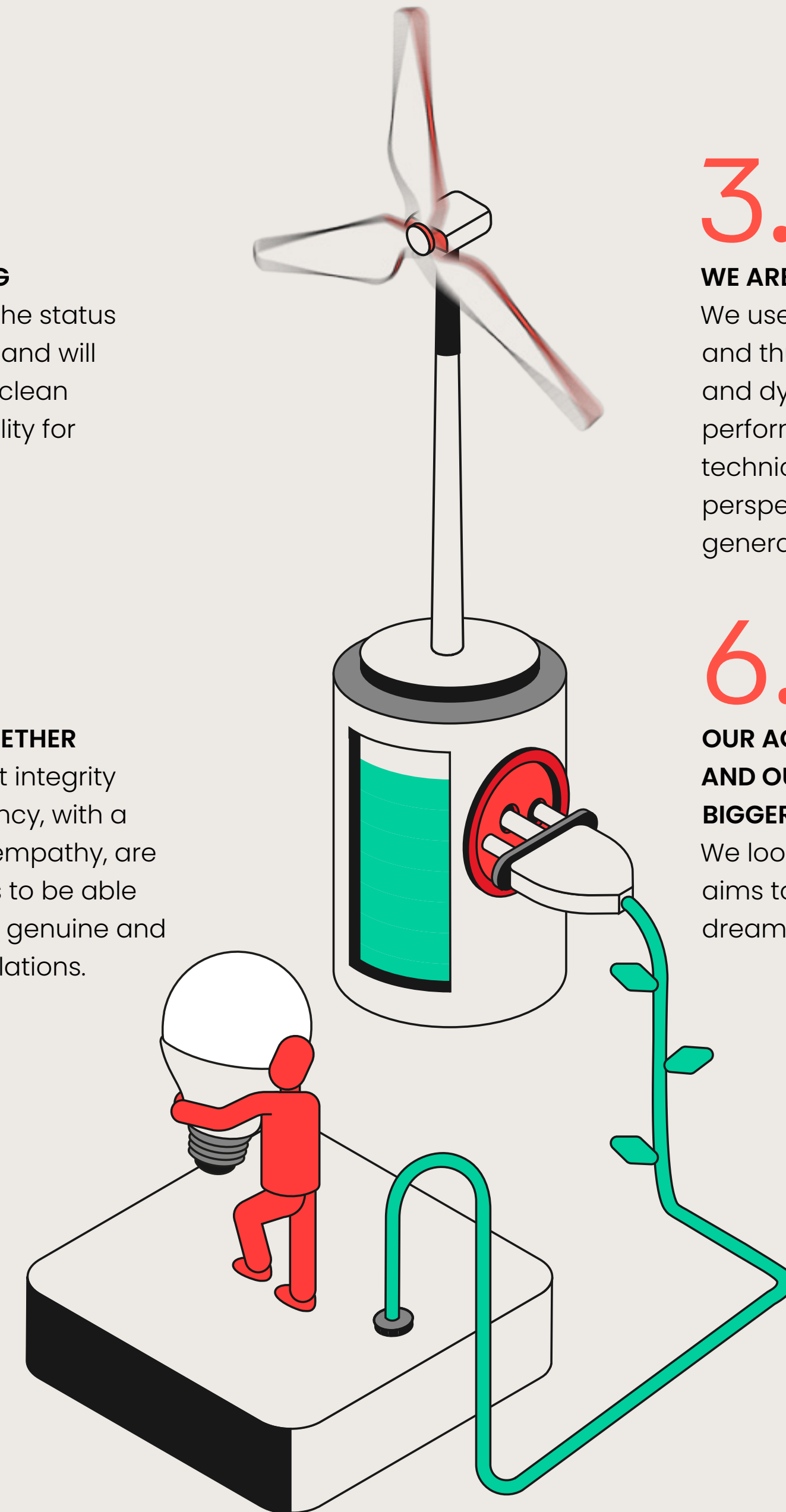
**EVOLVING TOGETHER**

We believe that integrity and transparency, with a good dose of empathy, are essential for us to be able to build strong, genuine and long-lasting relations.

6.

**OUR ACHIEVEMENTS ARE BIG AND OUR DREAMS ARE EVEN BIGGER**

We look to transcend our aims to achieve ever greater dreams.



Our principles

# Attraction, development and retention of employees

GRI 3-3

We are committed to attracting co-entrepreneurs who are aligned with our objectives, and who hold a non-conformist and genuine view of the world which will help us cross new boundaries and go that much further. In 2023, our workforce of co-entrepreneurs expanded by 13.3%, meaning we ended the year with 358 people, 63.4% of whom were men and 36.6% women. [GRI 2-7](#)

For the second year running, our recruitment process has been decentralized. This means that it is not just our People Team that is required to attract talents. Our managers need to be actively involved in this as well, thus allowing for a more consultative, strategic and intelligent recruitment process. This approach has also contributed to the ability to retain co-entrepreneurs who are aligned with our culture.

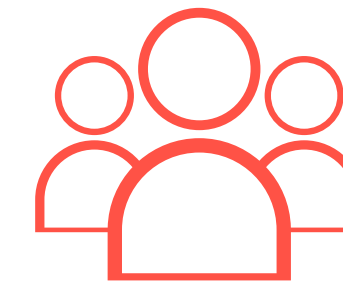
In 2023, we launched the 'Power Program' which involved a 'Solar Program', aimed at hiring interns, and a 'Wind Program' aimed at analysts who have already graduated or are close to graduation. The initiative as a whole is designed to train professionals and prepare them to become future leaders. Those on the Solar Program are focused on solar energy, an area of business that is growing in our portfolio. Those on the Wind Program, meanwhile, work with wind energy, the form of

power generation that involves the majority of our assets. The members of these programs also have access to English classes.

A total of 24 young talents were chosen to get the programs under way. All those participating in both the 'Solar' and the 'Wind' projects are monitored by designated members from the People Team to check on their development, whilst they also participate in talks and events involving important professionals from the sector, who may work for Serena or not. The 'Wind' participants, especially, receive special mentoring and experience job rotation within Serena's commercial department.

In relation to the internal engagement of the co-entrepreneurs, every week, the "Pulse" survey, called "Our Voice", is undertaken using the Team Culture platform. The survey is sent out by e-mail, and requires the co-entrepreneurs to highlight the behavior that they have noted in the work environment and answer questions related to it.

Based upon the responses collected as part of this survey, which has been running for a year now, we have been able to identify the fact that wellbeing and recognition are important concerns for the company. We therefore reformulated the



"Energy for All" program to encourage engagement and ensure recognition (not necessarily financial) of the individual contributions between the network and the managers, through practices such as constant feedback.

We have also updated the wellbeing program. Having noted that the issues of most importance to the co-entrepreneurs in this area are healthy eating, and physical and mental health, we began offering fresh fruit twice a day at both the office and at the clusters, a financial subsidy designed to encourage the practice of sport for our co-entrepreneurs at the clusters, and we changed our mental health partner. The members of our team now have access to four free therapy sessions per month, offered through the Vittude platform.

The co-entrepreneurs' skills are improved through training in different areas, such as ethics and compliance, information security, and others related to technology. To read more about these training programs, [view the full version](#). [GRI 404-2](#)



# Sustainability in Variable Remuneration

All the co-entrepreneurs (except apprentices) have targets tied to sustainability that affect their variable remuneration. In 2023, our pure sustainability goals represented between 7.5% and 12% of the total goals.

Each year, the company defines its targets (operational, financial, risk management, organizational, amongst others), which make up books of targets that can be divided into three large groups: **(1) corporate targets; (2) business unit targets; and (3) specific project targets.** This is also the sequence in which the targets are created (1 > 2 > 3). Each co-entrepreneur has a different exposure to one of the books of targets, that vary depending upon the scope of their function. The variable remuneration is the result of a calculation of these targets, submitted for periodic monitoring throughout the year.

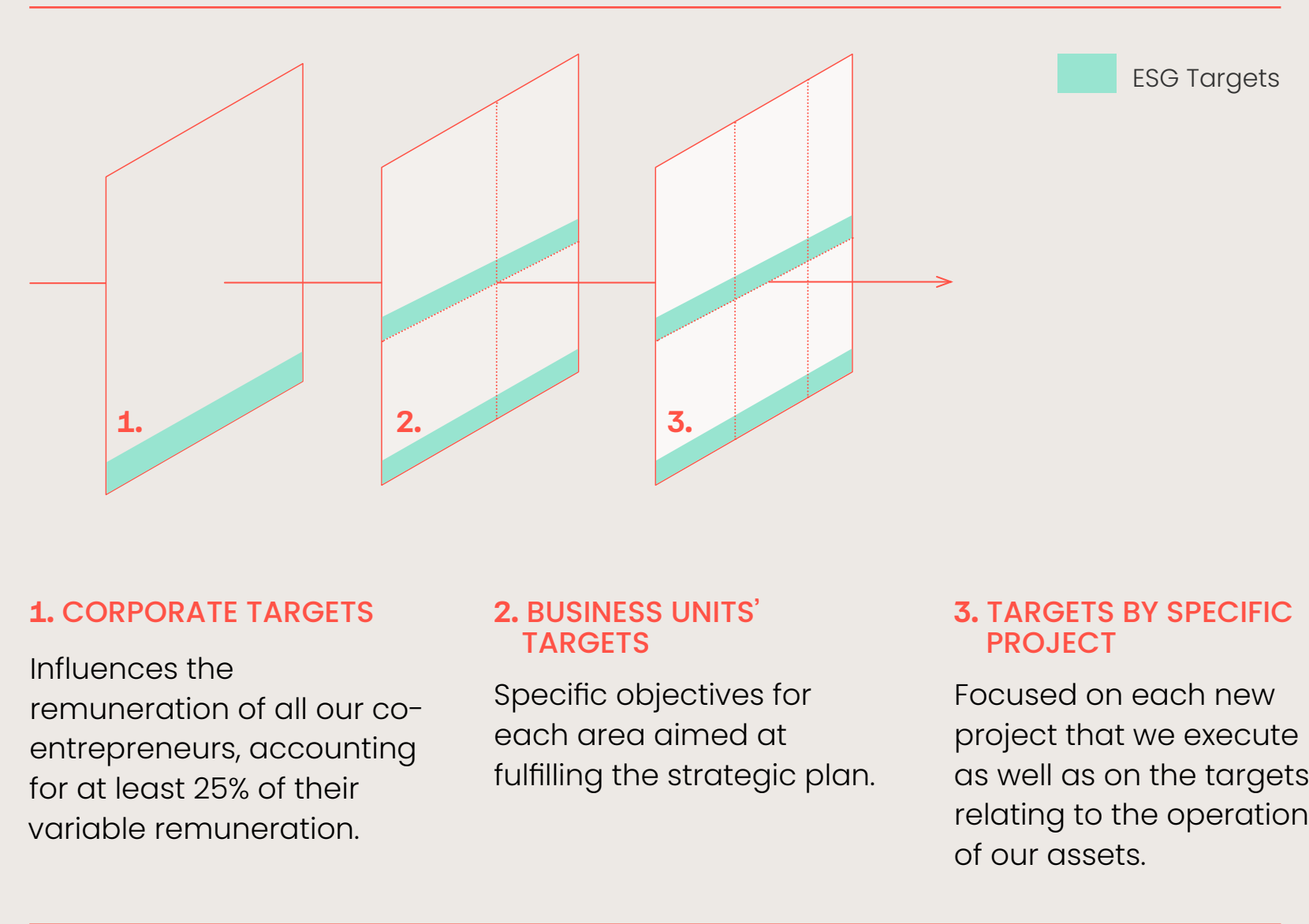
The book of corporate targets influences the remuneration of all our co-entrepreneurs, accounting for at least 25% of their variable remuneration. Amongst these corporate targets, we have sustainability targets with equally strategic and final objectives, such as the inclusion of Serena in the B3's ISE.

We understand that, in order to achieve these corporate targets, we need to expand them more specifically to our business units, with a focus on the operational assets, the future renewable energy

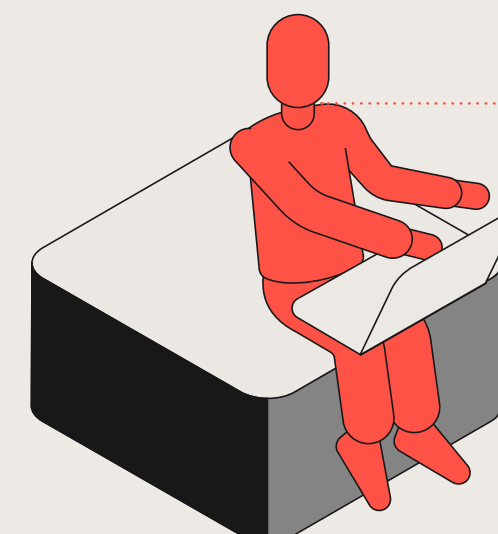
projects, and our commercial teams. The corporate sustainability targets are also expanded across the second group of targets, in such a way that the team that operates on these fronts is exposed not only to the corporate targets, but also to the sustainability targets of that specific business unit. One example of this is the execution of our year-to-year decarbonization plan designed to help us reach our net zero target by 2030.

Finally, we have the third group of targets, which is focused on each new project that we execute, as well as on the targets relating to the operation of our assets (groups of targets by region/cluster), considering their specific characteristics. This book of targets also has targets tied to sustainability that are highly focused on that project, as well as the community and biome of which it forms a part. One example of this is the execution of a social project that takes advantage of the vocational skills of the particular community, be it by including a project dedicated to training women entrepreneurs, or by including a project designed to stimulate income and environmental education for people who had previously made a living from plant extractivist activities.

Targets linked exclusively to sustainability are therefore always guaranteed as an incentive to achieve the highest possible variable remuneration, meaning that everyone really does collaborate in reaching the targets at every different level.

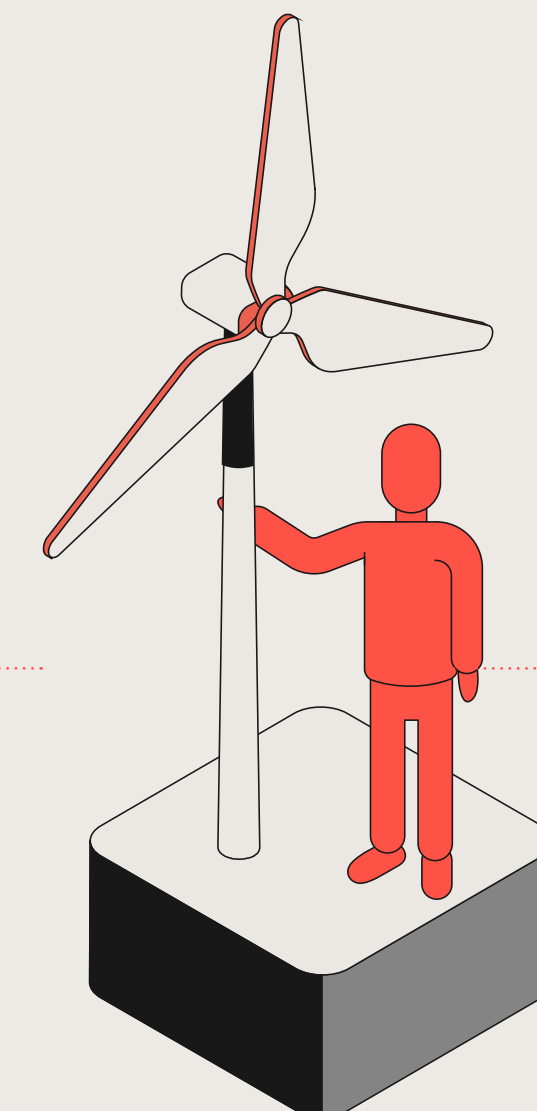


As an example, let's think of a corporate target related to the implementation of the decarbonization plan:



**Sara**  
WORKS IN THE OFFICE

She needed to coordinate the GHG inventory training for suppliers.



**João**  
WORKS AT ONE OF THE PARKS

He needed to collate and report the amount of different fuels used in a specific year, in order for the Company's inventory to be performed.

# Health and Safety

GRI 3-3, 403-1, 403-2, 403-4, 403-7

Serena's teams work diligently to continually improve their operations in terms of health and safety. Everyone is responsible for this commitment, with the leaders driving the efforts in order to inspire those with whom they interact.

We have ended one more year having achieved our main objective: we have experienced not one serious accident involving permanent loss, nor any fatalities. We have not yet achieved the results planned in terms of the accident rate, although we worked a great deal to evolve in this area in 2023.

As part of this, our occupational health and safety management system operates with a range of services including occupational risk management, safety training, accident prevention programs, certificate and license management, the management of suppliers and services, ergonomics education, amongst others. The system also works to ensure compliance with labor laws, the protocols of the International Labour Organization (ILO), and the civil and criminal codes, whilst also being founded on the regulatory norms (RNs) established by the Ministry of Labor and Employment and the ISO 45001 international norm. GRI 2-23

Structured in its own, separate space within Sharepoint, this system involves ten essential practices, that include governance and liabilities, training and certification, risk management, reporting of incidents and irregularities, management of performance, processes and health and safety requirements, the culture of safety, management of suppliers, planned inspections, and management of emergencies.

Serena Energia undertakes a range of routine and non-routine processes to ensure health and safety in its workplaces (office, construction sites and plants in operation). This includes safety inspections, ergonomic assessments, analyses of incidents and irregularities, environmental risk evaluations, and analyses of specific tasks and construction projects.

The company has also implemented emergency simulations and health and safety audits, whilst performing risk surveys to create important management programs such as the Risk Management Program (RMP), the Occupational Health Medical Control Program (PCMSO). These activities are complemented by a wide-reaching program of training and certification, covering issues ranging from the culture of health and safety at work to first aid and communication on safety, as well as training on a number of Regulatory Norms.

## Health promotion

GRI 403-6

We have developed a variety of initiatives designed to facilitate our co-entrepreneurs' access to healthcare services, including flexible work hours, wellbeing programs, psychological support, reimbursement for medical expenses, and access to online healthcare resources.

These initiatives include health and nutrition control campaigns, cancer prevention campaigns, the encouragement of physical activities and exercise, vaccination campaigns, as well as programs focused on mental health and emotional wellbeing, as addressed in the previous chapter.

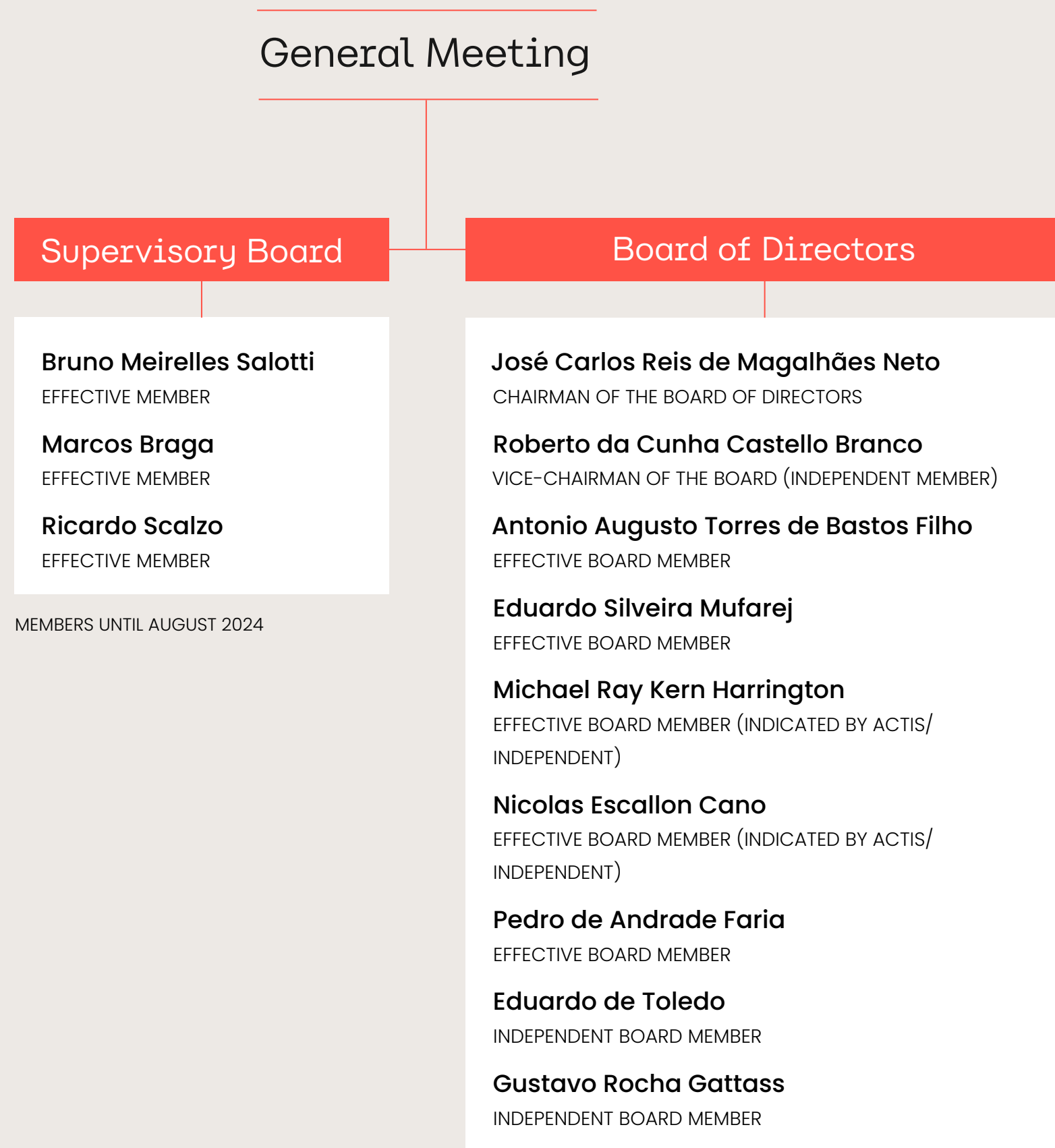
It is important to stress that it is possible for some of the benefits to be extended to the co-entrepreneurs' families, and that the co-entrepreneurs are permitted to use these services during the working day.

In 2023, we performed a number of campaigns, including: Yellow May (raising awareness of traffic safety); Pink October (care and prevention

of breast cancer); Blue November (care and prevention of prostate cancer); and especially Green April (the month devoted to raising awareness of accidents at work). These campaigns involved initiatives designed to encourage the sharing of health and safety reports, and we hosted a special day focusing on self care at all the operations, with the opportunity to chat with Dr. Frederico Porto, about being pro-active and having a positive attitude towards health.

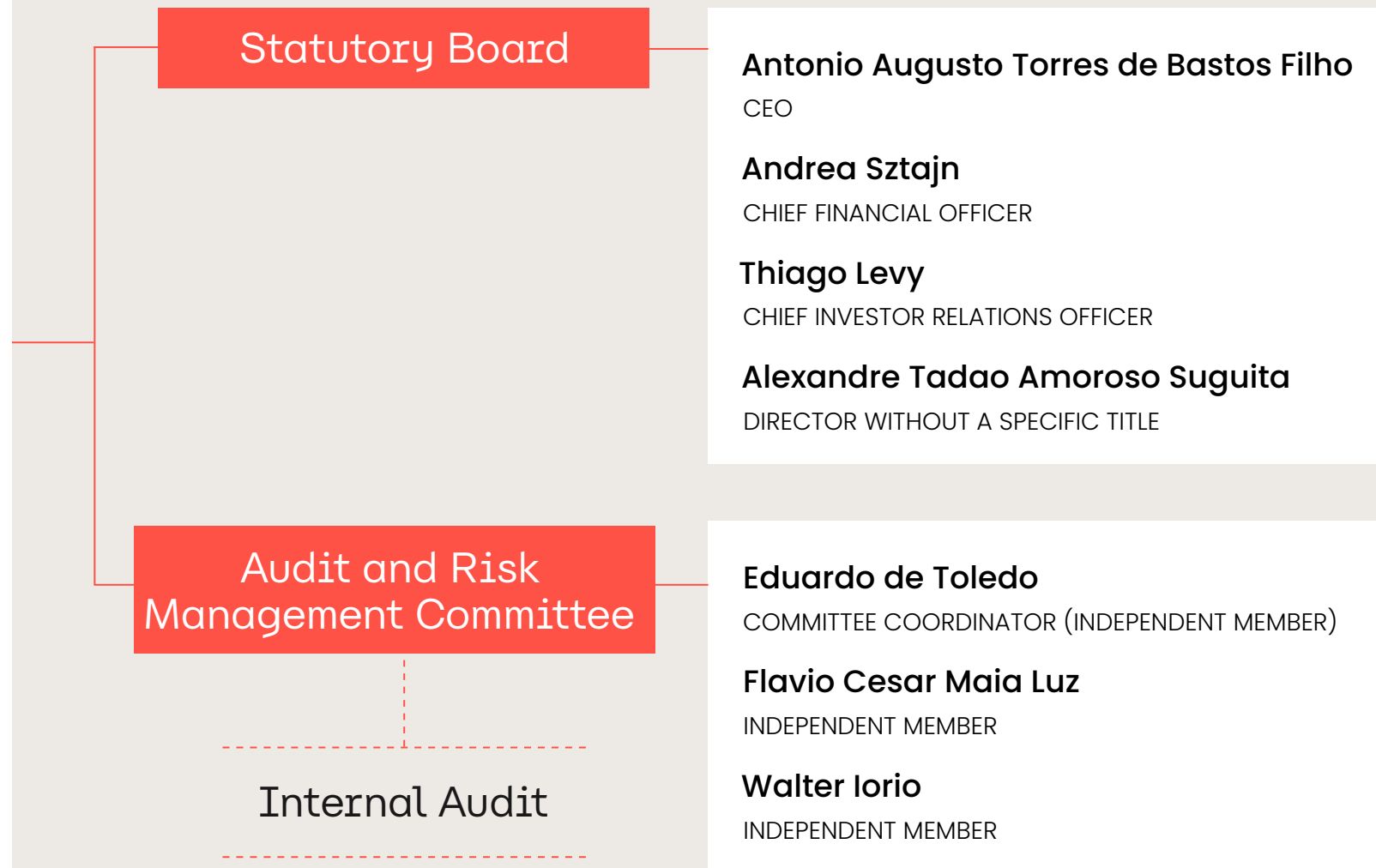
To ensure easy access to these services and to distribute information about them, Serena Energia uses a variety of different channels, including awareness raising campaigns, internal communication and corporate e-mails.

# Administrative structure



MEMBERS UNTIL AUGUST 2024

MEMBERS UNTIL AUGUST 2024



## Shareholder structure<sup>1</sup>

SHAREHOLDERS	NUMBER OF SHARES	PERCENTAGE OF THE CAPITAL STOCK
Lambda3 Fundo de Investimentos em Ações	92,367,272	14.83%
Tarpon Gestora de Recursos S.A.	195,524,833	31.40%
Actis LLP	166,986,292	26.82%
<b>Subtotal Shareholders of Reference</b>	<b>454,878,397</b>	<b>73.05%</b>
Other Shareholders	167,852,159	26.95%
<b>Total shares</b>	<b>622,730,556</b>	<b>100.00%</b>

<sup>1</sup> Shareholder position on December 31, 2023.



# Ethics and *compliance*

GRI 2-15, 2-23, 2-24, 2-25, 205-2, 404-2

Sustainability at companies and in society begins with ethical and responsible actions. This is why Serena has an integrity program, developed as a tool for the prevention and combating of unethical conduct and the mitigation of risks relating to the practicing of acts of public and private corruption within the sphere of the Company's activities.

The organization has a number of different policies and documents that establish our commitment to responsible corporate conduct, including the Code of Conduct, the Anti-corruption Policy, the Information Security Policy, the Personal Data Protection Policy, the People Manifesto, the Sustainability Policy, the Socio-environmental Policy, the Occupational Health and Safety Policy, and other governance-related policies. These documents are approved by different governance levels, with the highest including the Executive Board and the Board of Directors. These documents are available for consultation on the [Organization's website](#).

The commitments we make through the abovementioned policies (which apply to all the organization's internal activities, and which regulate the conduct of our co-entrepreneurs with outside parties), also plan for the application of the principle of precaution, as well as respect for human rights. We have also adopted different processes designed to prevent and mitigate conflicts of interest, including education and training to help our co-entrepreneurs recognize and manage these conflicts.

In order to integrate these commitments into our organizational strategies, policies and operations, Serena implements measures such as the definition of targets (to ensure that our suppliers are aware of and understand our commitments and operating procedures) so that we can monitor the awareness of our co-entrepreneurs.

All the policies are communicated to our community by means of posts or institutional videos, published on our internal social media and website, and outlined in annual reports

such as this. The policies relating to ethics and compliance, especially, are the subject of obligatory training courses: "Code of Conduct and Policies" and "Doing the Right Thing, the Right Way!", launched in 2022, and "Compliance in Focus", launched in December 2023. In 2023, 58% of the co-entrepreneurs in Brazil completed at least one of the three training courses.

This figure, however, does not reflect the co-entrepreneurs' general training. Of the 347 co-entrepreneurs at Serena in Brazil, 252 were hired in 2022. Of these, 98% completed at least one of the first two training courses in 2022. Those who did so, did not need to take them again in 2023, but rather only needed to do the "Compliance in Focus" training. Through until the end of March 2024, 75% of the co-entrepreneurs had taken part in the last training course, and the monitoring of the three courses and new co-entrepreneurs will continue. [GRI 2-7](#)

In addition to the abovementioned online training sessions, which aim to effectively implement our

commitments amongst the internal community, we have the "Information Security Policy" and related training sessions, also for the internal community, as well as the "Understanding the Serena Ecosystem" and the training on how to perform the GHG inventory for our suppliers. As part of the theme of health and safety, there is the "Safety Introduction", which is required of all suppliers working in the field in the US, and training in the use of the occupational health and safety reporting tool for the internal community and suppliers in Brazil.



## General coordination

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Julia Nobrega  
Pedro Pacheco  
ESG Team

## Content Coordination

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Cecília Dâmaso  
José Pedro Galvão  
ESG Team

## Content and Consultation

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### Grupo Report

[www.gruporeport.com.br](http://www.gruporeport.com.br)

Ana Souza and Isabela Ribeiro PROJECT MANAGEMENT  
Rejane Lima and Sandro Thadeu CONTENT  
Tatiana Lopes and Nikaelly Sousa CONSULTATION  
Stephen Wingrove ENGLISH TRANSLATION

## Design

---

### Biabum

[www.biabum.com](http://www.biabum.com)

Beatriz Tati Nóbrega CREATIVE DIRECTION  
Stella Nardelli PROJECT MANAGEMENT  
Barbara Cutlak, Julia Ferreira, Isadora Pinheiro and  
Vinícius Monteiro DESIGN AND ILLUSTRATION

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