



SUSTAINABILITY  
REPORT  
**2022**

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# ABOUT THE REPORT

GRI 2-2, 2-3, 2-4

Santo Antônio Energia's Sustainability Report (SAE) presents market, economic-financial, operational information and the main highlights of the Company's performance. It covers the period from January 1 to December 31, 2022.

This report complies with the Global Reporting Initiative (GRI) in its updated version, the GRI Standards. Although it is SAE's first publication of this type, the Company has a history of issuing reports that meet the standards of the Brazilian Institute of the Environment and Renewable Natural Resources (Ibama), the National Electric Energy Agency (ANEEL) and creditor banks. Santo Antônio Energia also releases, by March 30 every year, a management report on the previous fiscal year.

To define the material topics, we followed Eletrobras' materiality, adopted by Eletrobras Furnas, majority shareholder and controller of the holding Madeira Energia S.A. (MESA), as of June 2022. The financial statements include Madeira Energia S.A. (parent holding) and Santo Antônio Energia S.A. (operating entity). Madeira Energia S.A. holds 100% of SAE's interest and does not have operating activities. Therefore, the sustainability report only includes Santo Antônio Energia S.A., holder of the concession agreement and socio-environmental obligations.

The content of this document is organized into four pillars, following guidelines from the World Economic Forum (WEF) for a consistent report:



**Governance:** the activities that place ethics, integrity and purpose at the heart of business.



**Wealth:** the contribution to economic, social and technological progress in harmony with nature.



**People:** the promotion of dignity and equity.



**Planet:** the protection of natural resources and biodiversity for future generations.



This report complies with the **Global Reporting Initiative** and adopts the materiality of Eletrobras companies

For preparation of this report, the Manual for Preparation of the Annual Social and Environmental Responsibility Report of the Electric Energy Companies of the National Electric Energy Agency (ANEEL, according to REN No. 933, of May 18, 2021) was also considered. By including all the information and the indicators requested by Aneel, this report is equivalent to the annual social and environmental responsibility report of the Electric Power Companies.

Questions and comments about this report can be submitted to: [comunicacaocorporativa@santoantonioenergia.com.br](mailto:comunicacaocorporativa@santoantonioenergia.com.br)

Enjoy your reading!

# MATERIALITY

GRI 3-1, 3-2

Santo Antônio Energia adhered to Eletrobras' materiality for its 2022 Sustainability Report. All Eletrobras companies, including Eletrobras Furnas, majority shareholder and controller of Madeira Energia S.A., adopt the same material themes, which were defined in 2021. For 2022, a review was carried out: the topics included in the list were evaluated considering their socio-environmental impact, according to the main market standards.

The review of the materiality of Eletrobras companies followed the following steps:

- **Preparation of a large** list with the materiality topics of Eletrobras companies, material topics of the main peers and material topics of companies that are a reference in the market;
- **Relevance analysis** of the topics listed through consultation with various sources (**MSCI and Sustainalytics** rating agencies; SASB [Sustainability Accounting Standards Board] sector matrix; S&P Yearbook [sustainability integration reference index to business strategy]; and DJSI [Dow Jones Sustainability Index];
- **Scoring and prioritization** of topics;

- **Online consultation** with 64 internal experts (from the Strategy, Governance and Sustainability Committees of Eletrobras Board of Directors, the Executive Committee for Sustainability Management and areas related to ESG topics, such as HR, Occupational Safety and Finance) and four external experts (from the energy, sustainability, industrial, business and academic sectors);

- **Weighting of the scores** of consultations with experts and frameworks and insertion in materiality;

- **Prioritization of topics**, according to relevance to the y-axis (frameworks) and significance to the x-axis (experts), resulting in the final list.

As a result of the review, a list of 11 material topics (described on the following page) was prepared, in addition to five relevant topics, which bring strategic issues to companies, but which do not apply to all of them. Each company chooses which relevant topics will be reported, according to the importance to their business. See Eletrobras Furnas topics, adopted by SAE, in the table on the side. Throughout the materiality review process, the only new relevant topic was Quality and Service Safety, considered a priority for the consulted experts.



Rio Madeira



## Relevant topics for Eletrobras Furnas, considered in SAE report:

- ⊕→ Waste Management
- ⊕→ Quality and Safety of Service
- ⊕→ Supply Chain Management

### Material topics of Eletrobras companies

|                                     |  |  |  |  |
|-------------------------------------|--|--|--|--|
| Ethics, Integrity and Compliance    |  |  |  |  |
| Communities relationship            |  |  |  |  |
| Worker health, welfare and safety   |  |  |  |  |
| Climate change                      |  |  |  |  |
|                                     |  |  |  |  |
| Biodiversity and ecosystem services |  |  |  |  |
| Transition and energy efficiency    |  |  |  |  |

|  |  |  |  |  |
|--|--|--|--|--|
| Attraction, development and retention of employees |  |  |  |  |
|  |  |  |  |  |
| Water and effluent management                      |  |  |  |  |
| Human rights                                       |  |  |  |  |
|  |  |  |  |  |
| Risk and emergency management                      |  |  |  |  |
| Innovation and Technology                          |  |  |  |  |

The material topics are related as follows to the pillars of the report:

Governance - Ethics, integrity and compliance; and Human rights.

Prosperity - Supply chain management; Risk and emergency management; and Quality and safety of service.

People - Relationship with communities; Health, well-being and safety of the worker; Attraction, development and retention of employees; and Human rights.

Planet - Waste management; Climate change; Biodiversity and ecosystem services; Transition and energy efficiency; Water and effluent management; Risk and emergency management; and Innovation and technology.

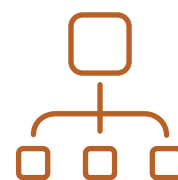
## Stakeholder engagement GRI 2-29

In 2020, Santo Antônio Energia carried out a stakeholder mapping during image diagnosis made by communication management. The main audiences identified were:

- **Granting Authority**  
(regulatory bodies, licensors)
- **Banks and insurance companies**
- **Local Liabilities**  
(NGOs, university, academic audience, residents of affected communities)
- **Opinion leaders**  
(Press, Entrepreneurs, Writers)
- **Leadership** (officers + heads).

Based on this analysis, the communication department prepared the Brand Platform, a document that guides the purpose, positioning, attitudes and attributes of Santo Antônio Energia's brand. Finally, with the definitions of the Platform, SAE prepared its Communication Plan for permanent action with stakeholders. The plan has three main pillars: structuring relationship actions, engagement for new brand positioning and actions to impact the image. This plan is reviewed annually to define relationship and communication goals and objectives.

In addition, SAE maintains a habitual relationship with stakeholders from a routine of contact and communication channels focused on different stakeholders, such as: granting authority, customers, suppliers, associations and research centers.



**SAE has a structured communication plan with its stakeholders**

### THE FIRST MATERIALITY OF SAE

Santo Antônio Energia built its first materiality in the second half of 2021 adopting *frameworks* and good market practices with the support of specialized consulting. Materiality included the following topics:

- ⊖ **Biodiversity and ecosystems**
- ⊖ **Diversity, inclusion and equity**
- ⊖ **Energy Efficiency and Security**
- ⊖ **Ethics, Integrity and Compliance**
- ⊖ **Climate Strategy**
- ⊖ **Business Model Innovation and Resilience**
- ⊖ **Investment and Social and Environmental Responsibility**
- ⊖ **Transparency in Institutional and Social Relations**
- ⊖ **Health, Safety and Well-Being of Employees**

In addition, the following topics were considered relevant:

- ⊖ **Attraction, development and retention of employees**
- ⊖ **Water resources management**
- ⊖ **Risk and Crisis Management**
- ⊖ **Privacy and Data Security**

From the developments with the controller Eletrobras Furnas and the holding Eletrobras, the companies' sustainability teams started the technical alignments with respect to the materiality that would be adopted for preparation of Santo Antônio Energia's 2022 Sustainability Report. Having verified the compatibility between the material topics defined in 2021 by SAE and the materiality of Eletrobras, SAE Board of Directors approved the adoption of the materiality of the parent company in the preparation of its report for the year 2022. [Know the material topics adopted.](#)

# MESSAGE FROM THE CEO

GRI 2-22

In 2022, Santo Antônio Energia (SAE) completed ten years of operation since the energization of the first machine of our plant. In this milestone for the company's history, we reaffirm our commitment to providing clean energy to Brazil and fostering sustainable development in the northern region of the country.

The year was also marked by the strengthening of Santo Antônio Energia's relations with Eletrobras. Eletrobras Furnas became the majority and controlling shareholder of the holding company Madeira Energia S.A., bringing to the management of our business all the experience, knowledge and robustness of the main electricity group in Brazil. Eletrobras Furnas control sent a positive message to the market and SAE kept the BBB- rating with the ratings agency Fitch, which evaluates the company's debentures, a rating that indicates low risk.

The improvement of national water indicators, added to the good efficiency practices in our plant, contributed to the success of Santo Antônio's operational performance, with approximately 18,000 gigawatt hours generated

during the year, occupying the position of the fourth largest power generator in the country.

A year filled with challenges and achievements unfolded in 2022. Regarding financial results, the company was strongly impacted by arbitration, requiring capital contribution. However, it generated enough cash in its operations to honor its obligations with debentures. Now under new shareholding control, a joint plan is underway that contemplates corporate, tax and financial strategies and initiatives, along with intercompany operational synergies. The Company will continue to be attentive to future challenges with the same commitment and with the certainty that it is a fundamental company for the electricity sector and for Brazil, and financially sustainable in the long term.

With regard to ESG management (acronym for environment, social and governance), we have the support of an external consultancy that has prepared a benchmarking study of SAE practices compared to other companies in the same sector. The study showed a high

level of maturity in our actions, the result of our effort and experience in meeting the Equator Principles and the environmental standards of the International Finance Corporation (IFC), in addition to the structure developed by our Integrated Management System (IMS).

We have also gained valued recognition in the market over the past two years. We received the Pro-Ethics seal from the Brazilian Office of the Federal Controller General (CGU, by its acronym in Portuguese), granted to companies that adopt internal measures and practices to prevent corruption. We have obtained the international Great Place to Work (GPTW) certification, aimed at companies that provide a healthy and welcoming workplace for employees. In addition, we received Professor Samuel Benchimol Award in the "Company in the Amazon" category for strengthening local production chains and sustainable development in the region.

We partnered with Instituto Amazônia+21 to create the first Center for Bioeconomy and Conservation of the Amazon (CBCA).

CBCA's goal is to foster sustainable economic development in the region of the upper Madeira River, with conservation and reforestation actions, research laboratories, creation of biofactory and nursery with capacity to produce up to two million seedlings per year. Our commitment to generating positive impacts and building the future is also translated by our Apprentices and Interns Program, which welcomes young people at our plant in Porto Velho and office in São Paulo to start their professional journey.

Finally, I would like to highlight the pioneering nature of Santo Antônio Energia. In these ten years, our members have found several innovative solutions to deal with challenges still little faced by the sector, especially regarding the operation in the hydrological complex of Madeira River. This characteristic of our culture led SAE to create the High Voltage Program, which encourages ideas for improvement for the business and was relaunched in 2022 after a brief discontinuation during the pandemic.

I invite everyone to learn more about these and other achievements in the year 2022 in Santo Antônio Energia's first Sustainability Report.

Enjoy your reading!

**Daniel Faria Costa**

CEO of Santo Antônio Energia



Daniel Costa,  
CEO of Santo Antônio Energia



# WHO WE ARE



Santo Antônio Hydroelectric Power Plant and the municipality of Porto Velho, capital of the State of Rondônia

# SANTO ANTÔNIO ENERGIA

GRI 2-1, 2-2, 2-6

Santo Antônio Energia S.A. is a publicly-held private limited company that stands out as the fourth largest hydroelectric power generator in the country in 2022. It was founded in 2008 in the Special Purpose Company (SPE) model to be the concessionaire responsible for the construction and operation of Santo Antônio Hydroelectric Power Plant. With electricity generation resulting from the use of the seasonal water regime of Madeira River, it uses the philosophy of water operation.

In addition to being connected to the National Interconnected System (SIN), providing power to all of Brazil, the plant also has a transmission line dedicated exclusively to supplying the system in the States of Rondônia and Acre, reinforcing its commitment to act for the direct benefit of local and regional populations.

The administrative headquarters (corporate office) is located at Avenida Doutor Cardoso de Melo, nº 1.184, 4º andar, Neighborhood Vila Olímpia, City of São Paulo (SP), Zip Code 04548-004. And the operation is located in the municipality of Porto Velho (RO), on Rodovia BR 364 (Sentido AC), S/N, km 09, Zip Code 76.805-812.

The Company has several competitive advantages, specially:



**Revenue predictability:** of the amount of energy corresponding to the Company's generating units, 70% has already been marketed in the Regulated Contracting Environment (ACR) and 30% marketed in the Free Contracting Environment (ACL).



**Sustainability and Investments in the Socio-Environmental Area:** Santo Antônio Hydroelectric Power Plant was structured to produce electricity and, at the same time, contribute to national and regional socioeconomic development.



**Activities subject to regulatory bodies:** as a result of the conclusion of the concession agreement, SAE is subject to obligations with the granting authority and compliance with current regulations to develop energy production and commercialization activities.



**Environmental liability:** the legislation establishes quality and protection standards that must be complied with by the enterprise, and that, if violated, may subject the Company to sanctions. The Company's environmental policy is part of the Integrated Management System (IMS), in which it is possible to identify and manage business risks and their impacts. SAE also has relationships and impact mitigation programs with the local community. More than R\$2.5 billion has already been invested in social and environmental compensation and in the 28 programs included in the Basic Environmental Plan (PBA), including the Reassignment Program for the Affected Population.



## 28

### ENVIRONMENTAL PROGRAMS IN SAE ENVIRONMENTAL BASIC PLAN

## SAE in numbers



**50** bulb turbines– suitable for high flow and low fall rivers

**6 turbines** produce energy exclusively for Rondônia – Acre regional system, supplying up to **40%** of the consumption of both States through a specific transmission line at **230 kV**



Installed capacity of **3,568 Megawatts**, enough to serve **45 million** people with clean and renewable energy



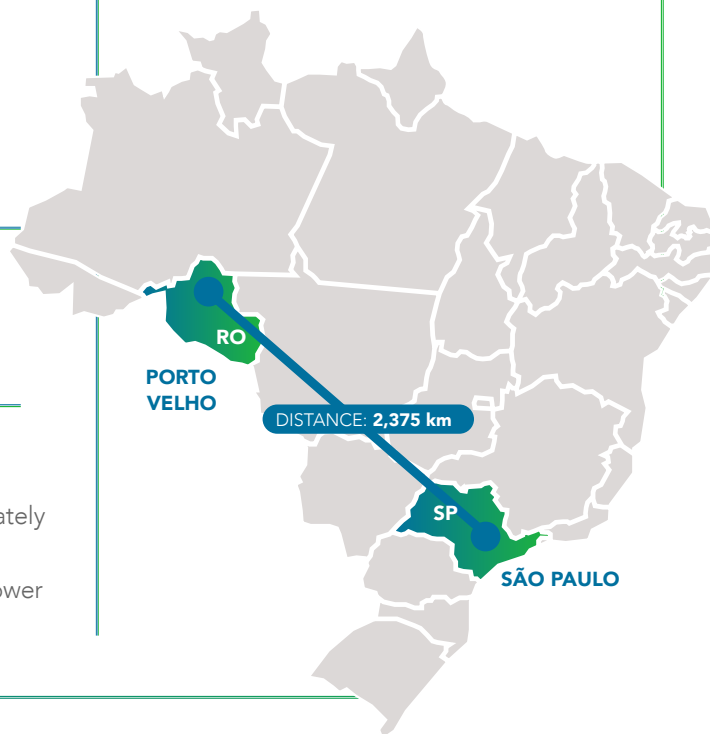
**17,624,561.97 MWh** of net energy generated in 2022



**R\$20 billion** invested approximately from the feasibility studies for the construction of the Hydroelectric Power Plant to date



Part of the energy produced travels **2,375 km** through “**Linhão do Madeira**”, one of the largest direct current transmission lines in the world. The “line” connects **Porto Velho (RO)** to **Araraquara (SP)**, from where energy is distributed to several states by the National Interconnected System (SIN)



## Mission, vision and values



### Mission

Turn the power of water into energy for you and Brazil.



### Vision

We understand that man and nature are complementary and seek the best benefits of this association.

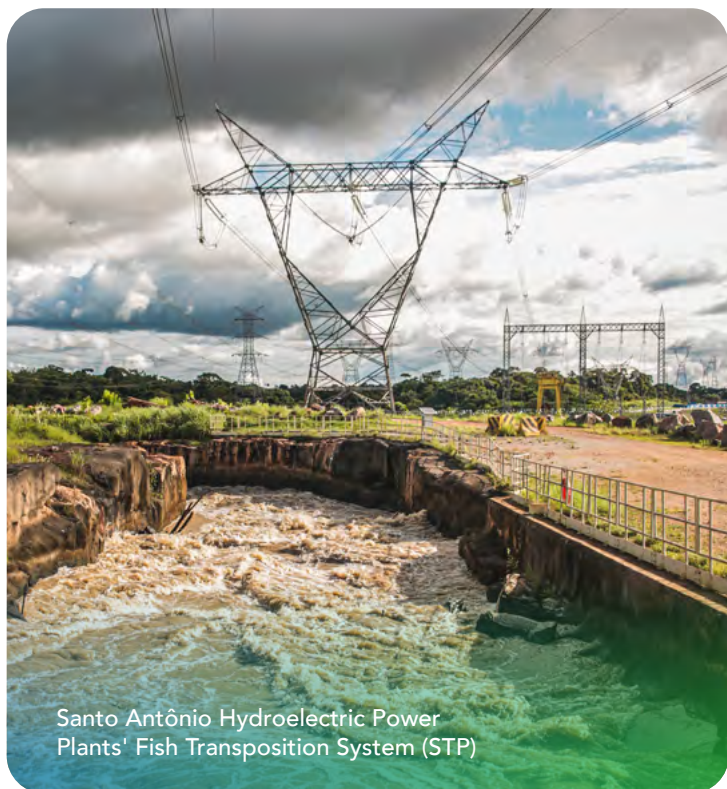


### Values

Sustainability, clarity, efficiency, creativity, trust, ethics and responsibility.



SAE's commitments converge with high international sustainability standards



Santo Antônio Hydroelectric Power Plants' Fish Transposition System (STP)

## Commitments and associations GRI 2-22, 2-28

### Amazônia+21 Institute

Santo Antônio Energia was the first company to join the Amazônia+21 Institute, a civil society organization created by the National Confederation of Industry (CNI) and Pro-Amazon Action. The institute aims to promote sustainable business and contribute to the development of the region. The partnership begins with the project of the first bioeconomy center in the Amazon.

### Equator Principles

Santo Antônio Energia follows the Equator Principles, which establish a risk management framework to support financial institutions in decision-making. This framework considers International Finance Corporation (IFC) sustainability standards and World Bank environment, health and safety guidelines. SAE is audited by independent consultancy periodically based on these principles and standards, since the beginning of the construction of the hydroelectric power plant. [For more information, read Integrated Management.](#)

### Brazilian Global Pact Network

SAE is also a signatory company of the UN Global Compact Brazil Network, respecting the ten principles of the institution related to human rights, labor, environment and anti-corruption, in addition to the Sustainable Development Goals (SDGs).

### Ethos Institute

SAE was the first company in the State of Rondônia to join Ethos Institute's Business Pact for Integrity and Against Corruption.

In addition, the Company is affiliated to the following associations:

- Associação Brasileira das Empresas Geradoras de Energia Elétrica (Brazilian Association of Electricity Generating Companies - Abrage)
- Associação Brasileira dos Comercializadores de Energia (Brazilian Association of Energy Traders - Abraceel)
- Brazilian Association of Accountants of the Electric Energy Sector (Abraconfee)
- Associação Brasileira dos Produtores Independentes de Energia Elétrica (Brazilian Association of Independent Electric Power Producers - Apine)
- Câmara de Comercialização de Energia Elétrica (Electric Power Trading Chamber - CCEE)

# TIMELINE



## 2005

★ Started the Environmental Impact Statement (EIS) and Environmental Impact Report (EIR).



## 2007

★ Grant of Prior Approval (PA).



## 2008



★ **Grant of the Installation Permit and start of construction of the hydroelectric plant on the Madeira River.**



## 2009



★ **Adherence to the Equator Principles, which guarantee the best sustainability practices in accordance with IFC (International Finance Corporation) guidelines.**

★ Training of the workforce for civil construction through the ACREDITAR project (The workforce had 21,700 workers at the peak of the work – 83% were from the state of Rondônia).



## 2010

★ The project “Dialogue with the Riverside Community on the Installation of the Santo Antônio Hydroelectric Power Plant” earned the Public Opinion Award (Prêmio de Opinião Pública - POP) in the Social and Environmental Responsibility category. The initiative nationally recognizes the best practices in communication and public relations.



## 2014



★ **Received the highest number of top scores in sustainability among all the plants evaluated by the International Hydropower Association (IHA), a non-profit entity supported by UNESCO. See the report.**

★ Won the 6th Medical Services Innovation Award, in the Tropical Medicine category, in the Malaria Control actions modality.

★ Launch of the Book - “Fish from the Madeira River” on the species collected during the monitoring of fish in the Madeira River, with more than 1,000 cataloged species and more than 40 new species.



## 2013



★ **Began the commercial operation of the 10th unit generator.**



## 2012

★ In March, nine months ahead of schedule, the first two turbines went into commercial operation.

★ Won the Public Opinion Award (Prêmio de Opinião Pública - POP) for the second time with the project “Santo Antônio Energia in the fight against malaria in Porto Velho – Going beyond the obligation with the Public Relations program”.



## 2011



★ **Received the Operating License 12 months before the scheduled date for a period of ten years.**



## 2015

- ★ Finalist in the 2015 Inter-American Development Bank (IDB) Sustainable Infrastructure Award.
- ★ Porto Velho is classified by the Ministry of Health as a low risk area for malaria by the Ministry of Health, as a result of the SAE Public Health Program.




## 2016

- ★ Renewal of Ibama's Operating License for a period of more than ten years.
- ★ Implementation of the Integrated Management System (IMS) based on ISO International Standards for occupational health and safety and the environment.



## 2017

 **The hydroelectric plant goes into full operation with its 50 turbines.**

- ★ 1st Captive reproduction of Piramutaba - *Brachyplatystoma vaillantii*.



## 2018

- ★ First energy generation record: 3,266 MW/h, reaching the accumulated mark of 10 million MW/h.
- ★ SAE hits the mark of R\$ 300 million in royalties paid to the municipality, state and union.




## 2022

 **Ten year anniversary of SAE's operation.**

- ★ Increase in equity interest and assumption of share control by Eletrobras Furnas, making SAE a company of the Eletrobras group.
- ★ Won the Professor Samuel Benchimol Award for the performance in sustainability projects in the Amazon.
- ★ Term of Commitment signed with ICMBio on Parna Mapinguari.
- ★ Joined the 100% Transparency Movement, an initiative of the UN Global Compact Brazil Network.



## 2021

 **Won "Empresa Pró-Ética" Award, a partnership between the Ethos Institute and the Comptroller General of Brazil (Controladoria-Geral da União - CGU).**

- ★ Participates for the first time in the Great Place to Work (GPTW) and gets the 36th position in the ranking of medium-sized industries.
- ★ Association with Instituto Amazônia + 21 with the objective of articulating innovative projects in the North of the country.



## 2020

- ★ Adherence to the United Nations Global Compact.



## 2019

- ★ Wins the Quality Brasil Award, recognition to companies that contribute to social and economic development. SAE was awarded for the Turtle Conservation project carried out in partnership with Ecovale (Quilombola and Ecological Community Association of the Guaporé Valley).

# 2022 HIGHLIGHTS



## Ten Years in Commercial Operation

SAE completed **ten years of commercial operation** in 2022. On this date, a week of events was held in Rondônia with the main stakeholders. Members of SAE Board of Directors were present, most of whom are appointed by the controlling shareholder Eletrobras Furnas/Eletrobras, as well as government representatives and regulatory entities. Participants took a guided tour of the plant, visited Porto Velho and the history of the city. There was also a relationship with the local press, activities with members and also a relationship strategy in a digital environment.

## Professor Samuel Benchimol Award

SAE was recognized by Professor Samuel Benchimol award, granted by the Council of Organizations of Professor Samuel Benchimol Awards, in the category "**Company in the Amazon**", which distinguishes companies that balance their business with strengthening local production chains and sustainable development and take into account the importance of the Amazon Region for national development.

## Coffee with the CEO

To expand the dialogue with senior management, the **Coffee with the CEO** initiative was launched. Meetings take place every four months, when the members sign up for this moment with the CEO. In each edition, the topics are selected according to the participants' suggestions, with clarification of doubts and generating improvement plans for management. Three editions were held in 2022, with the participation of **30 people**.

## Great Place to Work

SAE obtained the **Great Place to Work (GPTW)** certification in the fiscal year 2021-2022, proving to be one of the best companies to work for in Brazil. The survey was responded by more than **75%** of the internal public and reinforces the Company's commitment to providing a safe and excellent environment to work.

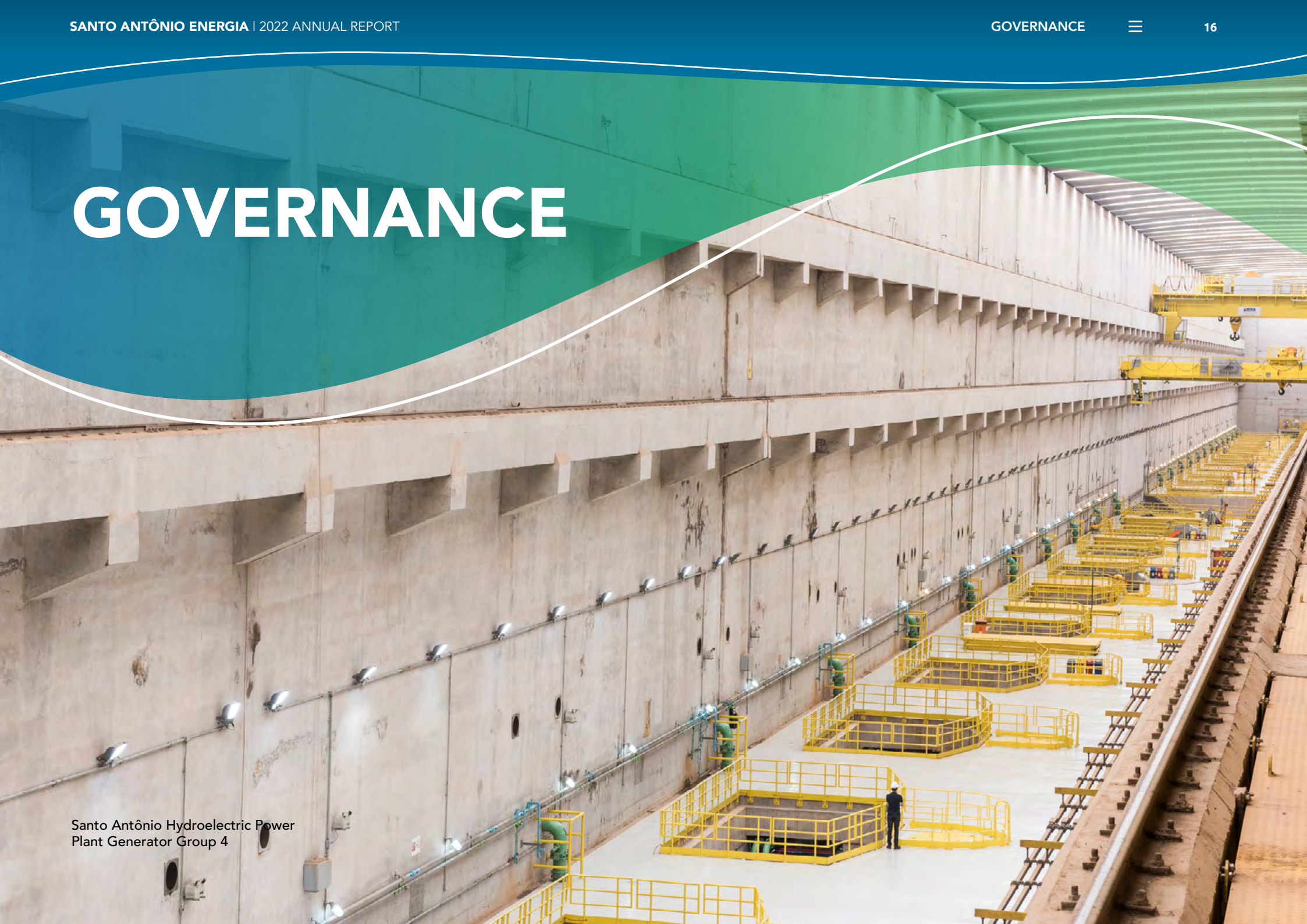
## Center for Bioeconomy and Conservation of the Amazon

A partnership between SAE and Amazônia+21 Institute gave rise to the Amazon Bioeconomy and Conservation Center, an initiative to foster sustainable development in the Upper Madeira River region. It will occupy an area of 1,000 hectares in the resettlement region of Vila Nova de Teotônio, where more than **400,000 seedlings** of native species were planted. The Center will have conservation and reforestation actions, research laboratories, a biofactory and a nursery with the capacity to produce up to two million seedlings per year.

## Celebrating together

Some members celebrate **ten years at home**, that is, they work at Santo Antônio Energia since the beginning of its commercial operation. They were honored with a medal presented by the company's Board of Directors.

# GOVERNANCE



Santo Antônio Hydroelectric Power  
Plant Generator Group 4



# GOVERNANCE STRUCTURE

GRI 2-9, 2-10, 2-11, 2-12, 2-14, 2-16, 2-17, 2-18, 2-19, 2-20

Santo Antônio has a firm governance structure, comprised by a Board of Directors, supported by four standing committees, an Executive Board and an Audit Committee, in addition to the General Meeting of Shareholders (AG), which meets at least once a year. SAE's Board of Directors was established in 2014 and is the Company's main governance body, with its Bylaws approved in 2018. The Company's Bylaws define the functions and rules for choosing the members of each instance.

## General Meeting

It shall be convened by the Board of Directors or in accordance with the law. The Annual General Meetings are held within four months after the end of the fiscal year and the Extraordinary General Meetings will be held whenever necessary subject to the interests

of the Company. In addition to the duties provided for by law, the General Meeting shall approve any change in the Governance Policy, established within the scope of MESA holding.

## Board of Directors

Comprised by at least five and at most 13 full members, elected for one-year terms by the General Meeting, with the possibility of re-election. The number of directors must always represent an odd number. The Company's Bylaws state that at least 20% of the directors must be independent and expressly declared, a good practice of Santo Antônio Energia, already following the guidelines of Novo Mercado B3 segment regulation. The positions of Chairman of the Board of Directors and Chief Executive Officer cannot be held by the same person.

At the Extraordinary General Meeting held on July 8, 2022, the shareholders approved a new composition of SAE Board of Directors, which was comprised by 11 members, seven appointed by Eletrobras Furnas (with alternates), two appointed by the minority shareholders (with alternates) and two independent directors. Of the total number of Board members, five are women, including the president and vice-president of the body. The members of the Board of Directors must meet the legal, regulatory and statutory requirements in force, in addition to having experience, knowledge and outstanding professional performance.

The Board of Directors is responsible, among other duties, for defining business strategies, electing and dismissing board members, analyzing the financial statements, approving budgets and defining the compensation of directors and officers, subject to the limits set by the General Meeting, and entering into contracts with related parties. It is also responsible for overseeing the work of directors. The agency must ensure the Company's interests and continuity, be guided by agile management, prevention of conflicts of interest, risk management, maintenance of compliance and sustainability programs. It should also ensure compliance with governance policies and accountability to regulatory bodies. The agency is responsible for approving the Company's Sustainability Report.

The Board of Directors has four non-statutory standing support committees, which act on a regimental basis: Audit, Risks and Compliance Committee; Strategy, Commercialization and Regulatory Committee; Finance Committee and People Committee. The committees do not have an executive function, only advisory. Eventually, temporary support committees

with a term defined by the board may be established. In the current governance structure, the Company has a Compliance and Risk Management area and an Internal Ethics Committee reporting to the Audit, Risks and Compliance Committee and, ultimately, to the Board of Directors.



## Executive Board

It consists of a maximum of six directors elected by the Board of Directors for a term of two years, reelection being allowed. The members must include a Chief Executive Officer and an Investor Relations Officer. Currently, the board of directors is also composed of directors of Operations and the Commercial and Regulatory area (non-statutory). The position of Chief Financial and Investor Relations Officer has been held by the Chief Executive Officer since June 2022. The executive board is responsible for the management of the Company and the distribution of services and tasks, among other duties. The board reports to the Board of Directors and has the support of a Legal Advisory.

## Audit Committee

Non-permanent instance, installed at the request of shareholders. It is comprised by at least three and at most five members, with the possibility of re-election being opened. It is responsible for supervising and evaluating financial management, as provided for in the legislation. Currently installed, it meets at least every quarter to analyze balance sheets and financial statements.

## Compensation and evaluation

With respect to the Company's compensation policies, in accordance with the Bylaws, the General Meeting establishes the global annual compensation of the managers, including the benefits, and the Board of Directors is responsible for distributing the compensation fixed between its members and the Executive Board. In April 2022, the shareholders unanimously approved the annual global compensation of the managers of SAE and its parent company Madeira Energia S.A. (MESA), on a consolidated basis, for the 2022 fiscal year in the amount of up to R\$9.2 million.

At the request of the Board, the Company conducts market research to assess the competitiveness of its compensation. The variable compensation of statutory executives is directly related to the objectives and performance of the business, based on the definition of a business plan with metrics and indicators by the Board of Directors.

According to the Bylaws of the Board of Directors, individual, monthly and fixed compensation is allocated to the members of the Board of Directors. Alternates may be entitled to compensation if they have replaced a member or participated in support committees. Independent directors may have a compensation different from the others if the majority decides and approves the differentiation.

## Compensation competitiveness is assessed in market research



In recent years, within the scope of the approval of the individualization of the compensation of the Board of Directors, the compensation of the members of the Board of Directors has corresponded to 10% of the monthly fixed compensation of the Chief Executive Officer, and the independent members who participate in one or more committees receive additional compensation corresponding to the total compensation of the member. Alternate directors who participate in committees are entitled to 50% of the compensation of the incumbent director.

As provided in its Bylaws, the Board of Directors must carry out an annual evaluation of its performance in order to improve its duties, and the evaluation process must be carried out by external specialized consulting, independently, according to a methodology previously approved by the directors.

## Communication and Sustainability

The communication with the Board of Directors of Santo Antônio Energia takes place with the support of the Corporate Governance area, which advises the periodic meetings with the directors and board of directors of the concessionaire, and is also responsible for communicating sensitive issues that need to be informed with priority or treated urgently. The executive board has a close, timely, and transparent relationship with the directors.

The topics covered in the risk matrix are dealt with in the informative or deliberative field at ordinary meetings of the Board of Directors. There were 12 ordinary meetings held in 2022. In extraordinary meetings, critical, sensitive and most urgent factual topics are addressed. In 2022, the extraordinary meetings dealt with topics such as the arbitration process between the concessionaire and the construction consortium, energy operation for hedging, capital increase and others.

Sustainability is disseminated by all the Company's governance bodies. Since 2020, the topic has been a strategic pillar defined by the Board of Directors. In 2022, the extraordinary meetings addressed the arbitration process between the concessionaire and the construction consortium; the energy operation for hedging

## In 2022, the SAE Board of Directors established targets for compliance with ESG practices

and the capital increase, among other topics with all members and monitored in a monthly meeting through the Prometas Program. The Risk Management Policy and the Integrated Management System (IMS) Policy establish Santo Antônio Energia's commitment to occupational health and safety, the environment and business impacts, through the continuous improvement of its processes. In addition, SER Culture and the Company's Mission, Vision and Values cover sustainable development as something to be pursued by senior management and by all members in general.

The Company has also been more active with regard to its communication with the external public on the subject of sustainability. An example is the announcement of its accession to Amazônia+21 Institute, published in the press and social networks.

### Learn more

[Santo Antônio Energia's governance structure](#)



## Eletrobras Furnas becomes majority shareholder and controlling shareholder of Santo Antônio Energia

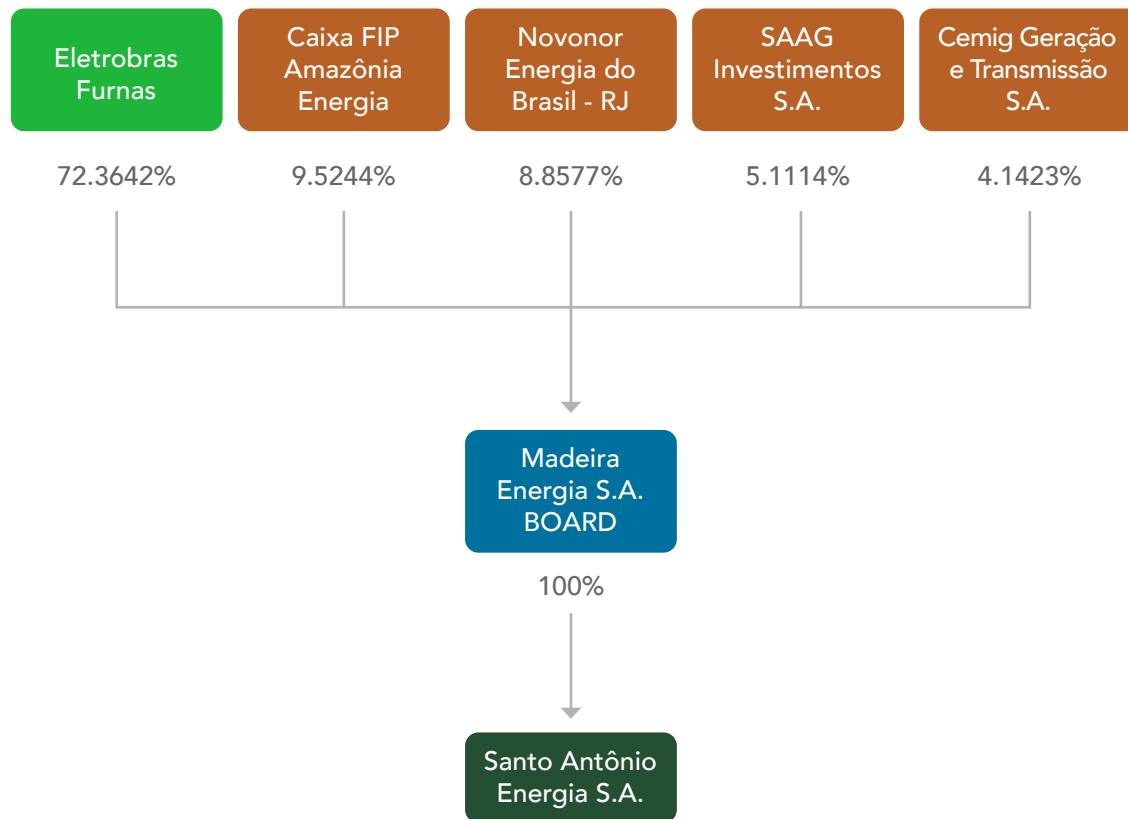
Santo Antônio Energia's shareholding composition was changed in 2022. Madeira Energia S.A. - MESA, SAE's parent company, received a financial contribution from Eletrobras Furnas, a subsidiary of Eletrobras. The contribution was intended to comply with the financial obligations arising from an arbitration process with the construction consortium and corresponding agreements signed between the parties. Eletrobras Furnas already had a relevant shareholding at MESA, but the contribution and the new composition of the Board of Directors redefined the corporate structure, with Eletrobras Furnas becoming a majority shareholder and also a controlling shareholder of the Company.

The change brings an expectation of maturity and sustainability for SAE, which now has the experience of 65 years of Eletrobras Furnas in the energy market, with a solid economic and financial situation. Culture of innovation, integrity, diversity and energy transition are some topics of synergy between companies. [Meet the new shareholding structure of MESA.](#)



Night view of the Santo Antônio Hydroelectric Power Plant from the left bank

Shareholding composition (12/31/2022 base)



█ Controlling shareholder    
 █ Non-controlling shareholder    
 █ Holding company

*In March 2023, Eletrobras Furnas expanded its share in MESA capital through the acquisition of the direct and indirect interests of the companies Cemig Geração e Transmissão S.A. (CEMIG GT); Andrade Gutierrez Participações S.A (AGPar); Novonor Energia do Brasil S.A. – under reorganization (Novonor); and Pension Funds. Part of the acquisitions carried out by Furnas has precedent conditions, and, once they are completed, Eletrobras Furnas will hold a 95.2% interest in MESA capital. As it is a subsequent event, the organization chart above does not reflect the new shareholding composition.*

# ETHICS, INTEGRITY AND COMPLIANCE

GRI 3-3, 2-23, 2-24, 205-2, 413-1



Santo Antônio Energia has policies and procedures to maintain and disseminate a culture of ethics and integrity. To this end, the Company meets legal obligations and has in its organizational structure a specific area that encompasses the topics of compliance, corporate risks, internal controls and internal audit. In 2022, the Company acted to improve its Compliance Program. With regard to the normative documents, in February 2022 the Conflict of Interest Policy was implemented, for which all members were properly trained. Learn about this and other SAE documents:

- **Conflict of Interest Policy:** aims to prevent personal interests of members or third parties from interfering in the business.
- **Anti-Corruption Manual:** it has guidelines and warnings on situations that pose a risk of corruption.
- **Code of Ethics and Conduct:** directs on the adoption of ethical conduct in the relationship with various stakeholders. It is complemented by the Code of Ethics and Conduct for Suppliers.
- **Anti-Corruption Policy:** expresses the ethical principles and commitments for the conduct of business in a responsible manner, including compliance with the Anti-Corruption Law (12,846, of August 1, 2013).

[Learn more](#)

[Access the main public documents of SAE](#)

In October 2022, Santo Antônio Energia joined the **100% TRANSPARENCY MOVEMENT**, held by the Platform for Action against Corruption of the Global Compact, with the objective of fostering institutional commitments and transparent public attitudes that generate a virtuous circle, self-assessment and concern for the companies' value chain.



Maria do Carmo Selim,  
Secretary of the Executive Board

In 2022, 100% of SAE members were trained or communicated on anti-corruption policies and procedures. This goal has been achieved since 2018, the year of implementation of the Integrity Program. [GRI 205-2](#)

In addition to the documents aforementioned, the Company has: Investigations Policy; Corporate Risk Management Policy; Third Party Integrity Verification Procedure; Donations, Sponsorships and Cooperation Procedure; Third Party Integrity Verification Procedure; and Concerns and Complaints Reporting Procedure. All documents were approved by the appropriate governance bodies.

The reading and assimilation of the Code of Conduct and internal policies are the duties of all those involved in Santo Antônio Energia's activities, ensuring compliance with the Integrity Program. The code is available on the Company's website, while the other policies can be accessed on an internal document management platform.

The commitments established in the Code of Conduct are also reflected in SAE's business strategy and prioritized by the senior management with indexes and goals, linked to strategic guidelines. They are also reflected in the Company's corporate risk matrix and must be adopted in the relationship with all stakeholders, whether suppliers and partners, government, shareholders, communities or the press. In all business relationships, clauses of commitment to the Code of Ethics and Conduct are inserted in order to encourage partners to act governed by the same values established by Santo Antônio Energia in the conduct of its business.

In 2022, the Company joined the 100% Transparency Movement, an initiative of the UN Global Compact Brazil Network to foster institutional commitments and transparent public attitudes. Achieving the goals of the 100% Transparency Movement contributes to the continuous improvement of SAE Integrity Program, reinforcing the Company's commitment to its stakeholders.

## Dissemination of the culture of integrity

A fundamental pillar for the Integrity Program, several communications and training were developed throughout the year in order to disseminate the Company's culture of integrity to the internal and external public. Using various communication channels, such as Rota Digital, Jornal Mural, intranet and posters displayed throughout the plant and in the offices of Porto Velho and São Paulo, awareness campaigns were carried out to strengthen the culture of ethics and integrity in the Company's daily work.

The annual Compliance training, held in November 2022, featured a series of interactive activities, being initiated by an online lecture. Then, the Company partnered with a theater group from Rondônia to perform a personalized show, which included real cases received by the company's Complaints Channel and guidance on how to proceed. The play "Compliance in Scene" was staged in four sessions for the members of the plant and made available on video to the team of São Paulo office. Finally, a virtual game - Compliance Play – was promoted so that participants could develop learning and test their knowledge on the topics of the Code of Ethics and Conduct through an internal application that allows gamification strategies.

Outsourced suppliers working at the plant were also sensitized on the topic of integrity through face-to-face DDS ("daily sustainability dialogues") activities, receipt of the Supplier Code of Ethics and Conduct, as well as specific online training modules, focused on moral and sexual harassment.



Outsourced employees  
of Santo Antônio Hydroelectric Power Plant



"Compliance on scene" play performed at  
Santo Antônio Hydroelectric Power Plant





## SANTO ANTÔNIO ENERGIA HAS A COMMITMENT TO THE CULTURE OF INTEGRITY

With a medium and long-term vision, Santo Antônio Energia is committed to applying the highest standards of integrity, legality and transparency in the conduct of business. The Company works in line with a planning that is based on guiding pillars of corporate strategy.

Within the formal commitments assumed with external entities, since 2019 the Company has been a signatory to the Business Pact for Integrity and Against Corruption promoted by the Ethos Institute, which aims to unite companies to promote a more integral and ethical market and eradicate bribery and corruption.

In 2020, Santo Antônio Energia joined the UN Global Compact, aligning its strategic corporate guidelines with the Sustainable Development Goals (SDGs) and the 2030 Agenda, one of the SDGs prioritized being SDG 16 – Peace, Justice and Strong Institutions – which includes commitments to substantially reduce tax evasion, corruption and bribery in all its forms and increase the transparency, accountability and effectiveness of institutions, at all levels.

In December 2021, the Company was recognized as a Pro-Ethics Company by the Office of the Federal Controller General (CGU) which, after a careful evaluation of the Integrity Program, attested to the company's commitment to the adoption of integrity measures aimed at the prevention, detection and remediation of acts of fraud and corruption.

The Company works to curb any and all practices that constitute abuse of human rights in the workplace.

## Human rights GRI 3-3, 2-23

Santo Antônio Energia's Code of Ethics and Conduct informs the basic procedures and attitudes for the Company to implement respect for human rights. In addition, in 2010 the Company became a signatory to the Declaration of Corporate Commitment to Prevent and Stop Sexual Exploitation of Children and Adolescents, an initiative of the Secretariat of Human Rights, linked to the Ministry of Justice. SAE also participates in the UN Global Compact, which advocates for ten universal principles derived from the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

The Company works to curb any and all practices that constitute abuse of human rights in the workplace, including slave labor or analogous to slavery, work in degrading or inhumane conditions and child labor. Currently, the Occupational Health and Safety area acts in a preventive manner and with a focus on the well-being of members and third parties. Violation reports can be made through the Reporting Channel, monitored by the compliance and risk department.

In 2022, through the processes and due diligencies conducted by the Compliance department, no suppliers with active contracts in the SAE that presented significant risks of cases of child labor, forced labor or analogous to slavery were identified. It is noteworthy that all suppliers of Santo Antônio Energia are committed to contractual clauses and sign a document informing that they do not practice any type of slave or slave-like labor, nor do they use child labor. Santo Antônio Energia Code of Conduct expressly prohibits these practices.

## Whistleblowing channel

GRI 2-16, 2-26

Santo Antônio Energia has an exclusive, confidential and impartial Concern Reporting Channel made available so that members, suppliers and third parties can, safely and anonymously (if they wish), report any suspicious conduct that may not be in accordance with Santo Antônio Energia's Code of Ethics and Conduct, or even in apparent disagreement with any current legal and regulatory rule. It is worth noting that any offenses provided by Law No. 12,846/2013 may be reported.

Santo Antônio Energia guarantees through this channel total confidentiality of the information provided. The information

is received by an independent company specialized in receiving and handling ethical issues, ensuring absolute secrecy.

Information received is treated in a confidential manner. The objective is to provide a safe corporate environment aimed at maintaining the company's values provided in its Code of Conduct and Ethics. Concerns and reports can be escalated via the Concern Report Form or by phone.

Since the implementation of the Whistleblowing Channel in October 2018, a total of 245 reports have been received. Of these, 61 complaints were received in 2021 and 75 complaints in 2022, representing an increase of approximately 40% over the previous biennium (2019-2020) and an average of 0.15/year complaints per employee.

Suppliers, moral harassment, health and safety represent the most referenced categories in the reports presented by the whistleblowers, representing approximately 75% of the total number of complaints. It is important to highlight that the learnings of the Reporting Channel are fundamental for continuous improvement of the Compliance Program and are used to define the strategic planning of the area and definitions of its actions, such as preparation of specific training and communications, preparation of new policies, among others.

Regarding the treatment of complaints, 23.26% of the reports received in the 2021-2022 biennium were considered valid – representing seven reports in 2021 and 23 reports in 2022.

Among the disciplinary measures applied in the period through deliberation of the Internal Ethics Committee, it can be mentioned, among others, blocking suppliers for new hires, verbal warning and dismissal without cause.



### Concerns Report Form

Available on the Intranet or at the link Hello Ethics.



### Telephone Service

0800 0330 321



### Code of Ethics

Learn about the Code of Ethics and Conduct

## Conflicts of interest GRI 2-15

The Company has a Conflict of Interest Policy and other documents that address the subject, such as the Internal Regulations of the Board of Directors. According to these documents, the member of the Board must declare himself previously prevented from voting on resolutions that relate to contracts, agreements, businesses or transactions to be entered into between the Company and the shareholder who has appointed said director, to which the director is linked, to companies belonging to the same economic group or, even, with third parties that enter into subcontracts with said shareholder. If a director who fits the situation described does not abstain from voting, any other director may request the impediment of voting, provided that it is duly grounded in the Internal Regulations, the Conflict of Interest Policy and the legislation in force.

In addition, any contract or transaction with related parties is duly submitted to the Board of Directors for approval. The contracts are also duly disclosed in the Company's Financial Statements.



Electrical gallery of the Santo Antônio Hydroelectric Power Plant

## Risk Management GRI 3-3, 2-13

Santo Antônio Energia recognizes that integrated risk management is directly related to sustainable growth, profitability and value creation for its shareholders, so it must be integrated into the company's strategy and culture. The Company has a Corporate Risk Management Program and a Risk Management Policy. The management methodology classifies risks into four pillars: Financial, Compliance, Operational and Business. ESG (acronym for environmental, social and governance) is considered a cross-cutting theme in SAE risk matrix.

In its risk portfolio that was updated in November 2022, the Company monitors the 23 strategic risks that are evaluated quantitatively and qualitatively. The risks monitored are related to governance, occupational health and safety, financial, environmental, legal, commercial and regulatory. It should also be emphasized the monitoring related to meeting socio-environmental issues, mitigation and adaptations related to climate change.

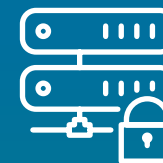
Regarding the governance of risk management, the Company has a Risk Management department that monitors and consolidates reports to the top management. The managers of each risk act as the first line of defense and are responsible for the execution of processes on a daily basis. The Board of Directors shall approve

the risk matrix, as well as define the acceptable risk limit in the conduct of business and ensure its prior identification by the Executive Board, monitoring the probability of occurrence and adopting measures for prevention and mitigation. The Audit, Risks and Compliance Committee has as one of its duties the advice to the Board in monitoring risks.

The Company has an Integrated Management System (IMS) aligned with corporate risk management acting in the prevention and mitigation of health, occupational safety and environmental risks. SGI has the support of senior management and strategic managers in the continuous improvement of the system. The various areas of the Company carry out risk management actions and impacts of its activities as a result of the commitments established in the Integrated Management System Policy.



**23**  
CORPORATE RISKS  
MONITORED



### Changes in technology and information security

In 2022, Santo Antônio Energia carried out initiatives aimed at modernizing and improving information security by the company. One of these changes was the transfer of the Company's physical data center to a cloud environment. This change included the updating of tax, identity and database systems. The adoption of the new infrastructure collaborates to accelerate SAE's digital transformation.

Another modernization carried out during the year was the update of the company's firewall, with internal changes that raised the level of security of the network, adoption of double identification factor for access to VPN and update of servers and systems. These measures have made the company more secure and protected against cyberattacks. In addition, the Information Technology department aims to make a campaign in 2023 to increase the level of risk perception by members.

# STRATEGIC PLANNING

Santo Antônio Energia has a strategic plan that translates the Company's medium and long-term visions through three pillars and specific drivers. The planning comprises internal and external challenges and opportunities, which interconnect and reinforce each other, in order to allow the expansion of the Company's reinforcements.

## Strategic pillars

**Ser+ para dentro:** includes initiatives to strengthen SER Culture, clarity and transparency in communications, and zeal for operational and cost excellence

**Ser+ para fora:** aims to foster influence and proactivity in external discussions that directly affect the progress of the business

**Ser+ além:** aims to diversify and expand the business with the tireless search for continuous improvement, efficiency and innovation, in addition to preparing the team and the organization for the new technological and socio-environmental challenges

## Strategic drivers

| SER+ PARA DENTRO   | SER+ PARA FORA  | SER+ ALÉM   |
|--|---|---|
| <p><b>People, culture and transparency</b><br/>Strengthen SER Culture with an organizational climate and excellent performance, transparency in communication, taking care of the well-being of members and third-party employees.</p> | <p><b>Capital structure and debt restructuring</b><br/>Value creation by exploiting all opportunities that enable debt restructuring with a reduction in the cost of capital to safeguard long-term economic and financial sustainability.</p>  | <p><b>Diversification of generation</b><br/>Evaluate the most advantageous possibilities for the diversification of energy generation, focusing on clean energies.</p>  |
| <p><b>Economic and financial sustainability</b><br/>Enable and optimize funds, contracts, projects and processes.</p>  | <p><b>Regulatory and judicial issues</b><br/>Act with the granting authority, regulatory agent and judicial spheres to ensure the Operating License, seeking favorable decisions for the Company and a structural solution for the GSF.</p>   | <p><b>New businesses</b><br/>Study the feasibility of generating new business: establishing partnerships with universities and <i>startups</i> to leverage the diversification of generation, creation of an energy trading company in order to optimize the commercialization process; the enhancement of synergistic activities (tourism, forest management, fish farming, R&amp;D consulting, etc.).</p> |
| <p><b>Operational excellence – FID 100%</b><br/>Leverage the efficiency and productivity of the plant, operational and regulatory, in order to achieve FID 100%.</p>   | <p><b>Communication and reputation</b><br/>Act in communication, relationship with <i>stakeholders</i>, member engagement and active participation in forums, sectoral discussions and partnerships to strengthen the reputation of the Santo Antônio Energia brand and its ESG essence (environment, social and governance).</p> | <p><b>Carbon market</b><br/>Acting in the carbon market as a source of complementary, sustainable revenue and reaffirming the Company's reputation.</p>   |
| <p><b>Hydrological risk</b><br/>Execute the actions established in the short, medium and long term hydrological <i>hedge</i> policy, and reassess the physical guarantee of the plant aiming at energy and financial gains.</p>        | <p><b>Socio-environmental commitments</b><br/>Optimize socio-environmental commitments, maintaining the best initiatives in relation to the communities surrounding the reservoir and the environment and ensure the strengthening of the Integrated Management System.</p>   | <p><b>Innovation and continuous improvement</b><br/>Improve internal programs to stimulate the emergence of ideas for improvements and new businesses, fostering innovation with a focus on 5Ds (decentralization, digitization, decarbonization, diversification and disruption).</p>  |
| <p><b>Governance, risk management, compliance and internal controls</b><br/>Strengthen governance mechanisms, risk management, Compliance Program actions and internal controls.</p>   |   |   |

# PROSPERITY



Main spillway of the Santo Antônio Hydroelectric Power Plant

# ECONOMIC AND REGULATORY SCENARIO

The year 2022 was marked by the change in Santo Antônio Energia's shareholding structure, based on the result of the arbitration process ([read more](#)). While the process has brought significant financial impacts to the Company, there is a positive expectation regarding the shareholding control undertaken by Eletrobras Furnas, since the robustness and experience of Eletrobras companies generate confidence in the market. Eletrobras Furnas' financial contribution led the ratings agency Fitch, which evaluates SAE's debentures, to reaffirm its rating in BBB- (Good credit quality) with a stable outlook for the Company, a rating that indicates low risk.

From the second half of 2022 there was a reduction in the Broad Consumer Price Index (IPCA), which updates the cost of debt. Even so, the accumulated index was well above what the Central Bank predicted (5.79% vs. 3.5%), a condition that represented a negative impact on the financial cost of debt. On the other hand, the Company adhered to the program of temporary suspension of debt collection, the standstill, from December 2021 to June 2022, which represented a liquidity for the Company's cash of approximately R\$857 million.



The solidity and experience of Eletrobras Furnas **add positively** to the management of SAE's business

# ECONOMIC AND FINANCIAL RESULTS GRI 201-1

Despite the negative accounting and financial results, mainly resulting from the payment of the debt imposed by the loss of the arbitration process, Santo Antônio Energia closed the year with cash flow liquidity. The Company makes conservative investments, which benefited from the increase in the CDI and favored the compensation of its financial revenues.

## Learn more

SAE's economic and financial information is available in the Management Report, [click here](#).

## Economic value distributed (R\$) GRI 201-1

| DISTRIBUTED                   | 2022                    |
|-------------------------------|-------------------------|
| Employee salaries             | 94,009,560.34           |
| Employee benefits             | 21,782,607.71           |
| Payments to capital providers | 2,101,109,869.05        |
| Payments to government        | 230,499                 |
| Investments in the community  | 365,714.11              |
| <b>Total</b>                  | <b>2,217,498,250.21</b> |

## Economic value generated (R\$)

| GENERATED | 2022         |
|-----------|--------------|
| Revenues  | 4,137,000.00 |



Marília Torres,  
Treasury Coordinator, Accounts  
Payable and Receivable



# OPERATING RESULTS <sup>EU6</sup>

2022 marked the first year with a full return to plant activities after the pandemic period, during which health indices imposed social distancing measures. The Company achieved all its operational goals, always with continuous improvement movements.

Santo Antônio invested more than R\$165 million in operational improvements at the plant last year. Some projects financed included, as an example, the beginning of implementation of the wagon gate wheel lubrication project, the acquisition of equipment to maintain the Trunk Management System (SMT), the exchange of carbon steel pipes for stainless steel, the beginning of the exchange of voltage regulators, the replacement of battery banks and the obligations of environmental and land conditions.

Short and long-term maintenance practices are based on the planning of major shutdowns and the Preventive Maintenance Plan (PMP), considering the needs of the assets:

- **Large shutdowns:** An annual and multiannual schedule is prepared by the Engineering and Maintenance departments, with subsequent evaluation by the Operation team, considering the hydrological behavior and the feasibility of carrying out the activities in order to minimize the impacts on the plant availability indicators. Weekly, the activities are monitored and the adherence to the initially prepared schedule is checked, making the necessary adjustments.

- **PMP:** Every preventive maintenance plan is registered in Oracle-EAM software, where the maintenance orders that guide the performance of activities in the field are generated, and the information is fed back after completion of the services.

The National System Operator (ons) shall coordinate and define the generation amount for the subsequent day considering water use availability and according to the expected load demands of SIN. ONS is responsible for demand management.

Santo Antônio Energia has a concession for electricity generation, its transmission assets are only intended to interconnect the Hydroelectric Power Plant to the receiving substations. Still, the transmission assets also have maintenance plans that follow the minimum requirements of Anel 906 resolution dated 12/08/2020.



The Company **achieved all its operational goals**, always with continuous improvement movements

Learn about some operational numbers of the Company:

### Installed capacity EU1

Santo Antônio Hydroelectric Power Plant consists of 50 generating units, 26 69.59 MW machines and 24 73.29 MW machines. In January 2017, SAE achieved the complete motorization of the plant and its installed capacity was set at 3,568 MW (sum of the individual powers of the 50 generating units).

In compliance with the National System Operator Network Procedure (ONS), each generating unit has a Commissioning Report containing all

technical and electrical test data. Information is available to auditors and supervisory bodies in physical media, on the premises of the plant and in digital media.

### Plant Availability Factor EU30

In the last three years, there has been a significant reduction in hours of loss of load on the grid due to log boom and grid cleaning activities, the main factor generating unavailability of the generating units, enabling the continuous increase in the availability of the plant.

### Average plant availability and outage EU30

|                                  | 2020       | 2021       | 2022        |
|----------------------------------|------------|------------|-------------|
| Number of planned outage hours   | 25,004.95h | 65,172.62h | 123,453.87h |
| Number of unplanned outage hours | 17,789.10h | 29,358.02h | 3,293.37h   |
| Average generation availability  | 90.26%     | 78.38%     | 70.69%      |

Notes: The hours of generating units available or under intervention were considered, excluding purges and/or partial generation effect.

Information is extracted from SAGER - Generation Calculation System - ONS software that contains the entire database referring to the change of the operating states of the Generating Units, being used to calculate various parameters and indicators of operational efficiency, including hours of generating units in interventions (scheduled and unscheduled).

The qualification of the type of maintenance is carried out in the SGI - Intervention Management System, with the definition deadlines to consider scheduled or forced intervention defined in Sub-module 4.2 (Intervention programming in operation network facilities) of the Network Procedure. Santo Antônio uses interventions considering the hydrological regime in order to eliminate and/or reduce the impacts on TEIP and TEIFa rates.

Santo Antônio uses the interventions considering the hydrological regime in order to eliminate and/or reduce the impacts on TEIP and TEIFa rates. The penalty only occurs when there is spillage under Santo Antônio's responsibility, which, despite the lower availability for the year, the values for the calculated ID remain above the reference ID.



Dimas Maintinguer,  
Chief Operating Officer



Gas Isolated Substation of Santo Antônio Hydroelectric Power Plant Generator Group 1

## Net electricity production EU2

The electricity generation of the Santo Antônio Hydroelectric Power Plant, being a water-fired power plant, is fully linked to the seasonal water regime of Madeira River. In addition to the water regime, the power plant generation dispatch is carried out by the National Electric System Operator (ONS), which takes into account several factors of interference in generation, such as:

- **policies and guidelines** Operation Monthly Planning
- **electrical constraints** in subsystems and intra-subsystems
- **maintenance schedules** for generating units
- **programs and interventions** in operating network facilities
- **hydraulic, environmental and multiple-use water restrictions**, including flood control
- **features and restrictions** on plant and equipment

According to the grid procedure of the National Electric System Operator (ONS), Santo Antônio Hydroelectric Power Plant has an electric energy measurement system installed. The

data are audited and considered even for accounting by the Chamber of Electric Energy Commercialization (CCEE). Santo Antônio Energia has made efforts to provide the greatest possible availability of its generating units for dispatch by ONS, which has resulted in an increasing generation of energy year by year, according to the table below:

### Total volume of net electricity generated in gigawatt hours

|      |           |
|------|-----------|
| 2022 | 17,624.52 |
| 2021 | 17,954.12 |
| 2020 | 17,544.33 |
| 2019 | 16,811.38 |

SAE has been working to promote the **highest possible availability** of its generating units

## Transmission and distribution lines EU4, EU12

The compliance of transmission lines in operation, within all levels of corporate tension, was 96.40 km, and the capacity for transformation into corporate operation was 4130 MVA. The net change in corporate transformation capacity was 465 MVA. Technical losses in the consolidated basic network made available as a percentage are equivalent to 3.88%.

The connection of the 44 generating units of the Santo Antônio Hydroelectric Power Plant are the facilities of restricted use of the Hydroelectric Power Plant, which comprise:

- A lift substation next to the right bank powerhouse, with a double bar arrangement with four shielded switches in SF<sub>6</sub>, two transformers 13.8/13.8/525 kV – 165/165/30 MVA each, a line input at 525 kV intended for the connection of the plant with SE Coletora Porto Velho 525 kV, a line input intended for the connection of the right bank powerhouse with the riverbed powerhouse and an interconnection of bars;
- One elevating substation next to the left bank powerhouse, with double bar type arrangement with four shielded switches in SF<sub>6</sub>, six transformers 13.8/13.8/525 kV –

165/165/330 MVA each, two line inputs in 525 kV intended for the connection of the double circuit line to SE Coletora Porto Velho 525 kV and an interconnection of bars;

- A lift substation next to the power house of the river bed, with double bar arrangement with four shielded switches in SF<sub>6</sub>, three transformers 13.8/13.8/500 kV – 165/165/330MVA each, a line input at 525 kV intended for the connection of the plant with SE Coletora Porto Velho 525 kV, a line input intended for the connection of the power house of the river bed with the power house on the right bank and an interconnection of bars.



**96.40 km**  
**OF TRANSMISSION**  
**LINES IN OPERATION**



Wilton Cesar Santana,  
Maintenance Coordinator

# SUPPLY CHAIN MANAGEMENT

GRI 2-24, 204-1, 205-1, 407-1

Santo Antônio Energia's supply chain management changed in 2022, including reviewing procedures, improving processes and qualifying suppliers. In 2022, 195 suppliers were identified and evaluated on criteria and integrity. In such cases, Santo Antônio Energia adopts the most advanced principles regarding compliance to mitigate risks to which the Company may be subject during the provision of the service.

The Company determines as critical or high-risk situations from a compliance point of view: founded suspicions or effective involvement of the counterparty in public investigations or convictions related to corruption; disqualification or fraud; inclusion in public restriction lists (such as CEIS, CEPIM and CNAE); criminal proceedings; transactions with politically exposed persons and related parties; requests for payment in cash, in bank accounts other than those of the contracted company or in the account of individuals; and suspicious activities in the hiring process, among others. In addition, the Company's contracts have a standard clause related to compliance and anti-corruption.

After formalization of the contract, suppliers are monitored during the period of relationship with the Company in several aspects, which include legal regularity, economic and financial evaluation, compliance with the established technical specifications, management (internal monitoring) of contractual execution and labor compliance. Contracts entered into express the mutual agreement by which each party is liable for the consequences of its non-compliance.

During the contract execution stage, third-party employees are made aware of the importance of knowing the values, policies and public commitments of the SAE, carried out through specific training mainly related to good work safety practices and Compliance. Educational actions involve internal communications and interactive actions of face-to-face and online training.

Third party suppliers working at the plant receive the Supplier Code of Ethics and Conduct. In addition, in 2022, they were sensitized on

integrity practices through face-to-face activities of DDS ("daily sustainability dialogues") and conducting specific *online* training modules, focused on moral and sexual harassment.

SAE suppliers are free to exercise freedom of association and collective bargaining. In the period covered by this report, no suppliers whose right to collective bargaining could be violated were identified. Upon contracting, the collective agreement applicable to the category of the contracted company shall be submitted. SAE also has a whistleblowing channel that can be used to report any abnormality.

## Procurement budget with local suppliers GRI 204-1

| OPERATING UNIT 1                        | 2022           |
|---|----------------|
| Total amount spent on suppliers (R\$)   | 478,415,913.59 |
| Amount spent with local suppliers (R\$) | 161,451,618.33 |
| % of budget spent with local suppliers  | 33.75          |

# PEOPLE



Apprentices and interns  
of Santo Antônio Hydroelectric Power Plant

# PROFILE OF MEMBERS

GRI 2-7, 2-8, 2-21, 401-1

SAE ended 2022 with 362 members, 2.7% less than 2021. In addition to the members, the Company's workforce has employees from third-party companies, interns and apprentices, totaling 1,436 people at the end of 2022. The Apprentices and Interns Program welcomed 34 new participants, 13 from technical courses in mechanics, electrotechnics and administration, and 21 undergraduate students in engineering, law, accounting, psychology, among other areas.

The number of employees of SAE's third-party companies reached 900 people in 2022. The counting is made through contracts with outsourced companies and the number of workers established by them, registered in a third-party document management platform. The main activities developed by third parties are related to electromechanical maintenance, works, property security and facilities.

In 2022, the company promoted eight members to leadership positions, four being women, reinforcing its commitment to developing and leveraging internal talents. The shutdown ratios for the period were consistent with SAE's recent track record and in line with the market.



## SER+ CULTURE

Defined in 2017, SER+ Culture (Synergy, Efficiency, Sustainable Results and Innovation) underpins all processes, policies and programs adopted by People Management. It was expanded in 2021, with the insertion of the pillar related to innovation. In 2022, engagement campaigns were carried out to extend the dissemination of Ser+ Culture among members. For 2023, actions focused on all behaviors of the corporate culture are planned.

A recent achievement related to SAE's organizational culture was obtaining the Great Place to Work (GPTW) certification in 2021-2022. SAE ranked 36th among the best companies in the medium-sized industry segment, in addition to being classified as an excellent place to work. GPTW is a global organization that provides tools, training and certifications to help companies become a better workplace for their employees. Obtaining the GPTW seal means that SAE has a healthy and positive work environment, in addition to valuing and investing in its members.

The improvement points mapped by GPTW survey gave rise to a corporate action plan, fostering internal recruitment, feedback and recognition processes among members, in addition to the action plan by area so that leaders could work with their teams. At the end of 2022, an internal pulse survey related to the plan was conducted. The results showed the quality of the actions developed and the engagement of the members, but also signaled new opportunities. For 2023, the Company plans to continue its certification, through actions that strengthen the culture and a new GPTW research.



Katia Vieira,  
Dam Safety and Civil  
Maintenance Coordinator

### Employees by employment contract and gender GRI 2-7

| TYPE OF CONTRACT | 2020 |       |       | 2021 |       |       | 2022 |       |       |
|------------------|------|-------|-------|------|-------|-------|------|-------|-------|
|                  | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL |
| Permanent        | 314  | 66    | 380   | 309  | 62    | 371   | 300  | 62    | 362   |
| Total            | 314  | 66    | 380   | 309  | 62    | 371   | 300  | 62    | 362   |

### Employees by employment contract and region GRI 2-7

| REGION | 2020 |       |       | 2021 |       |       | 2022 |       |       |
|--------|------|-------|-------|------|-------|-------|------|-------|-------|
|        | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL |
| N      | 275  | 37    | 310   | 269  | 33    | 307   | 263  | 31    | 294   |
| SE     | 35   | 29    | 66    | 38   | 28    | 61    | 37   | 31    | 68    |
| Total  | 310  | 66    | 376   | 307  | 61    | 368   | 300  | 62    | 362   |

Note: Employment contract indicators do not include apprentices and interns.

### Non-employee workers GRI 2-7

|             | 2020 |       |       | 2021 |       |       | 2022 |       |       |
|-------------|------|-------|-------|------|-------|-------|------|-------|-------|
|             | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL | MEN  | WOMEN | TOTAL |
| Apprentices |      | 1     | 1     | 13   |       | 13    | 09   | 04    | 13    |
| Interns     | 7    | 2     | 9     | 4    | 1     | 5     | 10   | 11    | 21    |
| Total       | 7    | 3     | 10    | 17   | 1     | 18    | 19   | 15    | 34    |



### Employees by type of employment GRI 2-7

| JOB TYPE      | 2022       |           |            |
|---------------|------------|-----------|------------|
|               | MEN        | WOMEN     | TOTAL      |
| Fulltime job  | 218        | 58        | 276        |
| Part-time job | 82         | 4         | 86         |
| <b>Total</b>  | <b>300</b> | <b>62</b> | <b>362</b> |

### Individuals of governance bodies GRI 2-7

|                                  | 2020 | 2021 | 2022 |
|----------------------------------|------|------|------|
| Members of the governance bodies | 20   | 21   | 23   |

### New hires by gender GRI 401-1

|              | 2022       |            |
|--------------|------------|------------|
|              | NO.        | PERCENTAGE |
| Men          | 300        | 11         |
| Women        | 62         | 30.65      |
| <b>Total</b> | <b>362</b> | <b>-</b>   |

### New hires by age group GRI 401-1

|                             | 2022       |            |
|-----------------------------|------------|------------|
|                             | NO.        | PERCENTAGE |
| Under 30                    | 46         | 41.3       |
| Between 30 and 50 years old | 279        | 10.39      |
| Over 50 years               | 37         | 10.81      |
| <b>Total</b>                | <b>362</b> | <b>-</b>   |

### New hires by region GRI 401-1

|              | 2022       |            |
|--------------|------------|------------|
|              | NO.        | PERCENTAGE |
| N            | 294        | 9.18       |
| NE           | -          | -          |
| CO           | -          | -          |
| SE           | 68         | 36.76      |
| S            | -          | -          |
| <b>Total</b> | <b>362</b> | <b>-</b>   |

### Turnover by region GRI 401-1

|              | 2022      |            |
|--------------|-----------|------------|
|              | NO.       | PERCENTAGE |
| N            | 35        | 11.9       |
| NE           | -         | -          |
| CO           | -         | -          |
| SE           | 22        | 32.35      |
| S            | -         | -          |
| <b>Total</b> | <b>57</b> | <b>-</b>   |

### Turnover by age group GRI 401-1

|                             | 2022      |            |
|-----------------------------|-----------|------------|
|                             | NO.       | PERCENTAGE |
| Under 30                    | 13        | 28,26      |
| Between 30 and 50 years old | 36        | 12.9       |
| Over 50 years               | 8         | 21.62      |
| <b>Total</b>                | <b>57</b> | <b>-</b>   |

Note: The rates are calculated by the formula: total number of employees hired or dismissed by category (gender, region or age group) / number of employees in that category X 100.

### Employees who left the company, by gender GRI 401-1

|              | 2022      |            |
|--------------|-----------|------------|
|              | NO.       | PERCENTAGE |
| Men          | 39        | 13         |
| Women        | 18        | 29.03      |
| <b>Total</b> | <b>57</b> | <b>-</b>   |

### Employees admitted to the company, by age group GRI 401-1

|                             | 2022      |            |
|-----------------------------|-----------|------------|
|                             | NO.       | PERCENTAGE |
| Under 30                    | 19        | 41.3       |
| Between 30 and 50 years old | 29        | 10.39      |
| Over 50 years               | 4         | 10.81      |
| <b>Total</b>                | <b>52</b> |            |

Note: The rates are calculated by the formula: total number of employees hired or dismissed by category (gender, region or age group) / number of employees in that category X 100.

The ratio of the organization's highest-paid individual's total annual compensation to the average total annual compensation for all employees (except the highest-paid individual) was 14.52. There was no variation in the proportion of the percentage increase between the highest compensation and the annual average of all employees, since the compensation of the highest paid individual remained stable.

GRI 2-21

### New hires, by gender GRI 401-1

|              | 2022      |            |
|--------------|-----------|------------|
|              | NO.       | PERCENTAGE |
| N            | 27        | 9.18       |
| NE           | 0         |            |
| CO           | 0         |            |
| SE           | 25        | 36.76      |
| S            | 0         |            |
| <b>Total</b> | <b>52</b> |            |

### New hires, by gender GRI 401-1

|              | 2022      |            |
|--------------|-----------|------------|
|              | NO.       | PERCENTAGE |
| Men          | 33        | 11         |
| Women        | 19        | 30.65      |
| <b>Total</b> | <b>52</b> |            |

Note: The data of admitted employees refer to new hires in 2022.



Cassio Almeida,  
Heavy Equipment Operator

## Member Experience GRI 3-3, 404-1, 404-2, 404-3, EU14

Santo Antônio Energia's principle is to manage people with a focus on the positive experience of the member, fostering well-being and an excellent organizational climate. The company has a People Management Policy and procedures for recruitment and selection, training and development, compensation, education assistance and other people management processes. The procedures are aligned with the Company's policies and best market practices, in addition to seeking agreement with ethical and legal issues.

To monitor the results of its actions, the company uses the internal e-NPS (adaptation of the *Net Promoter Score* satisfaction survey) and engagement survey. In 2022, several processes were reviewed in order to improve the track record of members in the company, from recruitment to dismissal. Six sub-processes in People Management received improvement actions (see table).

### Internal track record of the members



Among the main changes made by the Company, the internalization of recruitment and selection processes stands out. The measure improved costs, reduced hiring time and favored the assertive selection of professionals, in addition to strengthening the performance of internal recruitment. Currently, the company invests in a humanized attraction process, considering from the first contact with the candidate until its integration process, in which it is accompanied and has access to various content to facilitate its initial development. Soon, the members may also count on Santo Antônio Energia Corporate Academy.

At the same time, SAE developed actions to improve its employer brand image through social media, especially LinkedIn, which grew 32% in the number of followers in 2022. Preference was also given to internal disclosure of vacancies among third parties, carried out prior to external disclosure.

As a retention mechanism, the company invests in benefits and compensation competitive with the market. Regarding the development of members, several types of training are carried out, for example, mandatory training focused on technical and safety aspects, in addition to educational subsidy policies for improvement and undergraduate courses.

SAE's people management follows international requirements such as: International Organization for Standardization ISO 45001 through the Integrated Management System (IMS); Equator Principles and Social Performance Standards of the International Finance Corporation (IFC); principles of the UN Global Compact related to Human Rights; Compliance and the Great Place to Work (GPTW).

Another important front is the Competence Development Program of Members, built through the Skills Cycle, which aims to evaluate them considering the behaviors of SER+ Culture. After the evaluation process, the members receive feedback that assists in the construction of the PDI, considering the technical and behavioral development. Here are some examples of programs implemented by the company:

- **Leader Development Program:** Knowledge trails for leadership aimed at strengthening the company's strategic guidelines and culture. SAE leaders must be protagonists of people management. The program has two formats (Master Leader and Step into the Future). Recently, a process was implemented to identify talents and successors by management, with the participation of leadership. Also for leadership positions, onboarding is offered for new and newly promoted leaders, as well as constant dialogues on different topics.

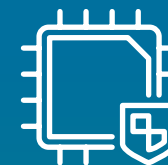
- **Competency Development Program:** Trails for members on various topics. In 2022, feedback and diversity were addressed. In 2023, a track involving aspects of SER+ Culture and including operational levels is planned. As part of the PDC, self-knowledge workshops are also held in order to identify the behavioral profiles and how to best take advantage of the potential of each one and team building enhancing the behaviors necessary for the best results of the team.

Before starting their activities, the members and employees hired undergo the Basic Sustainability Training (TBS) receiving important guidance on the Company's various topics including Environment, Health and Safety at Work and Compliance

- **Santo Antônio Academy:** Beginning of implementation in 2022 for the operational public and expected to launch to the others in the first quarter of 2023, the platform has an operator training course, required by the National Electric System Operator (ONS). The tool should be expanded from its adoption to all courses held by the Company. In addition, the academy allows greater monitoring and control by managers and creative strategies, such as gamification, to engage members.
- **Apprentice and Intern Entry Program:** Aims to develop possible successors for critical positions. The learning path, which is in its initial phase, includes behavioral training, career chat, mentoring sessions and technical training. Contractors are also included in the Company's culture. The apprenticeship program is aimed at young people aged 18 to 24 who are attending high school. In Porto Velho, the program is carried out in partnership with Senai and in São Paulo with the Center for Learning and Professional Improvement (CAMP). For the internship program there is no age limit, being necessary to be attending Higher Education in the contracting areas.

The apprenticeship program is aimed at young people aged 18 to 24 who are attending high school

Finally, Santo Antônio Energia has been working to ensure a safe and comfortable shutdown. As an indicator, interviews are conducted with all members who leave the company, reinforcing the reception given by the Company during its journey and collecting important data to improve the retention process. For 2023, a humanized dismissal process was designed that will cover outplacement as a support tool for strategic and business-specific positions.



## Technology and innovation are addressed in events and programs

In 2022, Santo Antônio Energia promoted Tech Week, a week of events on technology and digital transformation that addressed topics such as information security and market trends with daily lectures. In addition, the Company launched the 4th edition of the High Voltage Program, designed to encourage a culture of innovation among its members. The program, which had been interrupted during the pandemic, encourages the suggestion of ideas aimed at solving problems or improving processes.

The company seeks new, useful, feasible ideas that bring benefits by contemplating at least one of the pillars: cost reduction, process efficiency, sustainability, well-being and safety. The solutions are judged by a panel and compete for financial recognition awards.

Innovation is a strategic pillar for Santo Antônio, incorporated by Ser+ Culture in 2021. The very nature of the plant, which uses water turbines in a river of great flow, has always driven the search for answers to problems that had not yet been faced by the sector. The company has a Research and Development (R&D) department and is expected to launch an innovation knowledge track as of 2023.

**Average hours of training per employee by gender** GRI 404-1

|              | 2022         |
|--------------|--------------|
| Men          | 96.3         |
| Women        | 55.03        |
| <b>Total</b> | <b>89.23</b> |

**Total hours of training per employee by gender** GRI 404-1

|              | 2022            |
|--------------|-----------------|
| Men          | 28,890.65       |
| Women        | 3,412.15        |
| <b>Total</b> | <b>32,302.8</b> |

**Average hours of training per employee by job category** GRI 404-1

|                          | 2022   |
|--------------------------|--------|
| Management               | 22.68  |
| With higher education    | 57.09  |
| Without higher education | 146.96 |

**Total hours of training per employee by employee category** GRI 404-1

|                          | 2022     |
|--------------------------|----------|
| Management               | 340.27   |
| With higher education    | 11,875.4 |
| Without higher education | 20,427.4 |

Note: Training indicators include SAE Members, including apprentices and interns.

**Number of permanent staff who receive performance reviews by job category (un)** GRI 404-3

|                          | 2022       |           |            |
|--------------------------|------------|-----------|------------|
|                          | MEN        | WOMEN     | TOTAL      |
| Management               | 11         | 4         | 15         |
| With higher education    | 155        | 53        | 208        |
| Without higher education | 134        | 5         | 139        |
| <b>Total</b>             | <b>300</b> | <b>62</b> | <b>362</b> |

**Number of employees in managerial positions who received performance appraisal by job category (un)** GRI 404-3

|                          | 2022       |           |            |
|--------------------------|------------|-----------|------------|
|                          | MEN        | WOMEN     | TOTAL      |
| Management               | 11         | 4         | 15         |
| With higher education    | 155        | 53        | 208        |
| Without higher education | 134        | 5         | 139        |
| <b>Total</b>             | <b>300</b> | <b>62</b> | <b>362</b> |





Alloy Wheel, Chamber and Distributor System of Santo Antônio Hydroelectric Power Plant Turbine

## Benefits GRI 201-3, 401-2

Benefit plan obligations are directly covered by the organization's general resources. The estimated monthly amount of these obligations, as of December 31, 2022, is R\$966,260.00. The company grants the following benefits: transportation (own or through transportation voucher); funeral allowance; maternity leave; paternity leave; medical assistance; group life insurance; retirement fund; variable compensation; meal allowance; food allowance; daycare allowance; education allowance and foreign language courses.

There is no specific fund for the payment of pension plan. The Company adopts a private pension plan. Vexty Plan is structured in the defined contribution modality. The contributions of the participants and the company's counterparts, plus the result of the investments, comprise the individual reserves of the participants.

## Maternity/paternity leave GRI 401-3

|   | 2022  |      |
|---|-------|------|
| Employees who took leave  | men   | 8    |
|   | women | 4    |
| Employees who returned to work, in the reporting period, after the end of the leave                       | men   | 8    |
|   | women | 5    |
| Employees who returned to work after leave and continued to be employed 12 months after returning to work | men   | 5    |
|   | women | 3    |
| Return rate   | men   | 100  |
|   | women | 100  |
| Retention rate  | men   | 62.5 |
|   | women | 150  |

Note: Retention rate: (total number of people retained 12 months after returning to work after maternity or paternity leave/total number of people who returned from maternity or paternity leave in previous years covered by the report) x 100.

# DIVERSITY, INCLUSION AND EQUITY GRI 405-1, 406-1, 413-1



Joice Tucci,  
Occupational Health Coordinator

Santo Antônio Energia, in alignment with its SER+ Culture, is committed to maintaining fair and respectful relations with all its stakeholders, especially its members. In 2022, in order to further strengthen the program and encourage discussions within the company, the Diversity Committee was formed with the attendance of more than 25 members from different areas, who discuss actions and best practices to reinforce inclusion and the safe environment. Non-discrimination is also a priority for the Ethics Committee, as stated in the Code of Conduct and compliance policies.

The Diversity Program has been conducting, since 2021, awareness training, informational workshops, actions directed to specific audiences, such as LGBTQIAP+, blacks, women and people with disabilities, in addition to having its own manifesto, released in May 2022. The search for new professionals has been expanded to increase diversity in the company.

Santo Antônio Energia has been leading the energy sector in promoting the participation of women. The Company encourages their inclusion in early career programs, such as the Young Apprentice, up to leadership positions, with women acting as coordinators, managers and directors. In 2022, 25% of leadership positions were held by women.

During 2022, a diversity census was carried out, with the participation of 95% of the Members. The research aims to collect data on the composition of the organization's diversity, including aspects such as gender, race, sexual orientation, age and disability, among others. Based on the research, action plans were established to improve the rates of female representation.

Check out some actions included in the diversity thematic calendar of the year:

- **March, Women's Month:** A conversation about gender equity was held, as well as a communication campaign with testimonials from women who work at SAE.



- **May, Diversity Month:** A month reserved to celebrate all forms of diversity with the launch of Somos Diversos booklet and informative actions such as cine popoca, round of conversation and lecture.
- **June, LGBTQIAP+ Pride month:** LGBTQIAP+ was addressed in a communication campaign and lecture.
- **September, month of the person with disabilities:** Registration for the diversity committee, launch of a communication campaign with Paralympic athletes and with the participation of SAE members, in addition to an informal live with an athlete from the Brazilian Paralympic swimming team.
- **November, month of black awareness:** Communication campaign, chat with members and holding a thematic cinema session.

SAE has a Whistleblowing Channel that receives notifications of discrimination, racism, prejudice or intolerance. In 2022, five cases classified with this typology were recorded. After verification, the compliance team verified the dismissal of the formalized reports, and no repair plans were made. In addition, diversity and inclusion is continuously addressed in the communications and training carried out by the Compliance team.

### Diversity of governance bodies and employees GRI 405-1

|  | GENDER (%) |       | AGE GROUP (%)  |                |               | MINORITY GROUPS (%)                        |       |
|--|------------|-------|----------------|----------------|---------------|--|-------|
|  | WOMEN      | MEN   | UNDER 30 YEARS | 30 TO 50 YEARS | OVER 50 YEARS | BLACK, BROWN, YELLOW AND INDIGENOUS PEOPLE | PWD'S |
| Employees - Age group                          | 17.22      | 82.87 | 10.77          | 79.01          | 10.22         | 100  |       |
| Employees / Management Positions               | 26.67      | 73.33 |                | 86.67          | 13.33         | 100  |       |
| Employees / Positions with higher education    | 25.33      | 74.67 | 14.35          | 76.68          | 8.97          | 89.66                                      | 10.34 |
| Employees / Positions without higher education | 4.20       | 95.80 | 5.04           | 82.73          | 12.23         | 91.84                                      | 8.16  |

Note: The data shown are by category and in percentage. Minority groups include black, brown, yellow, indigenous and PwDs.

### Ratio of base salary value, by job category (R\$) GRI 405-2

|                          | 2022     |          |
|--------------------------|----------|----------|
|                          | MEN      | WOMEN    |
| Management               | 32081.54 | 29353.50 |
| With higher education    | 11114.60 | 10544.14 |
| Without higher education | 5175.30  | 4316.40  |

### Ratio of compensation by job category (R\$) GRI 405-2

|                          | 2022     |          |
|--------------------------|----------|----------|
|                          | MEN      | WOMEN    |
| Management               | 32081.54 | 29353.50 |
| With higher education    | 13787.82 | 11464.74 |
| Without higher education | 7833.78  | 5735.58  |

# HEALTH, SAFETY AND WELL-BEING

GRI 3-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, EU16

Santo Antônio Energia's Integrated Management System (IMS) has as its main scope the management of health, occupational safety and environmental risks in activities performed by members or contractors, with the objective of preserving the physical and mental integrity of workers.

Inserted in the IMS, SAE Occupational Health and Safety Management System (OSH) is governed by ISO 45001/2018 and provides knowledge of the risks for the planning of health and safety programs. The Company also has a commitment to monitor legal requirements, including regulatory standards for occupational health and safety and to comply with Performance Standard 1 - Assessment and Management of Social and Environmental Risks and Impacts and Performance Standard 2 - Conditions of Employment and Work of the International Finance Corporation (IFC), in addition to the Equator Principles, being audited externally by an independent consultant. [For more information about the audits, access the Integrated Management text.](#)

The procedures and operational instructions of Occupational Health and Safety (OSH) deal with topics such as: activity with hanging basket; machinery and equipment; safe activity in work at height; safe activities with electricity; safety in services in confined and controlled spaces; diving operation in dangerous conditions; isolation, blocking and labeling of dangerous sources; management of personal protective equipment; safe assembly and disassembly of scaffolding.

There are procedures for the critical analysis of topics related to IMS that aim to evaluate the adequacy, relevance and effectiveness of the system, focusing on the survey of subsidies for its continuous improvement. Those responsible for decision-making are leaders of the organization from various hierarchical levels who have processes and activities under their responsibility. Qualitative and quantitative results are reported in meetings attended by Members, Contractors, Leaders and Officers.



Santo Antônio Hydroelectric Power Plant Emergency Brigade

## Healthcare management

In 2022, the health area became a coordination that was integrated with people management, with the objective of acquiring more consistency between actions and benefits. The Welfare Program was launched, which aims to broaden the debate on the subject. Some health promotion activities carried out by NCS include: Regular medical examinations, vaccination campaigns, health dialogues and guiding practices.

The company offers health insurance to all members, including interns and apprentices, regulated by the National Health Agency (ANS) with national coverage, through which beneficiaries have access to consultations, examinations, therapies, clinical and surgical hospitalizations included in the list of mandatory coverage procedures by the operator. In addition, the Hydroelectric Power Plant in Porto Velho has a medical outpatient clinic equipped for care and stabilization for transportation of injured persons in case of emergencies, with a team formed by occupational health coordinator, occupational nurse, occupational physician, physiotherapist and administrative assistant who are available during business hours. After this period, an Emergency Brigade equipped and comprised by members trained for emergency care is available. Both Porto Velho and São Paulo facilities also have ergonomic conditions to fully meet the requirements of Regulatory Standard No. 17.

There are no employees whose work or workplace is involved in occupational activities with a high incidence or high risk of specific diseases. As for the risks related to work that represent health risks, there is mechanical risk, characterized by damage or various injuries, identified as a low risk within the Company and controlled through the use of PPE. There is also biological risk, characterized by the location of the enterprise that suggests risk of endemic diseases, such as dengue, malaria and yellow fever, as well as sun exposure, identified as a moderate risk. These risks are controlled by the supply of repellent and sunblock. The ergonomic risk, characterized by musculoskeletal lesions, is identified as low.

## Training

Training is conducted according to the Homogeneous Exposure Groups (GHE), which take into account the position and risk of exposure of the activity. In the risk inventory it is possible to identify this classification and the training used as a control measure resource.

- **Basic Sustainability Training (TBS):** It aims to present to the members and employees of the contracted companies under their responsibility the topics related to SGI, Occupational Health and Safety and the Environment.

- **Academia Santo Antônio:** The Company is implementing Academia Santo Antônio platform. Leaders will be able to monitor the courses taken by their subordinates. In this modality, the member accesses the mandatory training trail (EAD) and monitors its development.

The Company monitors a monthly training indicator, which contains the general status of training, adherence by area and costs. During the pandemic, the online modality helped the company keep up with its demand for mandatory safety training.

The control of validity of the training of members is carried out periodically by the Personnel Department of SAE. In relation to suppliers, SAE has a contract with a company that performs third-party management services, with the main object of providing a portal for relationship with suppliers that allows the insertion of supporting documents by the supplier.



The use of PPE is **mandatory** and follows the risk classifications of each activity



Work safety technician of Santo Antônio Energia and outsourced employees

## Equipment

It is mandatory to wear Personal Protective Equipment (PPE) at Santo Antonio Energia. As provided for in Regulatory Standard No. 6, the company shall provide to its employees, free of charge, PPE appropriate to the risk, in perfect condition and operation, whenever general measures do not offer complete protection against the risks of occupational accidents or diseases.

The Specialized Service in Safety Engineering and Occupational Medicine (SESMT) and the Internal Commission for Accident Prevention (CIPA) are responsible for recommending the

PPE appropriate to the risk for each activity. Usage assessments are performed before and after field inspections. The control of equipment sheets is carried out by software.

During the Covid-19 pandemic, even with the end of the health emergency, in April 2022, given the lack of PFF2 protection masks in the market and due to its high cost, SAE continued to make this protection measure available free of charge to all contracted companies. Hygienic cap, protective overalls, apron and gloves were also delivered.

## Hazards identification

The management of business risks and impacts is a guiding element of the IMS (Integrated Management System). The IMS Policy establishes rules for the analysis of hazards and risks related to occupational health and safety and the environment. Management procedures define the rules for mapping processes and the identification, analysis and management of risks and impacts, determining their elimination, minimization or control. The same applies to operational processes.

In 2022, the Safety First program was implemented to reduce the severity and occurrence of incidents. The initiative was introduced with 17 projects, which include blitz in access roads to the plant to reduce accidents, evaluating drivers, safety inspections and training. The program has monthly goals and has managed to significantly reduce the rate of severe accidents. The Company also has an Ergonomics Program, with a brief and detailed study of all stages of its operations and processes, with the objective of neutralizing risks and preventing accidents.

## Participation of members

To prepare the Safety Matrix, the members answered a questionnaire that identified the risks in their workplaces, collaborating for their control. Workers also have the right to refuse, that is, they can withdraw from work in situations they believe have the potential to cause injury or health problems. Santo Antônio Energia also has a procedure for investigating incidents.

Health and safety services maintain several points of contact with members and employees hired, such as:

- Kickoff meetings with representatives of the contracted companies before the start of their activities to pass on information.
- Monthly meetings with contractors, at which time company representatives can answer their questions and indicate opportunities for improvement.
- Conducting the Basic Training in Sustainability (TBS) once a week, by which the participant is evaluated.
- Internal Commission for Accident Prevention (CIPA), which explores health and safety issues in its monthly meetings.

- Daily Sustainability Dialogue (DDS), a quick chat with direct approaches on situations related to health and safety. They are carried out by sector, according to the leaderships' guidelines, adapted according to their activities and realities.

- Health campaigns with relevant topics for reflection.

- Publications in internal and external media, such as the Company's social media.

- "Talk to SGI" channel that receives messages, questions, compliments, complaints and opportunities for improvement.

Annually, the OH&S, Environment, IMS and Corporate Communication teams define the Communication Action Plan, listing the agendas to be worked on in the Company's various communication channels. Periodically, actions are taken to disseminate the IMS Policy and Manual.

The percentage of the workforce represented in formal health and safety committees is 6.4%. In addition to CIPA, the Company has the groups: Covid-19 Steering Committee (executive level, composed of statutory directors and managers) and Safety Committee (composed of operations board, managers and president of CIPA).



Geraldo Almeida,  
Electrical Maintenance Technician

## Numbers and percentages of employees GRI 403-8

| EMPLOYEES  |     | 2020      |   | 2021      |   | 2022      |   |
|--|-----|-----------|---|-----------|---|-----------|---|
|  |     | Employees | Workers who are not employees but whose work and/or workplace is controlled by the organization | Employees | Workers who are not employees but whose work and/or workplace is controlled by the organization | Employees | Workers who are not employees but whose work and/or workplace is controlled by the organization |
| Total number of individuals  | No. | 398       | 752   | 371       | 659   | 398       | 1,040   |
| Individuals covered by an occupational health and safety management system based on legal requirements and/or recognized standards/guidelines, which has been internally audited | No. | 398       | 752   | 371       | 659   | 398       | 1,040   |
|  | %   | 100%      | 100%  | 100%      | 100%  | 100%      | 100%  |

<sup>1</sup> The same results were identified in evaluation by external audit.

## Acidentes de trabalho GRI 403-9

|  | 2022      |
|--|-----------|
|  | Employees |
| Number of employees – monthly average  | 398       |
| HHTER  | 797,592   |
| Absolute number of accidents with leave (less than or equal to 15 days) - employee | 0         |
| Absolute number of accidents with leave (greater than 15 days) - employee          | 0         |
| Absolute number of accidents without leave – employee                              | 2         |
| Total absolute number of accidents – employee (includes deaths)                    | 2         |
| Days/men leave – employee  | 0         |
| Days/men debited – employee  | 0         |
| Total days/men lost – employees  | 0         |
| Number of deaths – employee  | 0         |
| Frequency rate with leave (tfa) – employee   | 0         |
| Attendance rate (tf) – employee  | 2.51      |
| Severity rate (tg) – employee  | 0         |

# RELATIONSHIP WITH COMMUNITIES

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



Santo Antônio Hydroelectric Power Plant is strategic for the development of the Northern Region of the country, particularly for the State of Rondônia. The power generated by the plant is enough to serve more than 45 million people. Production benefits both local consumers and those located in other regions of the country.

The Hydroelectric Power Plant arrived in Porto Velho with the proposal to integrate into the local community and thus contribute to the economic development of the region through the generation of jobs, improvement in the supply of electricity and the advance in integration with other locations. These factors are able to originate new business fronts and attract capital for the growth of industry, trade and local services.

In ten years of operation, the Company has invested more than R\$2.5 billion in sustainability, allowing the development of 28 socio-environmental programs in order to mitigate possible impacts resulting from the implementation of the Hydroelectric Power Plant. Royalties are another engine of development. The Company generated R\$762.6 million in royalties from the

beginning of its operation until the end of 2022, distributed among the state of Rondônia (25%), the municipality of Porto Velho (65%) and the Federal Government (10%).

In 2022, SAE joined Amazônia+21 Institute, a civil society organization that aims to foster sustainable business and contribute to the development of the Amazon region. The Company is developing a bioeconomy center in partnership with the institute, which carries out actions aimed at generating benefits for low-emission agriculture, forests, renewable energy, sustainable tourism, creative economy and water.

The Company also signed a Cooperation Agreement with the Federal University of Rondônia ([UNIR](#)) to foster the education of local university students. In this sense, in 2022, SAE donated more than R\$300 thousand in equipment to the laboratory of the electrical engineering course at Porto Velho campus.

Another initiative that aims to bring positive feedback to communities is the Volunteer Program. In 2022, two actions were carried out

to collect toys and donate to local entities. The first involved the exchange of solidarity tickets for the presentation of the show “Clássicos do Mundo”, sponsored by SAE. Each member who wanted to attend the show should bring a toy for donation, including their companions. The donations were destined to the Support Center for Children with Cancer of Porto Velho.



**R\$762.6 million**  
VALUE IN ROYALTIES GENERATED  
BY SAE IN TEN YEARS



Resettlement farmers  
Riacho Azul

The second action carried out was the usual Christmas Letters campaign, involving the units of Porto Velho and São Paulo. The company has adopted requests from several institutions with the support of its members. In Porto Velho, the institutions benefited were the Support Center for Children with Cancer (NACC), the

Chico Xavier Institute, the Brother Bird Service Station, the Sister Clara Fraternity, the Mother Mazzarello Social Center and the Rosetta Family House. In São Paulo, Betel Missões Urbanas was benefited. In all, more than 420 toys were collected in both campaigns.

### Private social investment GRI 413-2-ISP



**R\$191,489**

Total amount of donations of unserviceable goods to the company



**R\$ 60,000**

Total amount invested in non-subsidized cultural projects



**R\$ 10,000**

Total amount invested in non-encouraged sports sponsorship projects



**R\$104,225**

Total amount invested in sponsorship projects for events, congresses, symposia, seminars and other actions of similar characteristics



**420**

Number of beneficiaries in voluntary actions

## Repair of negative impacts

GRI 2-25, 411-1, 413-1, 413-2, EU20, EU22

The implementation and operation of the Santo Antônio Hydroelectric Power Plant are based on current socio-environmental legislation, and are especially accompanied by the Board of Environmental Licensing of Ibama in Brasília. After six years of previous studies to carry out inventory and ensure the feasibility of the project, a solid Basic Environmental Plan (PBA) was consolidated, covering the development of **28 Programs** to ensure that the impacts of the Hydroelectric Power Plant were mitigated or compensated.

In parallel, due to its financing model and the socio-environmental commitments undertaken by the financial institutions that joined the project, Santo Antônio Energia has always complied with the Equator Principles, which are a set of socio-environmental guidelines of the International Finance Corporation (IFC) with support from the World Bank. In 2022, since the objectives of seven programs have already been achieved, 21 socio-environmental programs are still under development, which are periodically supervised by Ibama and by an independent audit linked to the financing banks.



The Company has a partner team of Social Communication and Environmental Education that operates in the main communities relocated to the formation of the Hydroelectric reservoir. The team develops a close relationship with the communities since the plant's implementation phase.

SAE implemented seven resettlements: Novo Engenho Velho, São Domingos, Riacho Azul, Vila Nova de Teotônio, Santa Rita, Morrinhos and Parque dos Buritis. In these, in addition to acquiring the areas for lots and houses, individual and collective infrastructures were implemented, including the construction or adequacy of access roads, energy distribution, water supply and support structures such as schools, community centers and health clinics, depending on the original characteristics of each community. The resettled families received the provision of social and environmental technical assistance services. Actions aimed at individual and collective training, social strengthening and income generation were also carried out.

505 families were relocated, or about 2,000 people, with an investment of approximately R\$375 million. Another 2,020 properties were acquired by SAE to implement the plant, with an investment of R\$500 million in indemnities and the relocation of 6,000 people. For the formation of the reservoir, all necessary relocations





of properties that had floodable areas and permanent preservation that were the subject of Operating License 1044/2011 1st Renewal 3rd Rectification were carried out.

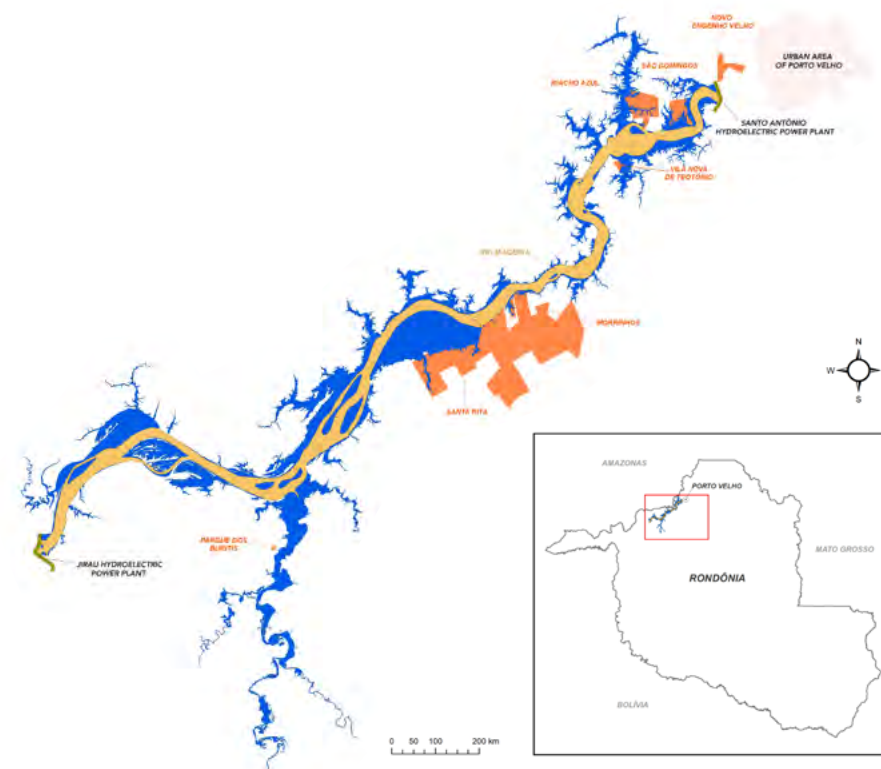
An eligibility matrix was established to define the specific treatments for each case, with the possibility of indemnification, resettlement, credit statement or self-relocation. All had legal support paid by SAE. In the last three years, including 2022, no relocations have been conducted.



## SAE provided social and environmental assistance services to all resettled families

**SANTO ANTÔNIO HYDROELECTRIC RESERVOIR AND RESETTLEMENT**

-  AXLES OF DAMS
-  NATURAL TROUGH OF THE MADEIRA RIVER
-  RESERVOIR
-  RESETTLEMENTS





## 97.4% OF THE CONTACTS RECEIVED BY THE TELEPHONE CHANNEL WERE REQUESTS FOR CLARIFICATION OF DOUBTS



Resettlement farmer  
Riacho Azul

All properties acquired by SAE currently undergo a land, tax and environmental regularization process. Resettled persons receive the registrations of their production and legal reserve lots duly registered in their names. To ensure the protection of the social and cultural identities of the resettled communities and the surroundings of the plant, there is the Environmental Program for Conservation and Use of the Environment of Santo Antônio Hydroelectric Reservoir (Pacuera), which is under analysis and approval by the environmental agency.

The results of the Relocation Program show that 94% of the negotiation processes was held administratively, that is, upon agreement between the parties. The remaining 6% were referred through lawsuits, mainly due to documentary factors, such as estate planning or unproven properties.

Resettlements involved public hearings and participatory meetings. Throughout the relocation of families, the company provided a multidisciplinary team for monitoring, with a psychologist and social worker. After the changes to the resettlements, the teams were also monitored for quality of life and social reintegration. Currently, the telephone channel 0800 647 6162 and the Social Monitoring Group are available.

The demands that arise from these stakeholders are duly referred. In 2022, 378 calls were made by telephone with 16 demands being referred to the administration of Santo Antônio Energia, while the others were immediately clarified by the channel. The toll-free number received 141 interactions in 2020, 63 in 2021, and 39 in 2022. Out of the total received last year, 97.4% refer to the clarification of doubts.

A socioeconomic diagnosis carried out by the company demonstrated that the current conditions of these communities are better than the conditions of origin and that the Family Development Index (IDF) of the resettlements is higher than the IDF in the municipality of Porto Velho.

The Company also routinely consults stakeholders to obtain image perceptions. Two recent examples, carried out in 2020 and 2022, respectively, are the institutional image diagnosis, carried out with the granting authority, financial institutions, leaders and collaborators, and the participatory socio-environmental diagnosis, carried out with the residents of the settlements. The first gave rise to a Communication and Reputation Plan and the second to a work plan to meet the demands of the community.

These works are periodically reported in internal and external audits, under the coordination of the company's Integrated Management System and also by the controllership area. The actions are also externally audited by an independent consultant to verify compliance with Performance Standard 4: Community Health and Safety and Performance Standard 5: Land Acquisition and Involuntary Resettlement of the International Finance Corporation (IFC) and the Equator Principles.

No indigenous or quilombola community was directly affected by the operations of the Santo Antônio Hydroelectric Power Plant. Mitigation actions were planned to indirect impacts on the surrounding indigenous communities through the "Indigenous Communities Support Program" that is part of the Basic Environmental Plan (PBA), including indigenous peoples of the Karitiana, Karipuna, Cassupá - Salamã ethnic groups and the references of isolated

indigenous people. The execution of the program was divided into two stages called Phase 1 and Phase 2 Agreement.

The first has already been completed by SAE, involving several actions to support the Karitiana and Karipuna Associations with emphasis on delivery of vehicles and vessels, reform of access roads, training, construction of schools and basic health units in the two indigenous lands, as well as other [infrastructure works](#). The Phase 2 Agreement that is under analysis by the National Foundation of Indigenous Peoples (FUNAI) includes, in summary, actions aimed at territorial protection, production and sustainability and ethnic strengthening and cultural valorization. Santo Antônio continues to negotiate with FUNAI to expedite the approval of Phase 2.

It is important to highlight that the indigenous theme is accompanied by IBAMA team in the scope of environmental licensing and externally audited by an independent consultant to verify compliance with Performance Standard 7: Indigenous Peoples of the International Finance Corporation (IFC) and the Equator Principles. Regarding Phase 2, the Independent Consulting reported in its 28th audit report that: *"the actions of this program are being dealt with within the scope of legal proceedings, underway in the 5th Federal Environmental and Agrarian Court of TJRO. SAE has been making its best efforts to enable greater agility in the processing of its processes."*

In 2022, in order to comply with the National Dam Safety Policy (PNSB), SAE initiated actions aimed at Operationalizing the Emergency Action Plan (PAE). PAE brings together the technical and administrative procedures that must be adopted in the face of an emergency scenario with potential and imminent rupture of the dam. The intention is to increase safety and minimize possible impacts on the population and the environment.



Left bank of the reservoir of Santo Antônio Hydroelectric Power Plant

### Learn more

For more information on Resettlements, [click here](#)

Watch a video about Relocation by [clicking here](#)

## Basic Environmental Plan (programs)

28 Programs have been established within the scope of Environmental Licensing, which are monitored by Ibama and by an independent consultancy to verify compliance with the Ecuadorian Benefits and Social and Environmental Performance Standards of the International Finance Corporation (IFC).



### MANAGEMENT (2)

- Environmental Program for Construction (PAC)
- Environmental Management System (EMS)



### PHYSICAL ENVIRONMENT (5)

- Water Table Monitoring Program
- Seismological Monitoring Program
- Climatological Monitoring Program
- Hydrosedimentological Monitoring Program
- Mining Rights and Mining Activity Monitoring Program



### SOCIOECONOMIC ENVIRONMENT (13)

- Environmental Compensation Program
- Social Communication Program
- Environmental Education Program
- Public Health Program
- Indigenous Communities Support Program
- Programs Related to Archaeological, Prehistoric and Historic Heritage
- Paleontological Heritage Preservation Program
- Relocation Program for the Affected Population
- Downstream Action Program
- Affected Infrastructure Recovery Program
- Social Compensation Program
- Environmental Plan for Conservation and Use of the Surrounding of Reservoir
- Support Program for Leisure and Tourism Activities



### BIOTIC ENVIRONMENT (8)

- Hydrobiogeochemical Monitoring Program
- Limnological Monitoring Program
- Aquatic Macrophyte Monitoring Program
- Flora Conservation Program
- Fauna Conservation Program
- Deforestation Program of the Area of Direct Influence
- Monitoring Program of Deforestation and Fauna Rescue Activities in the Area of Direct Interference
- Ichthyofauna Conservation Program

#### Find out more

[Read more](#) about meeting the Equator Principles and IFC performance standards in the Integrated Management chapter.

## Infrastructure investments

GRI 203-1

SAE's investments in infrastructure works reached approximately R\$82 million in 2022. Learn about the projects covered.



**R\$82**  
**MILLION**  
**INVESTED**

## Mapinguari National Park

In compliance with the Term of Commitment signed with ICMBio and IBAMA's intervention, SAE is supporting the works and the contracting of technical services for the established agreement between Santo Antônio Hydroelectric Power Plant and Mapinguari National Park, located between the States of Amazonas and Rondônia. The initiative covers:

- The recovery of access of 52 kilometers to the ICMBio base of operations
- The implementation of 4 kilometers of trails for public use
- The construction of administrative core (with offices, auditorium and laboratories, lodgings, kitchen, bathrooms and shed with warehouses)
- The structuring of a camping area using part of the current buildings
- The contracting of auxiliary land regularization services and auxiliary staff to manage the conservation unit

Two pickup trucks and a quadricycle were also donated for logistical support. The expectation is that the actions will provide better conditions for management and protection of the park, as well as encourage public visitation.



## SOCIAL WEALTH MANAGEMENT PROGRAM

Santo Antônio Energia's Social Wealth Management Program monitors the acquired areas and the surroundings of the plant's reservoir to maintain the integrity of the uses for which they are intended. The Company performs the on-board and ground monitoring of the right and left banks and the entire Permanent Preservation Area (APP).

Strategies are used that include remote monitoring using satellite images and visual confirmation using a drone, identification of persons and vehicles in suspicious activity or attitude, database maintenance and actions to vacate invaded areas, including extrajudicial notifications, mobilization of authorities or environmental inspection.

**Learn more**

Learn about SAE's Social Wealth Management Program by [clicking here](#)

## Buritis Park

A reurbanization work of Buritis Park's (RO) settlement was completed, meeting the demand of the community with the Social Monitoring Group (GAS) coordinated by Ibama. GAS is condition 2.13 of LO 1044-2011 1st Renewal 3rd Rectification. This redevelopment was carried out in an area relocated to meet the Protection Quota 77.10 m of the National Water Agency (ANA) for the district of Jaci-Paraná. The urbanized areas will have kiosks, hiking trail and outdoor gym, as well as landscaping with planting of grasses and trees. An existing square in that resettlement was also renovated. Still in compliance with the Protection Quota, BR 364 is being raised in the crossing section of Jaci river, influenced by Madeira river.

## Vila Nova de Teotônio

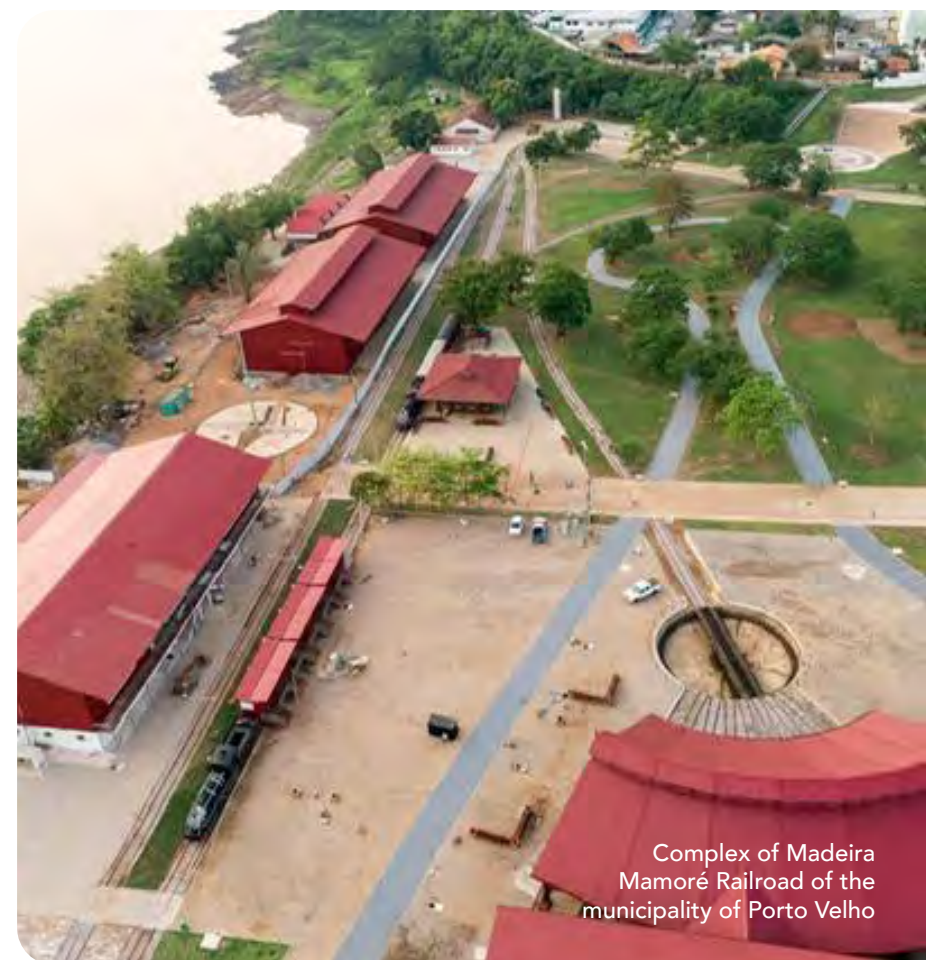
The new access to the resettlement Vila Nova de Teotônio is being implemented. This action meets a request from the resettled community and was negotiated with SAE and accompanied by IBAMA. The work shortens the route to resettlement by 12 kilometers and, in addition to providing greater convenience to residents, will also facilitate the access of the population of Porto Velho to local tourist attractions, boosting the generation of income in the community.

## Madeira Mamoré Railroad

To meet social compensation with the municipality of Porto Velho, linked to the Archaeological, Prehistoric and Historic Heritage Programs within the scope of Licensing, SAE carried out a set of works to recover Madeira Mamoré Railroad complex (EFMM) with the restoration of existing buildings, adjustment of spaces and landscape project that are part of a complex listed by the Institute of National Historic and Artistic Heritage (IPHAN) as historical heritage, described on the following page.

EFMM Museum is also being implemented in two warehouses recovered by SAE. The museum will tell the story of the construction of EFMM, the emergence of the city of Porto Velho, and the interaction of the builders with nature and the indigenous peoples of the region. The project will pay tribute to the railway construction workers, who were of 50 different nationalities, in addition to highlighting the various development cycles that are part of the history of the city of Porto Velho and the State of Rondônia.

This compensation has been monitored and audited externally by an independent consultant to verify compliance with Performance Standard 8: Cultural Heritage of the International Finance Corporation (IFC) and the Equator Principles.



Complex of Madeira Mamoré Railroad of the municipality of Porto Velho

### Learn more

Learn about the history of Porto Velho by [clicking here](#)

# More than 10 years of social and environmental investments

## Municipality of Porto Velho

- Construction of the Ichthyofauna and Biology Laboratory at the Federal University of Rondônia (UNIR)
- Construction of the Wild Animal Screening Center (CETAS) at UNIR
- Construction and renovation of kindergarten, middle and elementary schools: Antônio Ferreira da Silva, Joaquim Vicente Rondon, Moranguinho, Santo Antônio, Flamboyant, Pé de Murici and Manoel Aparício
- Implementation and improvements of approximately 260km of vicinal roads, including the construction and renovation of bridges and wooden bridges Renovation and expansion of Ari Pinheiro Base Hospital and construction of Cosme Damião Hospital
- Renovation of José Adelino Polyclinic and Renato Medeiros Health Center
- Expansion and renovation of the Mobile Emergency Care Service (SAMU)
- Construction of Alfredo Silva Health Specialization Center and the Women's Space
- Construction, renovation and expansion of the Basic Health Unit (BHU): Ana Adelaide, Rio das Garças, Aliança, Ronaldo Aragão, and construction of Mariana Health Center
- Renovation of the following Health Centers: Manuel Amorim, Caladinho, Agenor de Carvalho, Rafael Vaz e Silva, Osvaldo Piana, Pedacinho de

Chão, Mauricio Bustani and Ermandes

- Construction of anti-malaria modules and installation of Long-Term Impregnated Mosquito Nets in partnership with the Ministry of Health and the UN Global Fund for Malaria Control for communities in the area of influence
- General renovation of Shopping Cidadão "Tudo Aqui"
- Construction of the Popular Restaurant in the east area of Porto Velho
- Construction of bases in support of the State Department for Environmental Development
- Renovation and expansion of the administrative building and biological museum of the Municipal Natural Park of Porto Velho
- Construction of Bike Path on Santo Antônio Road in Porto Velho
- Urbanization of the surroundings of the Church of Santo Antônio, Porto Velho
- Renovation of Marechal Rondon Indigenous Cultural Center in Santo Antônio Church
- Renewal of Candelaria Cemetery
- Works to Renew the Madeira-Mamoré Railway (EFMM) including: slope protection (rockfill), construction of the shed deck, construction of the embarkation and disembarkation station, spinner structure, roundabout and workshops
- Digitization of the Historical Documentary Collection of Madeira-Mamoré Railway

- Project of the Building of the Technical Reserve of Archaeology UNIR and delivery of archaeological material in the technical reserve of the archaeology of UNIR - 300 thousand artifacts

## Riverside communities

- Construction of alligator slaughterhouse in Lago do Cuniã extractive reserve
- Construction of fruit agro-industry in the District of Cujubim Grande - Porto Velho
- Construction of babassu agro-industry in Calama District of Porto Velho
- Construction of floats in the Districts of São Carlos and Calama in Porto Velho
- Renovation and expansion of the Emergency Care Units (UPA) of Cujubim Grande and São Carlos

## Indigenous lands

- Construction of Schools in the Karitiana and Karipuna Indigenous Lands (TI)
- Construction of Basic Health Units (UBS) in Karitiana and Karipuna TI
- Construction of support bases for surveillance in Karitiana and Karipuna TI
- Bridge reconstruction and improved access in Karitiana and Karipuna TI
- Renovation and expansion of CASAI Indigenous Health Support House in Porto Velho

## Rural resettlements

- Construction of Resettlements: Novo Engenho Velho (39 houses), São Domingos (35 houses), Riacho Azul (42 houses), Vila Nova de Teotônio (77 houses), Santa Rita (137 houses), Morrinhos (48 houses), in addition to 220 houses in the area of influence
- Construction of Schools and Community Centers in Resettlements
- Construction of Basic Health Units in Resettlements
- Buildings in Vila Nova Teotônio resettlement, including: pier and anchorage, buildings, leisure commercials, floating, fish farming tanks
- Delivery of Leisure and Tourism Plans of Vila Nova de Teotônio
- Construction of the Flour House in New Engenho Velho Resettlement

## Municipality of Candeias do Jamari

- Construction of school in Candeias do Jamari.
- Construction of agro-industry for processing small birds, in the Municipality of Candeias do Jamari
- Delivery of the Leisure and Tourism Plan of the Municipality of Candeias do Jamari

## Municipality of Cacoal

- Construction of Cacoal Blood Center
- Renovation and expansion of Cacoal Regional Hospital

## Jaci-Paraná District

- Construction of the resettlement Parque dos Buritis in Jaci-Paraná, including infrastructure (187 houses)
- Construction, renovation and expansion of Schools in Jaci-Paraná : Cora Coralina, Joaquim Vicente Rondon and Maria Nazaré dos Santos
- Expansion and renovation Jaci-Paraná Health Unit
- Construction of Administrative Headquarters and Jaci-Paraná Square
- Construction of Jaci-Paraná Business Park
- Construction of Multisports Center in Jaci-Paraná
- Renovation and expansion of the Social Assistance Reference Center (CRAs)
- Construction of the House of the Association of Women and Elderly of Jaci-Paraná
- Construction of the Catholic Church and Parish House in the district of Jaci-Paraná
- Sand dredging for construction of Jaci-Paraná beach

- Paving, drainage and signaling in streets of Jaci-Paraná
- Execution of paving and drainage of streets in the district of Jaci-Paraná (RO)
- Elevation of the iron bridge of Madeira Mamoré Railway (EFMM) and restoration works of Contra river wood bridge in Jaci-Paraná
- Renovation and preservation of streets in the District of Jaci-Paraná
- Delivery of the Leisure and Tourism Plans of Jaci-Paraná



## SAE receives award for sustainable development of the Amazon

In 2022, Santo Antônio Energia won the Professor Samuel Benchimol Award for its performance in sustainability projects in the Amazon. Since the beginning of its operations, SAE has invested more than R\$2.5 billion in sustainability projects, in addition to having made partnerships for socioeconomic development in the region. Some examples include the conception of the 1st Center for Bioeconomy and Conservation of the Amazon (CBCA) and agreements with ICMBio and Ibama to renew Mapinguari Park. The category "Company in the Amazon", in which SAE was included, recognizes the actions of companies installed in the region that balance their business with the strengthening of local production chains and sustainable development.



# PLANET



Main spillway and generator sets of the Santo Antônio Hydroelectric Power Plant

# INTEGRATED MANAGEMENT

Santo Antônio Energia has an Integrated Management System (IMS), which consolidates the guidelines, rules and tools for the management of environmental impacts and risks in occupational health and safety. Incorporated into the IMS, the Occupational Health and Safety Management System (OSH), based on ISO 45001, and the Environmental Management System (EMS), based on ISO 14001, are simultaneously developed. The IMS of the Company has as principle: **“no emergency or production goal can compromise the health and safety of people or cause irreparable damage to the environment”**.

The IMS was implemented in 2016, within the scope of compliance with the Equator Principles and the IFC (International Finance Corporation) Environmental and Social Sustainability Performance Standards, a requirement of the creditor banks that financed the construction of SAE. The Company has been aligned with these requirements since 2009, undergoing cycles of continuous improvements in its environmental and social management, being recognized as a reference for compliance with these standards by stakeholders.

Santo Antônio Energia develops programs for monitoring impacts and environmental conservation. The Company's environmental management and the monitoring of legislation requirements are carried out through software. During the pandemic, some face-to-face environmental programs had to be interrupted momentarily, with the consent of the environmental agency, but were resumed in 2022.

## IFC Performance Standards

- PS 1: Evaluation and Risk Management and Socio-Environmental Impacts
- PS 2: Labor and Working Conditions
- PS 3: Resource Efficiency and Pollution Prevention
- PS 4: Community Health, Safety and Security
- PS 5: Land Acquisition and Involuntary Resettlement
- PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resource
- PS 7: Indigenous Peoples Performance Standard
- PS 8: Cultural Heritage



Members of Santo Antônio Energia



IMS was implemented in 2016 and foresees **continuous improvement** in environmental and social management in SAE

Focusing on the continuous improvement of its procedures and processes, SAE also has an internal mechanism for reporting non-compliances and the reporting of incidents and accidents, which ensure direct communication with the Integrated Management System (IMS). Santo Antônio establishes in its schedule the performance of internal and external audits and the annual evaluation of senior management through critical analysis. [GRI 2-26](#)

Santo Antônio also has traditional means of communication and consultation, such as receiving correspondence by letters, which are systematically inserted in the documentation management portal so that there is transparency and traceability of communication, including responses, with the support of an internal area of the Company, CEDOC.

## Emergency Response Plans [EU21](#)

Santo Antônio Energia's Integrated Management System (IMS) has procedures for responding to potential environmental and work emergency situations, ensuring that emergencies are identified, controlled, tested, treated, reported and attended to in an efficient, safe and sustainable manner. Information can be accessed at any time through SAE's documentation management software.

SAE prepared its Emergency Action Plan (PAE) in compliance with Federal Law 12334/2010, revised by 14066/2020, and the matter is also governed by Presidential Decree No. 11310/2022. PAE brings together the technical and administrative procedures that must be adopted in an emergency scenario with potential and imminent rupture of the dam, resulting from exceptional flooding in Madeira River or structural pathology. The intention is to increase safety and minimize possible impacts on the population and the environment in a preventive manner. The PAE was prepared in 2017 and its operationalization is taking place in partnership with the Civil Defense of the Municipality of Porto Velho (RO).

In compliance with Article 17 of Chap. V of Federal Law 12334/2010, annually the SAE provides resources in the budget plan for

corrective improvements and maintenance of the dam structure. All projects and records of the work are allocated in the corporate network. There was no change in relation to the project that causes reduction in the discharge capacity of the dam reservoir.

SAE has a specialized team dedicated to dam safety. Whenever requested, information is shared with the supervisory bodies and with the Civil Defense. The Dam Safety Plan (PSB) is updated annually and is available on the corporate network. Safety inspections are carried out, according to the legal requirement and the resulting reports are provided in Volume III of the PSB. Information regarding the dam is made available to Aneel, when requested.

Santo Antônio Energia is an integral agent of the fluent restoration of the National Interconnected System – (SIN), where, in the event of a blackout, the Hydroelectric Power Plant makes the generating units available for ONS to coordinate the reestablishment of the SIN, as recommended by the IO-RR.6MD review 24. In case of interruption of power generation affecting self-consumption, the secondary power is carried out automatically by the diesel generator sets or by the local concessionaire.



Treatment center and final disposal of waste from Santo Antônio Hydroelectric Power Plant

## Audits GRI 2-5

Santo Antônio Energia has an internal audit process through which it aims to ensure the protection and increase of organizational value. Internal audits are carried out to verify the compliance of Santo Antônio Energia's IMS with the requirements of International Standards ISO 14001 and ISO 45001. They can be carried out by internal or external personnel.

The company also has an external verification process that has the following verification agents: independent audit; inspection bodies such as Aneel and tax authorities (Federal, State and Municipal). Santo Antônio Energia's Board of Directors actively participates in the

resolutions related to the audit processes, which has the permanent and non-statutory Audit, Risks and Compliance support committee.

In addition to the legal requirements linked to Hydroelectric's operating license, Santo Antônio Energia, under the terms of its financing contracts, meets a set of socio-environmental criteria adopted voluntarily by financial institutions worldwide and referenced in the Equator Principles and in the Performance Standards on Socio-Environmental Sustainability of the International Finance Corporation (IFC), in addition to other international standards and requirements.

As part of the external audits to verify the Equator Principles and Performance Standards on Social and Environmental Sustainability of the International Finance Corporation (IFC), Santo Antônio Energia issued the Periodic Social and Environmental Report (RSAP) from 2009 to 2021, which had its information verified by an independent consultancy. This report is being replaced by the Sustainability Report in the GRI international standard. This report has not been secured. However, Eletrobras and Eletrobras Furnas Reports, which contain information related to SAE, underwent an assurance process.

All environmental actions of Santo Antônio Energia follow the Integrated Management System Policy, comply with the Equator Principles and the Environmental Sustainability Performance Standards of the International Finance Corporation (IFC). The Company is a signatory to the United Nations Global Compact and has sustainability as one of the values of Ser+ Culture.



## ESG MANAGEMENT ASSESSED

In 2022, SAE had the support of an external consultancy to analyze SAE's ESG practices. The study included benchmarking with eight reference companies in the electricity sector and diagnosed Santo Antônio Energia's ESG maturity level with a score of 3.73, considering a maximum of five points. The result of the work showed the company's adherence to international standards and norms.

Also, according to the study, the Company is at an advanced stage in the topics: "Relationship with Stakeholders", "Culture and Capacity" and "Systems and Technologies". Regarding practices with opportunities for improvement, the pillars "Leadership and Strategy", "Governance, Reporting and Assurance", "Materiality and Risk" and "Value Chain" were pointed out.



Members of the Environment, Physical Environment, Biotic Environment, Socioeconomic and Land Environment of Santo Antônio Energia

# WATER AND EFFLUENT MANAGEMENT

GRI 3-3, 303-1, 303-2, 303-3, 303-4, 303-5

The water and effluent management carried out by SAE is based on compliance with current legal requirements and the guidelines of the environmental agency responsible for licensing. The Company adopts measures to avoid or minimize adverse impacts on human health and the environment, eliminating or reducing pollution resulting from its activities. There is also concern about the more sustainable use of resources, with the use of the Integrated Management System (IMS) to maintain the standard of environmental processes.

The water consumed by the plant comes from Madeira River. The collection and destination is made by water treatment plants (WTP) of SAE. ETA's guarantee the adequate quality so that water is safe for human consumption, according to the parameters of Consolidation Ordinance No. 5 of the Ministry of Health, amended by GM/MS Ordinances No. 888/2021 and No. 2472/2021. The ordinance defines the number of samples and frequency for control of the quality of the water served. The monthly control of the production of treated water (m<sup>3</sup>) measured by the direct reading of the hydrometers is carried out. The total volume of water consumed in 2022 was 5,000m<sup>3</sup>.

The disposal of effluents is also carried out in Madeira river. The plant has an effluent treatment plant (ETE), guided by CONAMA Resolution 430/2011. In addition, the effluent assessment aims to meet Performance Standard 3: Resource Efficiency and Pollution Prevention of the International Finance Corporation (IFC) by which the company is audited. The production control of treated water (m<sup>3</sup>) and the flow of the generated effluent (m<sup>3</sup>) are carried out monthly, with measurement of BOD (biochemical oxygen demand), pH, temperature, sedimentable materials and suspended solids. Quarterly, total phosphorus, total nitrogen, oils and greases (soluble in hexane), dissolved organic carbon and total coliforms are analyzed.

SAE has the Water Quality Monitoring Program, executed in the reservoir to observe the parameters and values recommended by CONAMA Resolution 357/2009, according to a work plan approved by the environmental agency. The characteristics and support capacity of the receiving water body are taken into account for evaluation of the effluent discharge standards, according to art. 4 of CONAMA Resolution 430/2011.

The effectiveness of management is measured by comparing the analytical results found with the values recommended by current legislation. The results of the evaluation are treated in monthly sanitation reports and dissemination of analytical reports. Adjustments in the form of management are practiced when necessary as a result of scope adjustments to comply with environmental legislation.

Other monitoring related to water resources carried out by Santo Antônio Energia include:

- Monitoring of mercury, sediment and micro-organisms present in the river (HydroBiogeochemical Program)
- Monitoring of aquatic plants in the reservoir (can be removed, when necessary, to avoid impacts on power generation)
- Rescue of fish in the dissipation basin of the main spillway, protection of the ichthyofauna in spillway maneuvers, rescue of the ichthyofauna in the Fish Transposition System (FTS), rescue of the ichthyofauna inside the suction tube and rescue of alligators

- Monitoring of river beaches to check bathability (quality for bathers)
- Management of solid waste, used oil, liquid effluents, spillage of oil and chemicals into water, soil or floor and safe work with chemicals
- Sanitation of drinking fountains
- Measurement of gases and monitoring of dissolved oxygen in the suction tube

The plant has its main concession of the reservoir and the WTPs and WWTPs that are subject to concession with the National Water Agency. The project is located in the Amazon River basin, sub-basin of Madeira river. There is no institutionalized basin committee for Madeira river, but SAE carries out some follow-ups in partnership with Jirau Hydroelectric Power Plant, which is located upstream (above, towards the spring). Monitoring includes environmental and water quality information, following Ibama criteria.

**Total volume of water collected in all areas and areas under water stress, by source (ML) GRI 303-3**

| SOURCE   | 2020        |                       | 2021        |                       | 2022      |                       |
|--|-------------|-----------------------|-------------|-----------------------|-----------|-----------------------|
|  | ALL AREAS   | AREAS OF WATER STRESS | ALL AREAS   | AREAS OF WATER STRESS | ALL AREAS | AREAS OF WATER STRESS |
| Fresh Water ( $\leq 1000$ mg/l Total Dissolved Solids) | 19.8        | 0                     | 21.9        | 0                     | 25        | 0                     |
| <b>Total</b>   | <b>19.8</b> | <b>0</b>              | <b>21.9</b> | <b>0</b>              | <b>25</b> | <b>0</b>              |

Note: The monthly control of the production of treated water (m<sup>3</sup>) is carried out through direct measurements using hydrometers. There is no target set by the company to reduce the consumption of treated water.

**Total water disposal in all areas and areas with stress, broken down by the following sources (μL), if applicable GRI 303-4**

| SOURCE TYPE   | 2020      |                   | 2021      |                   | 2022      |                   |
|---------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|
|               | ALL AREAS | AREAS WITH STRESS | ALL AREAS | AREAS WITH STRESS | ALL AREAS | AREAS WITH STRESS |
| Surface water | 28.44     | 0                 | 22.22     | 0                 | 20.00     | 0                 |

Note: The results of the evaluations are sent through monthly sanitation reports and dissemination of the analytical reports that cover the quality of the effluents at the entrance and exit of the effluent treatment systems.

## Waste management GRI 306-2, 306-4, 413-1



SAE's waste management considers all stages, from generation to separation and final disposal. The entire process adopts environmentally sound practices and follows applicable legislation. The final disposal of solid waste begins with the separation by the generators (members and employees), which are guided by waste collection, with instructions and disposal points spread throughout the plant.

The waste generated at the plant is destined to the Waste Treatment and Final Disposal Center (CTDFR). In CTDFR, waste is separated by types:



**Recyclable:** through the Secretary of Environment of Porto Velho (RO), they are intended for cooperatives of waste pickers (Cooperativa Rondoniense de Catadores e Catadoras de Materiais Recicláveis - CATANORTE) and collaborate to generate income. In 2022, 33,511.40 kg of recyclable waste were generated.



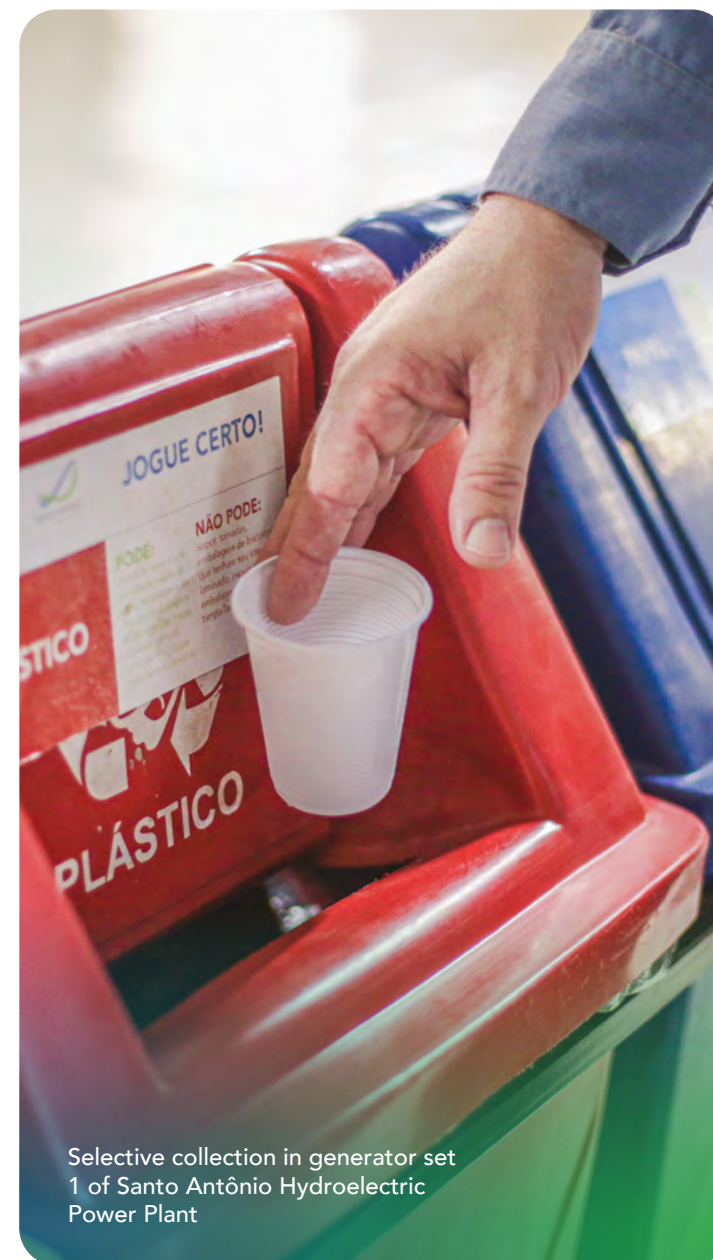
**Organic:** They are sent for composting and later used in the plant's gardens.



**Other tailings:** They are sent to waste cells for proper disposal. In 2022, SAE allocated 104,845.40 kg of waste to the tailings cells.

In addition to the waste aforementioned, 38,827.80 kg of hazardous waste were also generated, which were disposed in an environmentally correct manner. When possible, some are reused in the operation, such as used lubricating oil, which can be filtered. Contaminated or hazardous waste is disposed by a specialized company.

SAE has a company contracted to carry out the operation and maintenance of the Waste Treatment and Final Destination Center (CTDFR) and monthly issues a technical report with the waste generated at the plant. The waste disposal method generated in SAE is defined by the internal procedure and is externally audited by an independent consultant to verify compliance with Performance Standard 3: Resource Efficiency and Pollution Prevention of the International Finance Corporation (IFC).



Selective collection in generator set 1 of Santo Antônio Hydroelectric Power Plant



# CLIMATE STRATEGY

GRI 3-3, 201-2, 413-1



Even though it is a source of clean energy, in 2013 - still in the construction phase of the project - the Company carried out its first Greenhouse Gas Emissions Inventory, which resulted in a plan to adapt to climate change. And this topic has also been followed up within the scope of the external audits of the Equator Principles and IFC Sustainability Performance Standards, which recommended, in 2020, the return of the GHG inventory.

The GHG Emissions Inventory was resumed in 2021 and has become an important strategic tool for the Company to better understand its processes, evaluate and improve its management system. By analyzing the 2021 GHG emissions data and indicators, it was possible to observe the Company's satisfactory result within its power generation process. As a comparison, the annual average of the factor of emissions resulting from the electricity

consumption of the National Interconnected System (SIN) was 126.42 kgCO<sub>2</sub>e/MWh in 2021. The average emission of Santo Antônio Energia in the same year was 0.100 kgCO<sub>2</sub>e/MWh.

In line with the 2030 Agenda and with Climate Change being a material topic for the Company, SAE has become a signatory to the largest universal corporate sustainability initiative: the United Nations Global Compact on human rights, labor, the environment and fighting corruption, prioritizing the Sustainable Development Goals (SDGs) and highlighting SDG 13 - action against global climate change.

SAE was the first large plant in commercial operation in Brazil to effectively generate carbon credits for the global market. According to the Clean Development Mechanism (CDM) methodology, credits represent the amount of greenhouse gases not emitted into the atmosphere, expanding the supply of energy generated from clean and renewable sources.

Following global trends, SAE aims to reduce the use of fossil fuels, which have a high rate of greenhouse gas emissions, in its operations. For this reason, the diesel generators used in exceptional situations by the Hydroelectric Power Plant are monitored. The Company has an R&D project for the photovoltaic generation of energy and electricity supply of its fleet ([more information on Transition and energy efficiency](#)).

It is important to note that, as well as other environmental issues, the company's climate strategy follows the Integrated Management System (IMS) Policy, which provides for the reduction of the impacts of its operations. Other relevant instruments are the Equator Principles, by which the company is audited, and the environmental standards of the International Finance Corporation (IFC) with emphasis on Performance Standard 3: Resource Efficiency and Pollution Prevention.

Other projects of the Company with a positive impact on climate change include the Center for Circular Bioeconomy of the Amazon, which is being built in partnership with Amazônia+21 Institute. The initiative aims to develop local production chains, recover areas, restore agroforestry systems, promote carbon fixation research and implement public policies. The company also has a territorial management strategy for conservation of forest areas in order to identify opportunities to generate carbon credits in the areas of the Santo Antônio Hydroelectric Power Plant, considering the APPs, legal reserve and other properties.

Regarding the benefits arising from these projects, the restoration of degraded areas of the Amazon biome with the involvement of communities promoting sustainability principles stands out, in addition to the potential for carbon capture in the REED+ modality.

## Emissions Inventory

GRI 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7

The inventory was carried out based on the year 2021. SAE contracted a specialized company to consolidate the generated data, including the five gases and two internationally recognized greenhouse gas families as presented in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); sulfur hexafluoride (SF<sub>6</sub>); nitrogen trifluoride (NF<sub>3</sub>); hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

As for Santo Antônio Energia, the gases identified are: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and HFC. The sources analyzed in scope 1 were: stationary combustion, mobile combustion, fugitive emissions, industrial processes, agriculture activities, solid waste and effluents. The amount of gross direct GHG emissions (scope 1) in metric tons of CO<sub>2</sub> equivalent was 1,298.81 (tCO<sub>2</sub>e).

The Company hired a specialized company to carry out its inventory of Greenhouse Gas emissions in 2022. However, the report has not yet been issued. The Company does not monitor the emission of ozone-depleting substances (ODS) nor NO<sub>x</sub> and SO<sub>x</sub> emissions, since it has no generation sources that are required.

### Indirect emissions from energy acquisition (tCO<sub>2</sub> equivalent)– Scope 2 GRI 305-2

|  |        |
|--|--------|
|  | 2022   |
|  | 507.85 |

Note: The sources analyzed in scope 2 were: purchase of electricity from the grid.

### Other greenhouse gas emissions (t CO<sub>2</sub> equivalent) GRI 305-3

|  |        |
|--|--------|
|  | 2022   |
| Gross indirect GHG emissions in metric tons of CO <sub>2</sub> equivalent - ( tCO <sub>2</sub> e ) | 107.52 |

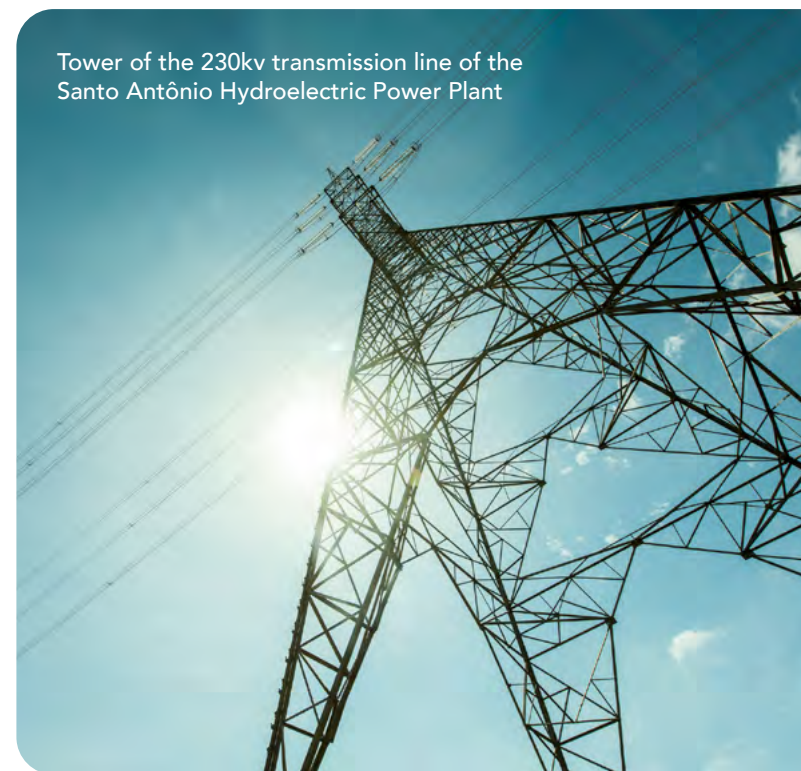
Note: The sources analyzed in scope 3 were: transportation and distribution (upstream), solid waste and business trips.

### GHG emissions intensity GRI 305-4

|  |      |
|--|------|
|  | 2022 |
| Scope 1 GHG emissions intensity based on generated energy (MWh). ( tCO <sub>2</sub> e/MWh )              | 0.07 |
| Scope 2 GHG emissions intensity based on generated energy (MWh). ( tCO <sub>2</sub> e/MWh )              | 0.03 |
| Intensity of GHG scope 1 + scope 2 emissions based on energy generated (MWh). ( tCO <sub>2</sub> e/MWh ) | 0.1  |

Note: The Company resumed its inventory of Greenhouse Gas emissions in 2022, based on 2021 data, so, as there is no comparative data and the resumption of the inventory is recent, the comparison with operating revenue was not carried out.

Tower of the 230kv transmission line of the Santo Antônio Hydroelectric Power Plant



# TRANSITION AND ENERGY EFFICIENCY

GRI 3-3, 413-1



SAE is a company concerned with transition and energy efficiency. The Company has research and development initiatives aimed at exploring new energy matrices, such as solar or the manufacture of biogas through macrophytes. Also noteworthy is the search for energy efficiency in relation to the equipment used in the plant. Learn about some of the actions carried out by the Company within these topics:

## Energy efficiency

- The Engineering, Planning and Statistical Control Management carried out a study on energy efficiency in operations. The results will be presented in 2023 with the definition of action plans with improvements.
- The Auxiliary Maintenance Management has made interventions in the lighting system, replacing lamps and reactors with components of the same capacity, but with lower consumption.

## Energy transition

- Santo Antônio Energia purchased 150 MWm of incentivized energy with a 50% discount on TUST/TUSD (Tariff for Use of the Transmission System / Tariff for Use of the Distribution System), from wind and solar sources for the composition of the structural hydrological risk hedge, from 2024 to 2039.
- The company started the registration process at [TOTUM institute](#) for commercialization of renewable energy certificates (I-RECs), through the international platform I-REC Standard. The commercialization will start as of 2023, referring to the energy generated in 2022. Each 1 MWh consumed is equivalent to one I-REC. In 2022, Santo Antônio Energia cumulatively generated 17,810,238.47 MWh of gross energy, equivalent to 17,690,873.989 I-RECs.
- Launch of the R&D initiative "Photovoltaic Generation Project in Multitechnologies and Albedo



Ricardo Barbi,  
Chief Commercial and Regulatory Officer

Study for Distributed Generation and Mobility with Electric Vehicles". The objective of this project is to assemble a multitechnology photovoltaic solar plant with bifacial panels in different soil types. The study will test four different types of soils and roofs, the energy produced will meet part of the plant's internal consumption and feed electric vehicles, making it possible to evaluate the advantages of electric mobility in replacement of the four vehicles currently powered by fossil fuels.

### Energy consumption within the organization (GJ) GRI 302-1

|   |                  |
|---|------------------|
| Gasoline consumption in land vehicles   | 1,152.45         |
| Gasoline consumption on vessels   | 1.73             |
| Diesel consumption in vessels   | 6,652.18         |
| Consumption of gasoline from other fixed sources in administrative activities   |                  |
| Diesel fuel consumption in land vehicles  | 2,411.2          |
| Diesel fuel consumption in generation and transmission                          | 556.86           |
| Consumption of diesel oil from other fixed sources in administrative activities | 0.00             |
| LPG consumption in land vehicles  | 0.00             |
| LPG consumption by fixed sources in administrative activities                   | 513.3            |
| Oil consumption 2 times by fixed sources in administrative activities           | 0.00             |
| Oil consumption 2 times on vessels  | 0.00             |
| Natural gas consumption for thermal generation                                  | 0.00             |
| <b>Total</b>  | <b>11,287.72</b> |

### Consumption of fuels from non-renewable sources (GJ)

|                                      |      |
|--------------------------------------|------|
| Ethanol consumption in land vehicles | 0.00 |
| <b>Total</b>                         |      |

### Energy consumed (GJ)

|   |                |
|---|----------------|
| Electrical energy from the transformer for auxiliary services in substations – transmission   |                |
| Electricity acquired from a concessionaire in the national interconnected system (SIN) for use in administrative units of the company | 176.85         |
| Total electricity consumption in the hydroelectric generation process - energy generated within the plant's own facilities            | 6,340.68       |
| Total electricity consumption in the thermal generation process - energy generated within the plant's own facilities                  |                |
| <b>Total</b>  | <b>6,517.5</b> |

### Energy consumption outside the organization (GJ) GRI 302-2

#### Consumption of fuels from non-renewable sources

|   |          |
|---|----------|
| Gasoline consumption in land vehicles to transport employees to the company-sponsored workplace             | 98.71    |
| Consumption of diesel oil in land vehicles to transport employees to the workplace sponsored by the company | 2,288.32 |

#### Consumption of fuels from renewable sources

|  |      |
|--|------|
| Ethanol consumption in land vehicles to transport employees to the company-sponsored workplace | 0.00 |
|--|------|

## Research and technological and scientific development <sup>EU8</sup>

Research and technological and scientific development are part of SAE'S performance. Annually, the Company allocates 0.28% of its net operating revenue to Aneel's Research and Development Program, a tool for continuous improvement of the quality and reliability of its operations. To date, SAE has completed eight projects and has eleven in progress.

The projects developed by SAE are directly related to the generation of electricity, the company's main activity. The company has a Research and Development (R&D) area that manages the topic with periodic meetings to monitor the projects, verify their evolution, results obtained and, when necessary, develop solutions to the difficulties found.

R&D resources are directed to the development of innovative methodologies and systems that contribute to the maintenance of operational excellence. In addition, the company invests in projects to protect and conserve the environment.

Partners are selected through careful and comprehensive marketing research, which includes research centers and renowned universities, seeking to meet the binomial risk mitigation versus maximization of results. The interaction between the operational topics of SAE and the partner research centers aims to maintain compliance

with the premises and expectations defined in the preparation of the projects and enable the adequate transfer of the knowledge generated.

Learn about the projects in progress and the investments made:

SAE is also involved with scientific debate and contribution to biodiversity-related research. The Company frequently publishes studies or presents in congresses the results of research related to the fauna groups monitored in its environmental programs.

| PROJECT   | INVESTMENT MADE<br>(IN R\$ MILLION) |
|---|-------------------------------------|
| Turbine blades                                    | 9.02                                |
| Mansonia  | 14.45                               |
| Transformer Failure                               | 6                                   |
| Optimal Dispatch                                  | 5.4                                 |
| Calculation and Simulation System ("FID")         | 2.3                                 |
| Failure Analysis                                  | 5.6                                 |
| Robot for cleaning the thresholds of stop logs II | 0.17                                |
| Fish Catching System                              | 1.4                                 |
| MIG – Remote Monitoring                           | 1.3                                 |
| SOLAR – SFV with Albedo and Electric Vehicles     | 13.5                                |
| Segregation of Hydraulic Losses                   | 0                                   |
| <b>TOTAL</b>                                      | <b>50.49</b>                        |

Note: Investment made from June 2018 to December 2022

### Learn more

[Read more](#) about innovation in the box "Technology and innovation addressed in events and programs"

Access more information on Research & Development by [clicking here](#)

# BIODIVERSITY AND ECOSYSTEM SERVICES

GRI 3-3, 304-2, 304-3, 304-4, 413-1, EU13

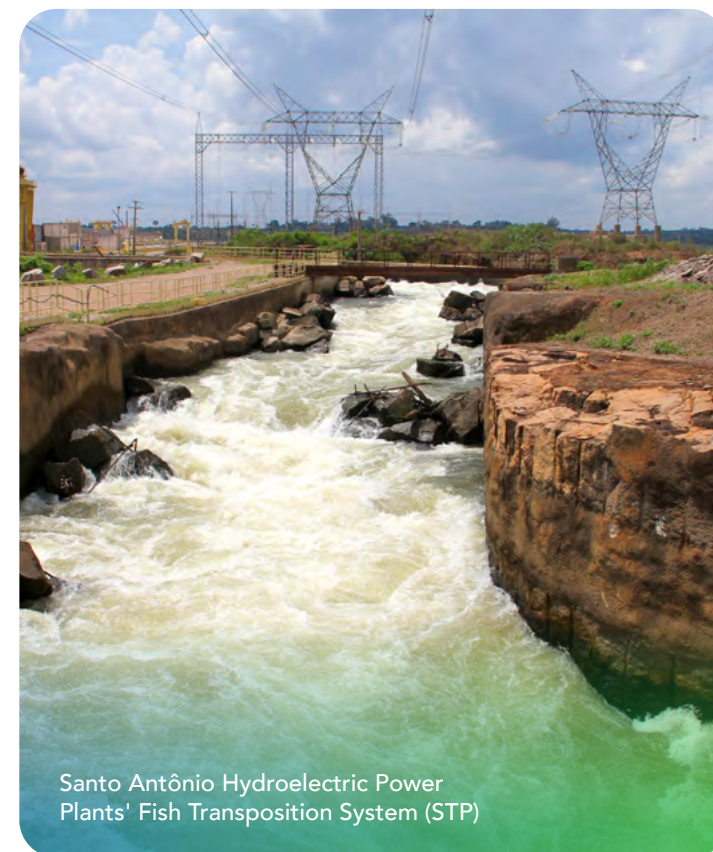


SAE has robust biodiversity protection programs, including: Flora Conservation Program, Limnological and Macrophyte Program, Fauna Conservation Program, Ichthyofauna Conservation Program and Public Health Program with insect vector monitoring, obligations that comprise the Company's environmental licensing process. The concern with biodiversity has been present since the beginning of the works for construction of the plant through the monitoring, analysis and dissemination of data. The monitoring of some groups, or part of the scope, was reduced with the consent of the environmental agency responsible for licensing, due to the natural progress of the project.

The commitments of the programs related to biodiversity are presented in environmental conditions, linked to the Basic Environmental Plan (PBA). Santo Antônio Energia's Integrated Management System (IMS) serves as the basis for decision-making and related actions.

The management is carried out by SAE's own team, which has experts in biodiversity issues and accompanies the consultancies responsible for carrying out environmental monitoring. This team is responsible for technically analyzing the information, proposing measures for improvements and adjustments and technically presenting and arguing with the licensing environmental agency and other agencies involved.

Among the evaluation mechanisms, there is the Health, Occupational Safety and Environment (SSTMA) inspection plan. In addition to inspections, performance evaluation is also carried out by monitoring performance indicators in periodic meetings with SGI and HSE teams, focal points, managers, board and other stakeholders. From the performance evaluations, situations of non-compliances can be identified, as well as opportunities for improvement that result in reporting and registration through the Non-Compliance Treatment procedure.



Santo Antônio Hydroelectric Power Plants' Fish Transposition System (STP)



## SAE applies the model of “vegetation islands”, creating small areas with high diversity

Internal audits are carried out to verify the compliance of Santo Antônio Energia's IMS with the requirements of the international standard ISO 14001, which provides for the guidelines for environmental management. They can be carried out by internal or external personnel, provided that these people have proven competence and experience to perform the audits, through references and qualification. There are specific procedures with the rules for internal audit and critical analysis.

## Impact mitigation

SAE has 35,714.30 hectares of Permanent Preservation Area (APP) around the reservoir. Since the formation of the reservoir in January 2012, the Company has restored 1987 hectares of area, with a 90.5% survival rate. The revegetation process of the APP areas planted seedlings of native species, and adopted the model of “vegetation islands”, which seeks to create small patches of forest with high diversity of species that, over time, will radiate to the entire area.

Seeds collected by the Flora Conservation Program and native seedlings produced in seedling nursery built by SAE for Porto Velho City Hall, located in the Porto Velho Municipal Natural Park, were used. In the final two phases, seedlings from local producers were acquired. After planting the seedlings, all the necessary forestry techniques are complied with, in addition to monitoring the entire planted area.

In the area of the old construction site, 868.29 hectares were restored, leaving only 11.5 hectares awaiting the release of structures by the construction consortium. Seeds from the regional seed bank and seedlings produced in a nursery located in the current area of the plant were used. The remaining areas of 11.5 hectares will be recovered with seedlings purchased from local suppliers of native trees. In the period of this report, the restoration areas did not change.

In 2022, socio-environmental programs and projects are still under development by the Company, and it is important to highlight that the Biodiversity theme is monitored by IBAMA team in the scope of environmental licensing and is externally audited by an independent consultant to verify compliance with Performance Standard 6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources of the International Finance Corporation (IFC) and the Equator Principles. The programs aim to evaluate the operating conditions of the plant and reservoir, verify if there are still impacts, monitor the stabilization of ecological processes and the adaptation of species. As for invasive species, the Company maintains this topic within limnological and ichthyofauna monitoring. To date, there is no record of introduction of invaders due to the formation of the reservoir.


Among the negative impacts generated by the implementation of the Hydroelectric Power Plant, the suppression of native vegetation in order to maintain water quality stands out, which caused the need for relocation of terrestrial and semi-aquatic fauna. As for positive impacts, the formation of the reservoir provided the formation of small estuaries for the development of fish species.




Thamires Costa,  
Apprentice

Most impacts are permanent. However, recent monitoring has shown species adaptation and the formation of ecological corridors in the PPAs.

Several mitigation actions were implemented by the Company during the formation of the reservoir, such as:

 rescues and chases of terrestrial fauna and aquatic avifauna. SAE published a guide presenting the rescued species that was delivered to schools, reinforcing the Company's commitment to go beyond environmental conservation. [Find out more.](#)

 rescue of seeds and seedlings, with the creation of the seed and germplasm bank

 rescue of ichthyofauna in cofferdams, among others

SAE developed mitigation actions with APP revegetation, ichthyofauna rescue during the shutdown of the generating units for maintenance, ichthyofauna rescue during the maintenance of spillways, fauna rescue in the plant areas, as well as the environmental monitoring activities that continue to be carried out.

In 2022, SAE signed a partnership with Amazônia+21 Institute for creation of the Amazon Bioeconomy and Conservation Center, which aims to collaborate for the sustainable economic development of regional production chains. This partnership aims to restore 893.8291 hectares of remaining area around the reservoir, more precisely on the right bank, near the resettlement Vila Nova de Teotônio.

The Company has been seeking with Ibama to change the scope of some programs, moving from monitoring to conservation programs. In this context, a project that is in the final stages of structuring provides that the remaining areas acquired for the formation of the reservoir outside the APP, on the left bank of the reservoir, will be transformed into a large ecological corridor.

In November 2022, SAE formalized the Environmental Commitment Term and paid environmental compensation provided for in federal law 9985/2020 to ICMBio regarding the Basic Environmental Compensation Program (PBCA), in the amount of approximately R\$9.2 million.



**35,714.30 HECTARES**  
OF PERMANENT PRESERVATION AREA (APP)  
FORM THE SURROUNDINGS OF SAE RESERVOIR



## Monitored groups

Over the past ten years, SAE teams have helped identify more than 1,000 species of fish in Madeira River, in partnership with the Laboratory of Ichthyology and Fisheries of the Federal University of Rondônia (LIP/UNIR), the National Institute of Amazonian Research (INPA) and the Federal University of Amazonas (UFAM), among other institutions. Of these species, 40 had never been catalogued. In addition, the fauna conservation program, in its monitoring conducted specifically for avifauna survey, identified and recorded 639 species of birds.

Currently, the Company complies with the environmental licensing programs, and the Fauna Conservation Program and Ichthyofauna Conservation Program are currently focused on carrying out the monitoring provided for in the PBA and environmental conditions. None of the species monitored by the Company are on the red list of threatened species.

Among the actions carried out with the ichthyofauna, the Company has the Fish Transposition System (STP) and monitoring of eggs, larvae and phytoplankton. The STP was designed to serve the species of large migratory catfish, especially the species *Brachyplatystoma rousseauxii*, Dourada, which performs migrations of more than

3,000 kilometers, from the estuary of the Amazon River to the foothills of the Andes. As the catfish move preferentially through the bottom of the rivers, the STP has open deflectors to the channel bed. These bulkheads create backwater areas for rest and rapids that serve as an attraction for fish to continue the upward migration.

In 2022, due to an emergency stop, the largest fish rescue in the history of the Company was carried out in a suction tube of generating units, returning to the river the equivalent of 13 tons of animals. The amount rescued reached 15 tons in the year. No species monitored by SAE is on Ibama's list of endangered species.

Regarding fauna, SAE monitors groups and subgroups of terrestrial animals, such as felines, birds and frogs, aquatic animals, such as crocodilians, in addition to turtles (Amazon and tracajas). The Company monitors the turtles spawning process and conducts environmental education with riverside communities to encourage the conservation of eggs and prevent them from being destined for human consumption. A restricted group of aquatic mammals is also monitored, with the presentation of periodic data to Ibama.

Scientific debate and contribution to research are important directions of SAE's work with biodiversity. In 2022, a research and development project of the Company on the species of mosquito *mansonía* generated three articles published in scientific journals. The work involves the use of genetic manipulation to control the mosquito. Other SAE research has already been taken to international congresses and events. Also in 2022, research was published on the impacts of fish transposition on their reproduction, on lesions and larval mortality, in addition to work dedicated to the catfish species Goliath (*Brachyplatystoma* spp.).

### Learn more

[Access more information about the Biodiversity of the Amazon region and studies carried out by SAE by clicking here](#)

[Learn about the SAE Ichthyofauna Conservation Program by clicking here](#)

# GRI CONTENT SUMMARY

Statement of use Santo Antônio Energia reported in accordance with the GRI Standards for the period from January to December 2022.

GRI used GRI 1: Foundation 2021

| GRI Standards                                       | Content  | Page<br>/URL | Omission                  |                       | Sustainable<br>Development Goals |
|---|--|--------------|---------------------------|-----------------------|----------------------------------|
|   |  |              | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| <b>GENERAL CONTENT</b>                              |  |              |                           |                       |                                  |
| <b>GRI 2: GENERAL DISCLOSURES 2021</b>              |  |              |                           |                       |                                  |
| <b>THE ORGANIZATION AND ITS REPORTING PRACTICES</b> |  |              |                           |                       |                                  |
| GRI 2: 2021   | 2-1 Organizational details   | 10           |                           |                       |                                  |
| General contents                                    | 2-2 Entities included in the organization's sustainability reporting             | 3, 10        |                           |                       |                                  |
|   | 2-3 Reporting period, frequency and contact point                                | 3            |                           |                       |                                  |
|   | 2-4 Restatements of information  | 3            |                           |                       |                                  |
|   | 2-5 External assurance   | 68           |                           |                       |                                  |
| <b>ACTIVITIES AND WORKERS</b>                       |  |              |                           |                       |                                  |
| GRI 2: 2021   | 2-6 Activities, value chain and other business relationships                     | 10           |                           |                       |                                  |
| General contents                                    | 2-7 Employees  | 39, 40, 41   |                           |                       | 8, 10                            |
|   | 2-8 Workers who are not employees  | 39           |                           |                       |                                  |
| <b>GOVERNANCE</b>                                   |  |              |                           |                       |                                  |
| GRI 2: 2021   | 2-9 Governance structure and composition   | 17           |                           |                       | 5, 16                            |
| General contents                                    | 2-10 Nomination and selection of the highest governance body                     | 17           |                           |                       | 5, 16                            |
|   | 2-11 Chair of the highest governance body  | 17           |                           |                       | 16                               |
|   | 2-12 Role of the highest governance body in overseeing the management of impacts | 17           |                           |                       | 16                               |
|   | 2-13 Delegation of responsibility for managing impacts                           | 28           |                           |                       |                                  |
|   | 2-14 Role of the highest governance body in sustainability reporting             | 17           |                           |                       |                                  |

| GRI Standards                           | Content   | Page<br>/URL  | Omission                  |                       | Sustainable<br>Development Goals |
|---|---|---|---------------------------|-----------------------|----------------------------------|
|   |   |   | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| GRI 2: 2021<br>General contents         | 2-15 Conflicts of interest  | 27  |                           |                       | 16                               |
|   | 2-16 Communication of critical concerns                           | 17, 26  |                           |                       |                                  |
|   | 2-17 Collective knowledge of the highest governance body          | 17  |                           |                       |                                  |
|   | 2-18 Evaluation of the performance of the highest governance body | 17  |                           |                       |                                  |
|   | 2-19 Remuneration policies  | 17  |                           |                       |                                  |
|   | 2-20 Process to determine remuneration                            | 17  |                           |                       |                                  |
|   | 2-21 Annual total compensation ratio                              | 39  |                           |                       |                                  |
| <b>STRATEGY, POLICIES AND PRACTICES</b> |   |   |                           |                       |                                  |
| GRI 2: 2021<br>General contents         | 2-22 Statement on sustainable development strategy                | 7, 12   |                           |                       | 16                               |
|   | 2-23 Policy commitments   | 22, 25  |                           |                       | 16                               |
|   | 2-24 Embedding policy commitments                                 | 22, 37  |                           |                       |                                  |
|   | 2-25 Processes to remediate negative impacts                      | 56  |                           |                       |                                  |
|   | 2-26 Mechanisms for seeking advice and raising concerns           | 26, 67  |                           |                       |                                  |
|   | 2-27 Compliance with Laws and Regulations                         | Santo Antônio Energia S.A. has been adopting all the necessary measures to fully comply with the Laws and Regulations. Thus, in 2022, no situations were identified in which the Company was penalized, fined or sanctioned for non-compliance with the laws in force and applicable to its business. |                           |                       |                                  |
| 2-28 Membership associations            | 12  |   |                           |                       |                                  |
| <b>ENGAGEMENT WITH KEY STAKEHOLDERS</b> |   |   |                           |                       |                                  |
| GRI 2: 2021<br>General contents         | 2-29 Approach to stakeholder engagement                           | 6   |                           |                       |                                  |
|   | 2-30 Collective bargaining agreements                             | The total number of employees covered by collective bargaining agreements is equivalent to 362 members – 100% of employees.   |                           |                       | 8                                |
| <b>MATERIAL TOPICS</b>                  |   |   |                           |                       |                                  |
| GRI 3: Material<br>Topics 2021          | 3-1 Process to determine material topics                          | 4   |                           |                       |                                  |
|   | 3-2 List of material topics                                       | 4   |                           |                       |                                  |
| <b>ETHICS, INTEGRITY AND COMPLIANCE</b> |   |   |                           |                       |                                  |
| GRI 3: Material<br>Topics 2021          | 3-3 Management of material topics                                 | 22, 25, 28  |                           |                       |                                  |

| GRI Standards                                      | Content   | Page<br>/URL  | Omission                  |                       | Sustainable<br>Development Goals |
|--|---|---|---------------------------|-----------------------|----------------------------------|
|  |   |   | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| GRI 205: Fighting<br>Corruption 2016               | 205-1 Operations assessed for risks related to corruption   | 37  |                           |                       | 16                               |
|  | 205-2 Communication and training about anti-corruption policies and procedures                                      | 22, 23  |                           |                       | 16                               |
|  | 205-3 Confirmed incidents of corruption and actions taken   | There are no confirmed cases of corruption and no public corruption-related lawsuits filed against the organization or its employees in the reporting period. |                           |                       | 16                               |
| GRI 415: Public<br>policies                        | 415-1 Political contributions   | There were no contributions to political parties.   |                           |                       |                                  |
| <b>COMMUNITIES RELATIONSHIP</b>                    |   |   |                           |                       |                                  |
| GRI 413: 2016 Local<br>Communities                 | 413-1 Operations with local community engagement, impact assessments, and development programs                      | 22, 48, 55, 56, 72, 73, 75, 78  |                           |                       |                                  |
|  | 413-2 Operations with significant actual and potential negative impacts on local communities                        | 55, 56  |                           |                       | 1, 2                             |
| Sector supplement<br>Local communities             | EU20 Approach to management of displacement impacts   | 56  |                           |                       | 1, 2, 11                         |
|  | EU22 Number of persons physically and economically displaced and indemnity, detailed by type of project             | 56  |                           |                       | 1.2                              |
| <b>WORKER HEALTH, WELFARE AND SAFETY</b>           |   |   |                           |                       |                                  |
| GRI 3: Material<br>Topics 2021                     | 3-3 Management of material topics   | 50  |                           |                       |                                  |
| GRI 403:<br>Occupational health<br>and safety 2019 | 403-1 Occupational health and safety management system  | 50  |                           |                       | 8                                |
|  | 403-2 Hazard identification, risk assessment and incident investigation   | 50  |                           |                       | 3, 8                             |
|  | 403-3 Occupational health services  | 50  |                           |                       | 3, 8                             |
|  | 403-4 Worker participation, consultation, and communication on occupational health and safety                       | 50  |                           |                       | 8, 16                            |
|  | 403-5 Worker training on occupational health and safety   | 50  |                           |                       | 8                                |
|  | 403-6: Promotion of worker health   | 50  |                           |                       | 3                                |
|  | 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | 50  |                           |                       | 8                                |

| GRI Standards                                      | Content  | Page<br>/URL | Omission                  |                       | Sustainable<br>Development Goals |
|--|--|--------------|---------------------------|-----------------------|----------------------------------|
|  |  |              | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| GRI 403:<br>Occupational health<br>and safety 2019 | 403-8 Workers covered by an occupational health and safety management system   | 50, 54       |                           |                       | 8                                |
|  | 403-9 Work-related injuries  | 50, 54       |                           |                       | 3, 8, 16                         |
|  | 403-10 Work-related ill health   | 50           |                           |                       | 3.8, 16                          |
| Sector supplement<br>Employment                    | EU14 Programs and processes that ensure the availability of skilled labor  | 43           |                           |                       | 4, 8                             |
|  | EU16 Policies and requirements concerning the health and safety of employees and outsourced workers and subcontractors | 50           |                           |                       | 8                                |
| <b>CLIMATE CHANGE</b>                              |  |              |                           |                       |                                  |
| GRI 3: Material<br>Topics 2021                     | 3-3 Management of material topics  | 73           |                           |                       |                                  |
| GRI 201: Economic<br>Performance 2016              | 201-2 Financial implications and other risks and opportunities due to climate change                                   | 73           |                           |                       | 13                               |
| GRI 305: 2016<br>Emissions                         | 305-1: Direct (Scope 1) GHG emissions  | 74           |                           |                       | 3, 12, 13, 14, 15                |
|  | 305-2 Energy indirect (Scope 2) GHG emissions  | 74           |                           |                       | 3, 12, 13, 14, 15                |
|  | 305-3: Other indirect (Scope 3) greenhouse gas (GHG) emissions   | 74           |                           |                       | 3, 12, 13, 14, 15                |
|  | 305-4 Greenhouse gas emissions (GHG) intensity   | 74           |                           |                       | 13, 14, 15                       |
|  | 305-5 Reduction of GHG emissions   | 74           |                           |                       | 13, 14, 15                       |
|  | 305-6 Emissions of ozone-depleting substances (ODS)  | 74           |                           |                       | 3, 12                            |
|  | 305-7 Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions        | 74           |                           |                       | 3, 12, 14, 15                    |
| <b>BIODIVERSITY AND ECOSYSTEM SERVICES</b>         |  |              |                           |                       |                                  |
| GRI 3: Material<br>Topics 2021                     | 3-3 Management of material topics  | 78           |                           |                       |                                  |
| GRI 304: 2016<br>Biodiversity                      | 304-2 Significant impacts of activities, products and services on biodiversity   | 78           |                           |                       | 6, 14, 15                        |
|  | 304-3 Habitats protected or restored   | 78           |                           |                       | 6, 14, 15                        |
|  | 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations.      | 78           |                           |                       | 6, 14, 15                        |

| GRI Standards   | Content   | Page<br>/URL  | Omission                  |                       | Sustainable<br>Development Goals |
|---|---|---|---------------------------|-----------------------|----------------------------------|
|   |   |   | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| Biodiversity Sector Supplement                            | EU13 Biodiversity of substitute habitats compared to biodiversity in affected areas   | 78  |                           |                       | 6, 14, 15                        |
| <b>TRANSITION AND ENERGY EFFICIENCY</b>                   |   |   |                           |                       |                                  |
| GRI 3: Material Topics 2021                               | 3-3 Management of material topics   | 75  |                           |                       |                                  |
| GRI 302: 2016 Energy                                      | 302-1 Energy consumption within the organization  | 76  |                           |                       | 7, 8, 12, 13                     |
|   | 302-2 Energy consumption outside the organization   | 76  |                           |                       | 7, 8, 12, 13                     |
| Sector supplement Availability and Reliability            | EU10 Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime | The requirement does not apply to Santo Antônio Energia, as there is no investment planning in expansion of generation capacity due to increased demand in both medium and long term. |                           |                       | 7                                |
| <b>ATTRACTION, DEVELOPMENT AND RETENTION OF EMPLOYEES</b> |   |   |                           |                       |                                  |
| GRI 3: Material Topics 2021                               | 3-3 Management of material topics   | 43, 44, 45  |                           |                       |                                  |
| GRI 201: Economic Performance 2016                        | 201-3 Defined benefit plan obligations and other retirement plans   | 47  |                           |                       |                                  |
| GRI 401: 2016 Employment                                  | 401-1 New employee hires and employee turnover  | 39, 41, 42  |                           |                       | 5, 8, 10                         |
|   | 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees                          | 47  |                           |                       | 3, 5, 8                          |
|   | 401-3 Maternity/paternity leave   | 47  |                           |                       | 5, 8                             |
| GRI 404: Training and Education 2016                      | 404-1 Average hours of training per year, per employee  | 43, 46  |                           |                       | 4, 5, 8, 10                      |
|   | 404-2 Programs for upgrading the skills of employees and transition assistance programs   | 43  |                           |                       | 8                                |
|   | 404-3 Percentage of employees receiving regular performance and career development reviews  | 46  |                           |                       | 5, 8, 10                         |
| GRI 405: Diversity and equal opportunities 2016           | 405-1 Diversity of governance bodies and employees  | 48, 49  |                           |                       | 5, 8                             |
|   | 405-2 Ratio of basic salary and remuneration of women to men  | 49  |                           |                       | 5, 8, 10                         |
| GRI 406: Non-discrimination 2016                          | 406-1 Incidents of discrimination and corrective actions taken  | 48  |                           |                       | 5, 8                             |
| <b>WATER AND EFFLUENT MANAGEMENT</b>                      |   |   |                           |                       |                                  |
| GRI 3: Material Topics 2021                               | 3-3 Management of material topics   | 70  |                           |                       |                                  |

| GRI Standards  | Content  | Page<br>/URL | Omission  |                       | Sustainable<br>Development Goals |
|--|--|--------------|---|-----------------------|----------------------------------|
|  |  |              | Omitted<br>Requirement(s)   | Reason<br>Explanation |                                  |
| GRI 303: Water and effluents 2018                              | 303-1 Interactions with water as a shared resource   | 70           |   |                       | 6, 12                            |
|  | 303-2 Management of water discharge-related impacts  | 70           |   |                       | 6                                |
|  | 303-3 Water abstraction  | 70, 71       |   |                       | 6, 8, 12                         |
|  | 303-4 Water discharge  | 70, 71       |   |                       | 6                                |
|  | 303-5: Water consumption   | 70           |   |                       | 6                                |
| <b>HUMAN RIGHTS</b>  |  |              |   |                       |                                  |
| GRI 3: Material Topics 2021                                    | 3-3 Management of material topics  | 25           |   |                       |                                  |
| GRI 407: Freedom of Association and Collective Bargaining 2016 | 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk             | 37           |   |                       | 8                                |
| GRI 408: Child Labor 2016                                      | 408-1 Operations and suppliers at significant risk for incidents of child labor  |              | In 2022, no suppliers with active contracts in SAE that presented significant risks of cases of child labor were identified. The contracted companies are requested to sign a document informing that they do not use any type of child labor. Santo Antônio Code of Conduct expressly prohibits these practices.               |                       | 8, 16                            |
| GRI 409: Forced labor or analogous to slave labor 2016         | 409-1 Operations and suppliers with significant risk of forced or compulsory labor   |              | In 2022, no suppliers with active contracts in SAE that presented significant risks of forced or slave labor were identified. Contracted companies are requested to sign a document stating that they do not practice any type of slave or slave-like labor. Santo Antônio Code of Conduct expressly prohibits these practices. |                       | 8                                |
| GRI 410: 2016 Safety Practices                                 | 410-1 Security personnel trained in human rights policies or procedures  |              | The company does not have its own staff. It only has 65 outsourced security guards. 100% are trained in human rights policies or procedures.  |                       | 16                               |
| GRI 411: Rights of Indigenous Peoples 2016                     | 411-1 Incidences of violations of rights of indigenous peoples   | 56           |   |                       | 2                                |
| <b>RISK AND EMERGENCY MANAGEMENT</b>                           |  |              |   |                       |                                  |
| GRI 3: Material Topics 2021                                    | 3-3 Management of material topics  | 28           |   |                       |                                  |
| Sector supplement Communities                                  | EU21 Contingency planning measures, disaster / emergency management plans and training programs and recovery / restoration plans | 67           |   |                       | 1, 11                            |

| GRI Standards                                    | Content  | Page<br>/URL   | Omission                  |                       | Sustainable<br>Development Goals |
|--|--|--|---------------------------|-----------------------|----------------------------------|
|  |  |  | Omitted<br>Requirement(s) | Reason<br>Explanation |                                  |
| <b>INNOVATION AND TECHNOLOGY</b>                 |  |  |                           |                       |                                  |
| GRI 203: 2016<br>indirect economic<br>impacts    | 203-1 Infrastructure investments and services supported  | 61   |                           |                       | 1, 3, 8                          |
|  | 203-2 Significant indirect economic impacts  | 55   |                           |                       | 1, 3, 8                          |
| GRI 418: Client<br>Privacy 2016                  | 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data                             | Santo Antônio Energia S.A. did not identify any proven complaints regarding the violation of customer privacy throughout 2022.             |                           |                       | 16                               |
| Sector supplement<br>Research and<br>Development | EU8 Research and development activity and expenditure to provide reliable electricity and Promotion of Sustainable Development | 77   |                           |                       | 7, 9, 17                         |
| <b>SUPPLY CHAIN MANAGEMENT (RELEVANT TOPIC)</b>  |  |  |                           |                       |                                  |
| GRI 204: Purchasing<br>Practices 2016            | 204-1 Proportion of spending on local suppliers  | 37   |                           |                       | 8                                |
| <b>SOLID WASTE MANAGEMENT (RELEVANT TOPIC)</b>   |  |  |                           |                       |                                  |
| GRI 306: Waste                                   | 306-2 Management of significant waste-related impacts  | 72   |                           |                       | 12                               |
|  | 306-4 Waste diverted from disposal   | 72   |                           |                       | 12                               |
| <b>OTHER INDICATORS (NON-MATERIAL TOPICS)</b>    |  |  |                           |                       |                                  |
| GRI 201: Economic<br>Performance 2016            | 201-1 Direct economic value generated and distributed  | 32   | 8                         |                       | 8, 9                             |
| Organizational<br>Profile                        | EU1 Installed capacity (MW), by primary energy source and regulatory regime  | 34   |                           |                       | 7                                |
|  | EU2 Net energy production by primary energy source and regulatory regime   | 35   |                           |                       | 7, 14                            |
|  | EU4 Length of aerial and underground transmission and distribution lines, detailed by regulatory system                        | 36   |                           |                       |                                  |
| Availability and<br>reliability                  | EU6 Management's approach to ensure short and long-term electricity availability and reliability                               | 33   |                           |                       |                                  |
| System efficiency                                | EU11 Average generation efficiency of thermoelectric power plants, by energy source and by regulatory system                   | Santo Antônio Energia is a hydroelectric generator and does not produce electricity with fuel burning, whether renewable or non-renewable. |                           |                       | 7, 8, 12, 13, 14                 |
|  | EU12 Transmission and distribution losses as a percentage of total energy  | 36   |                           |                       | 7, 8, 12, 13, 14                 |
| Access   | EU30 Average availability factor of the power plant, detailed by energy source and regulatory system                           | 34   |                           |                       | 1, 7                             |



## Sustainable Development Goals

1. Eradicate poverty
2. Zero hunger and sustainable agriculture
3. Health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Clean and affordable energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reducing inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Action against global climate change
14. Life in water
15. Terrestrial life
16. Peace, justice and strong institutions
17. Partnerships and means of implementation

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The photos of this report are from the collection of Santo Antônio Energia, with the contribution of the producers Casa do Rio and ECOA Comunicação, from Porto Velho, in addition to the records of the photographer Paulo Vitale.

## Translation

MS Tradução Juramentada e Técnica

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