

# Chesf Annual Report 2021



Eletrobras  
Chesf

EXECUTIVE SUMMARY

## Foreword

You are reading the Executive summary of the [2021 Annual Report](#) published by Chesf, an Eletrobras Group company. The report, prepared in accordance with international reporting standards, provides information about Chesf's activities, key results, achievements and targets. The contents of this report have been compiled and organized in accordance with internationally recognized best practices in corporate sustainability management and reporting, and in line with the practices adopted by the Eletrobras Group parent company and other Group companies.

## 2021 at a glance

**Net income of R\$ 5.5 billion**

**R\$ 1.3 billion in dividends**

**2021 rate-setting reviews**— a rate-setting review was completed for concession contract 061/2001 and seven contracts newly awarded, adding R\$ 2.5 billion in revenue;

**Launched a Generation Asset Modernization Program**, involving an investment of R\$ 1.5 billion over the next ten years;

**Acquired and merged the Pindaí I, II and III wind farm cluster (BA);**

**Approved newbuild wind farms:** Frei Damião (PB), and resumed investment in Casa Nova B (BA);

**Secured a seven-year concession extension** for the Sobradinho hydroelectric power plant;

**Offset greenhouse gas emissions** for 100% of office consumption and 7.7% of emissions from transmission losses via RECs (Renewable Energy Certificates).

# About this report

## Materiality

Chesf selected **11 material topics** across four pillars to inform the contents of this Report:

### Governance:

- Governance, integrity and ethics
- Risk management

### Prosperity:

- Technology and innovation

### People:

- People management and development
- Health, Safety and Well-being
- Human Rights
- Communities

### Planet:

- Water
- Biodiversity and ecosystem services
- Climate change
- Energy transition



The report additionally addresses the following material topics:

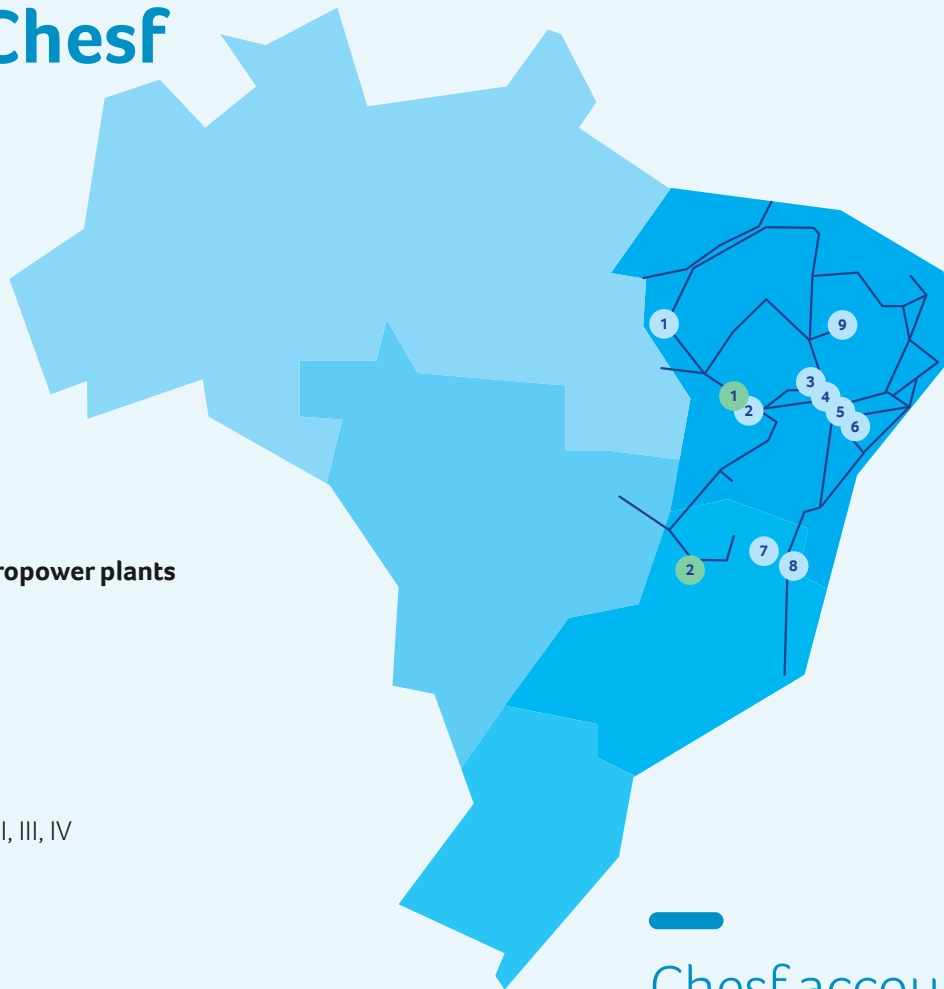
- Customers\*
- Regulatory environment\*
- Suppliers\*
- Waste\*
- Radioactive waste\*
- Nuclear safety

\* Topics that are material to Chesf.

## EESG Journey

This Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option, providing an integrated account of our economic, environmental, social and governance (EESG) performance. The Report has been structured into four materiality pillars: Governance, Prosperity, People and Planet.

# About Chesf



## Corporate hydropower plants

- 1 Boa Esperança
- 2 Sobradinho
- 3 Luiz Gonzaga
- 4 Apolônio Sales
- 5 Paulo Afonso I, II, III, IV
- 6 Xingó
- 7 Pedra
- 8 Funil
- 9 Curemas

## Corporate wind farms

- 1 Casa Nova II, III, A
- 2 Pindaí Wind Cluster (11 wind farms)

## Transmission lines

Chesf accounts for approximately **20.7%** of the Eletrobras Group's installed generation capacity

## Chesf operates:

### 12 corporate hydroelectric plants

8 on the River São Francisco;  
 2 on the Contas River (BA);  
 1 on the Parnaíba River (PI); and  
 1 on the Piancó and Aguiar rivers (PB).  
**10,262.33 MW** in generation capacity

### 14 corporate wind farms

**198.1 MW** in generation capacity

### Total installed capacity

**10,460.43 MW** corporate  
**2,642.95 MW** via Special Purpose  
 Entities (SPEs)

### Total length of transmission lines (TL)

across all voltage levels:  
**21,801.35 km<sup>1</sup>** (corporate) and  
**1,768.15 km** (SPEs)

### Total operational transformation capacity:

**70,296.37 MVA** (corporate)  
 Operational transformation capacity  
 via SPEs: **5,688.88 MVA<sup>3</sup> EU4**

### 136 power substations<sup>2</sup> and 12 power plant elevatory substations

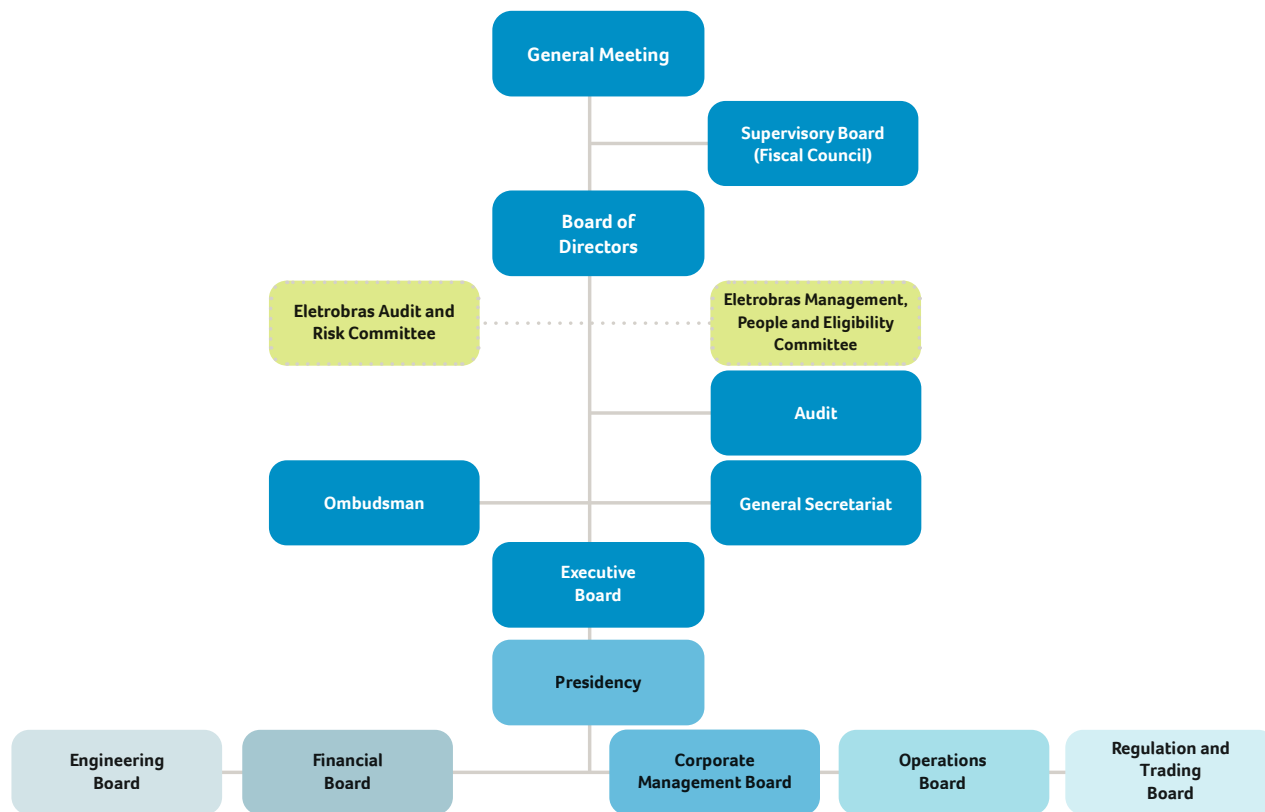
<sup>1</sup> The figure differs slightly from our 2021 Management Report as a different calculation method was used.

<sup>2</sup> Including the substations of other transmission companies in which Chesf has assets.

<sup>3</sup> Considers transmission substations and elevatory substations (2,851.80 MVA and 2,837.08 MVA, respectively).

# Governance

A company with sound corporate governance is responsible, ethical and transparent toward all its stakeholders, including shareholders, employees, creditors, customers, and wider society. The requirements, roles and responsibilities for Chesf’s corporate governance structure are outlined in our Bylaws and in the rules of procedure of our governance bodies.

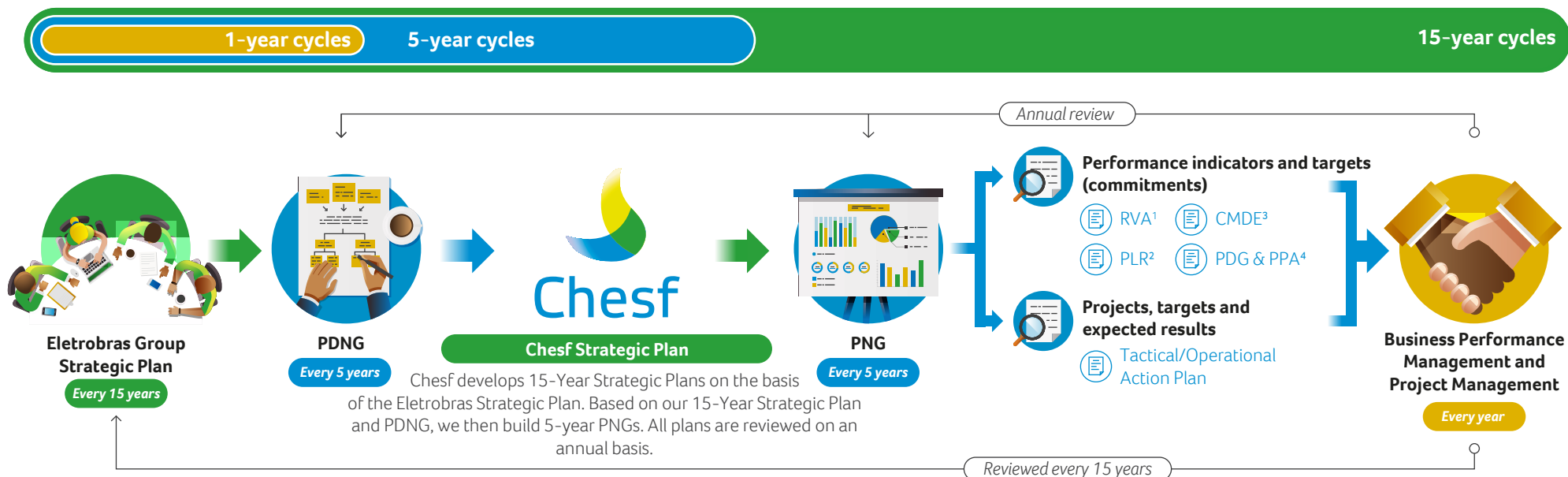


Some of the key governance, integrity and ethics practices adopted at Chesf include:

- An active Board of Directors comprising 28.5% independent members
- A permanent Fiscal Board whose roles and responsibilities are established in rules of procedure and consistent with applicable laws and regulations
- Members of our parent company’s Executive Board sit on the Chesf Board of Directors
- The Eletrobras Group Code of Ethical Conduct & Integrity
- Different communication channels to receive complaints and/or whistleblowing reports
- Board of Directors and Fiscal Board members assessed against the requirements and prohibitions contained in Law no. 13 303/2016 and Decree no. 8 945/2016
- A Statutory Audit & Risk Committee advising the Board of Directors
- Annual assessments of members of the Board of Directors, Executive Board and Fiscal Board.
- Annual Reports developed in accordance with the GRI Standards and the International <IR> Framework
- Participation in the assessment process to become a constituent of the B3 Corporate Sustainability Index (ISE)
- Participation in the assessment process to become a constituent of the IG-SEST Governance Index developed by the Office for Coordination and Governance of State-Owned Enterprises (SEST)

# How we ensure we are future-ready

Strategic planning at Chesf is aligned with the model adopted across the Eletrobras Group, and is led by our parent company. **The model is structured into planning and management components covering different time horizons—15 years, 5 years and 1 year.**



**Eletrobras Group Strategic Plan and Chesf Strategic Plan**

Outlines strategic goals and targets for the next 15 years. Plans are agreed between subsidiaries and our parent company, taking account of the internal and external environment and established general guidelines. This step informs the development of the Eletrobras Business & Management Master Plan (PDNG) and individual Group company’s Business & Management Plan (PNG).

**Business & Management Master Plan (PDNG) and Business & Management Plan (PNG)**

Once the PDNG has been developed, each subsidiary then uses it to inform their own Business & Management Plan (PNG), describing their business outlook for the next 5 years. The PNG establishes indicators, performance targets and expected results that are tracked during the course of the year.

**Business Performance Management and Project Management**

The process chain comes full circle with the management and monitoring of organizational performance targets and commitments to inform day-to-day business management.

<sup>1</sup> Management Variable Compensation (RVA) – for senior leadership

<sup>2</sup> Profit-Sharing Plan – for employees

<sup>3</sup> Business Performance & Targets Contract

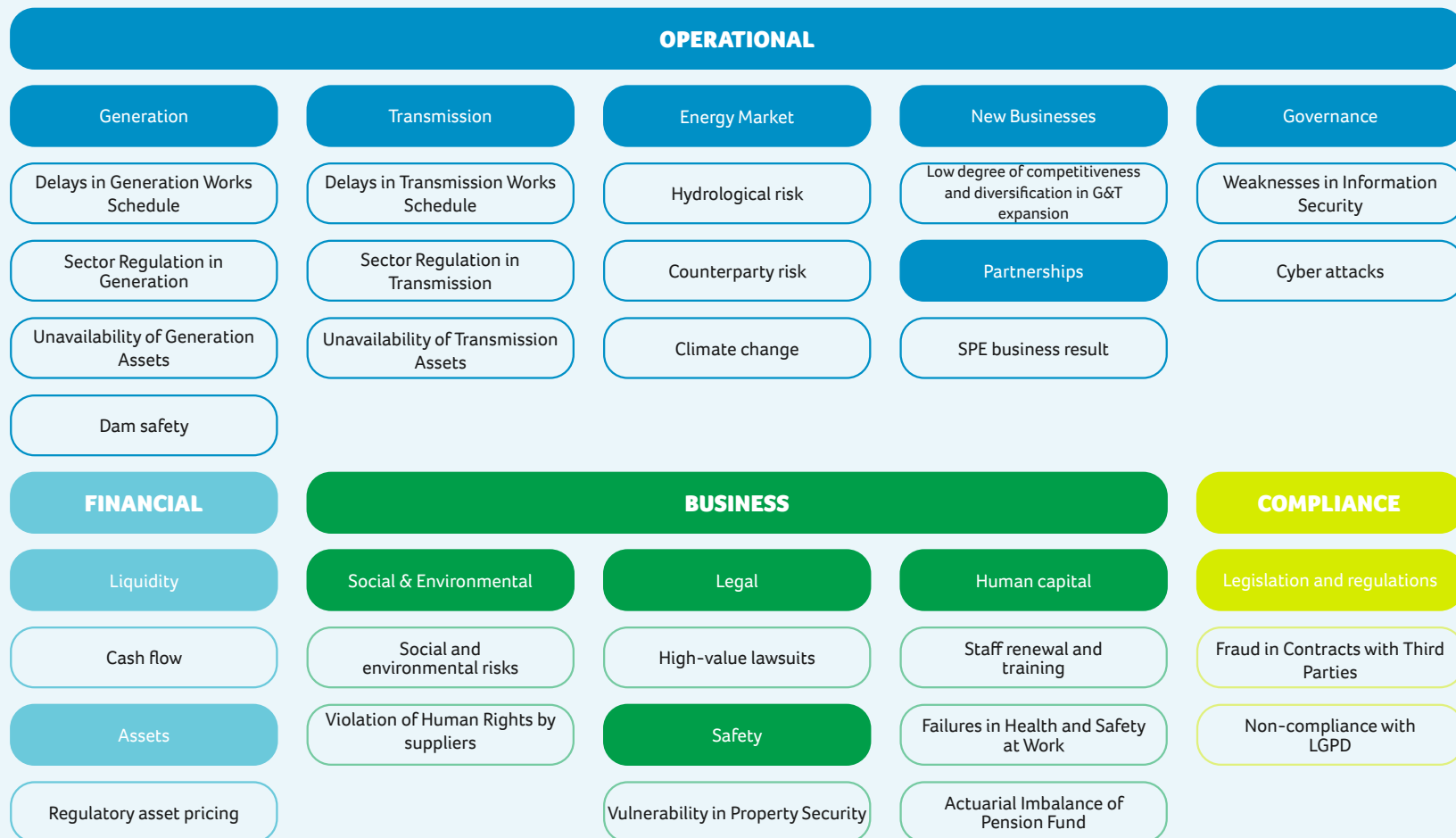
<sup>4</sup> General Expenditure Plan (PDG) and Multi-Annual Plan (PPA)



OPENING OF THE TAQUARI FLOODGATE AT PAULO AFONSO (BA)

# Risk management

Chesf has a formally established Risk Committee and Risk Management function, and a Statutory Audit & Risk Committee based at our parent company and with responsibility for all Eletrobras Group companies. In 2021 we revised our Risk Matrix and, as a result, we had one risk matrix effective from January to October, and another effective as from November. All 25 risks listed in the matrix are considered material and are regularly assessed.



## Voluntary Commitments

Chesf has undertaken voluntary commitments in line with our ESG policy and strategy. In 2021 we supported the following initiatives:

- Global Compact
- Gender & Racial Equity Program
- UN Women's Empowerment Principles
- Pledge on Addressing Sexual Violence against Children and Adolescents
- Eletrobras Pledge on Climate Change
- Open Letter – Private Sector Support for Carbon Pricing in Brazil, developed by IEC
- Sustainable Development Goals (SDGs)
- Open letter – Business for Human Rights
- Brazilian Business Commitment to Water Security
- Brazilian Business Commitment to Biodiversity
- *Na Mão Certa Program*, Childhood Brasil.

## Priority SDGs



## Prosperity

Despite an economically challenging 2021—with rising inflation, interest rates and unemployment; an extended drought, especially in the South and Southeast of Brazil; and the COVID-19 pandemic—Chesf delivered strong financial performance that exceeded our targets across all dimensions other than capital expenditure, creating value for our shareholders and for wider society.

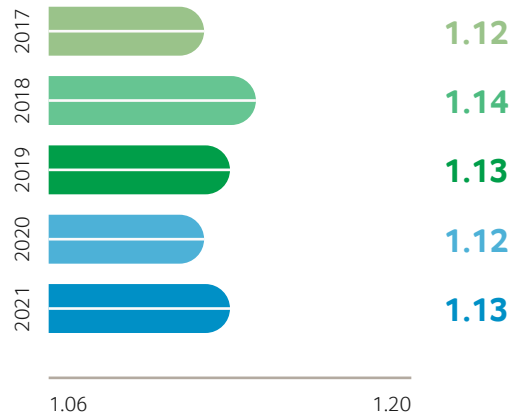
## Financial highlights

- **Income: R\$ 5.5 billion** (up 159.3% on 2020);
- **Dividends: R\$ 1.3 billion;**
- **Operating revenue: R\$ 8.1 billion** (up 31.8% on 2020);
- Final acquisition and takeover of the **Pindaí wind farm cluster** in Bahia;
- **A favorable decision** on 8/28/2021 in a **R\$ 2.925 billion lawsuit** brought by the City of Canindé do São Francisco against Chesf, seeking payment of proportional ICMS for the Xingó hydroelectric plant.

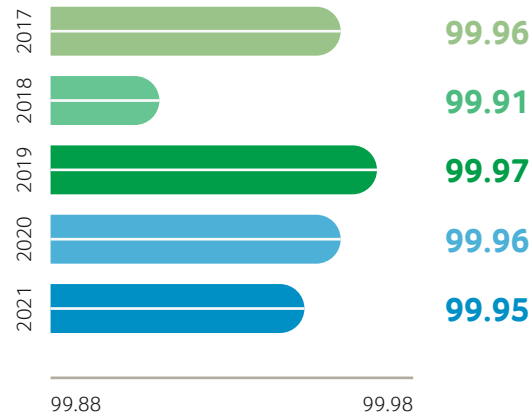


## Operational highlights

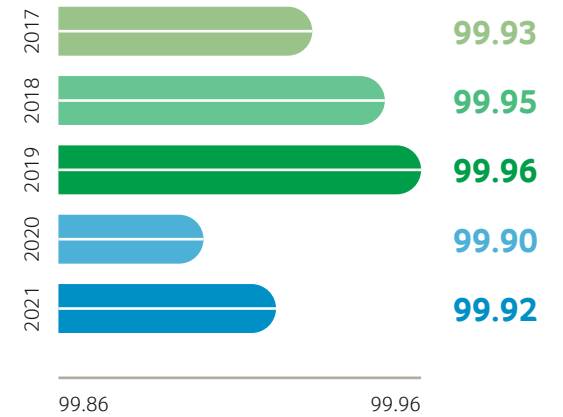
Average Generation Availability



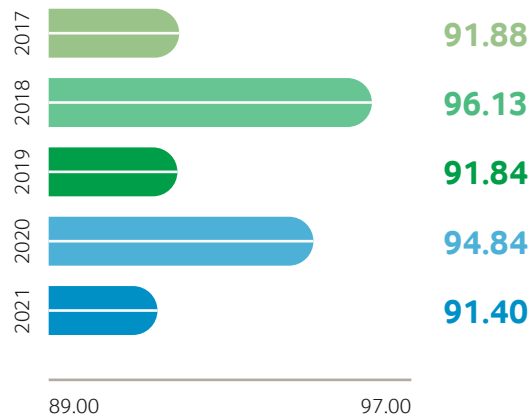
Transmission Line Operational Availability



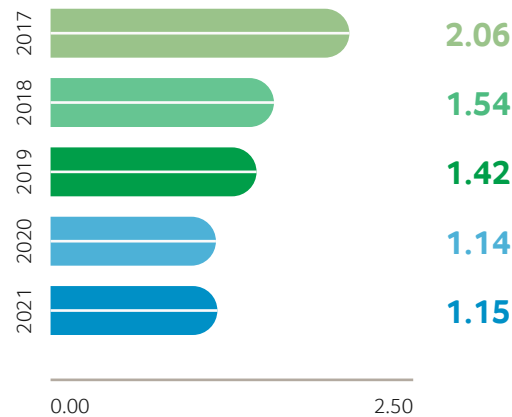
Average Transformer Availability



System Robustness Rating



Variable Component



In these charts, the higher the figure the better, except that for the Variable Component chart the reverse applies

# Linking solutions, people and results

All R&D+I projects at Chesf are managed from our **Development & Innovation Center**.



## 1. Smart Innovation Management System (SIGI)

- Centrally manages **R&D I projects and startups**.
- This **includes** risk assessment, technological maturity progression, investment and revenue management, and performance tracking.

## 2. Chesf Innovation Hub

- Drives Chesf innovation initiatives to **address pain points within the organization**.

## 3. Chesf Innovation Awards

- Awards** to reward employee innovation

**14** available categories



## 4. Training for innovation champions

- Initiatives to **train Chesf Employees** to champion our internal culture of innovation

## Key Areas of R&D I Investment in 2021



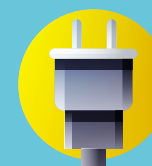
Alternative energy sources  
R\$ 20.389.320,00 invested



Safety  
R\$ 8.350.370,00 invested



New materials and components  
R\$ 4.136.580,00 invested



Operation of electric power systems  
R\$ 578.420,00 invested

## Suppliers

In 2001 the Eletrobras Group Supplier Service Center was centralized at the Northeast Shared Services Center (CSC) and Eletrobras launched a Supplier Space—a dedicated website for Eletrobras suppliers Group-wide.

Local supplier spend was R\$ 775,263,129.01 in 2021, or 25.14% of total supplier spend.

## People management highlights

- **People 5.0**, a project to develop world-class competencies and practices to enhance integration and collaboration between people and smart systems in designing strategic solutions
- **Enhanced COVID-19 safety protocols** and employee communications
- Upgraded our **Performance Management System (PMS)**
- Implemented an **online NR-10 (electrical installation) training course**.

## People

Chesf ended 2021 with a workforce of 3,084 employees, all employed on a permanent basis. All employees are based in the Northeast of Brazil and covered by collective bargaining agreements.

### by gender



MEN

2,531



WOMEN

553

**3,084**  
TOTAL<sup>1</sup>

### by employment type



FULL-TIME<sup>2</sup>

2,046  
men

507  
women

**2,553**  
TOTAL



PART-TIME<sup>3</sup>

485  
men

46  
women

**531**  
TOTAL

1. The total headcount includes the following: employees, requisitioned employees, reinstated employees and political appointees. The figures exclude seconded employees, employees on unpaid leave, and reinstated employees seconded to other agencies. All Chesf employees have indefinite employment contracts.  
 2. As agreed with our parent company, employees on secondment are deemed to be employed under an indefinite contract, pursuant to Decree No. 9144 (August 22, 2017).  
 3. As established by our parent company, an employee working a minimum of 200 hours per month is deemed to be a full-time employee.  
 As established by our parent company, an employee working less than 200 hours per month is deemed to be a part-time employee.  
 \* Our total headcount includes one employee who retired due to disability in early 2022, effective retroactively. When compiling information for the Annual Report, this employee was still listed as an active employee.

## Customers

Chesf has two types of customers and beneficiaries:

- **trading:** free consumers, electric utilities and trading companies;
- **transmission:** generators (self-producers, independent producers and shared generation facilities), transmission companies, electric utilities and consumers.

Chesf conducts a web-based customer satisfaction survey every two years. The 2020 survey covered the generation and transmission businesses. The survey dimensions included: customer service, commercial, trading and transmission contract management, metering, reputation, and sustainability. A total of 62.4% of customers were surveyed.

Our overall customer satisfaction rate was 90.6%. **In the commercial dimension, customer satisfaction was a perfect 100%**

## Communities

In 2021 Chesf ran the following programs in the communities where we operate:

- Chesf Solidarity Campaign
- Caring Christmas Campaign
- May 18 Campaign (against sexual exploitation of children and adolescents)
- An enhanced campaign under the hashtag *Existe Chesf na minha Vida*;
- Education campaigns, including Lilac August (gender violence), Pink October (breast cancer), Blue November (prostate cancer), People with Disabilities, 16 days of Activism, supplier Summit and Chesf anniversary
- Launched an “Inclusive Friends” comic strip, a collective employee effort in support of people with disabilities

Main local community engagement and development initiatives:

- Joined the Pernambuco Network to Combat Sexual Violence against Children and Adolescents
- Joined Childhood Brazil's *Na Mão Certa* Program
- Issued a call for programs and projects registered with the Fund for the Rights of Children and Adolescents - 2021 Edition
- Issued a call for programs and projects registered with the Elderly Fund - 2021 Edition
- Launched a project called, “Development activities supporting students, smallholders and riparian vegetation surrounding lakes in the São Francisco River Basin – PE/SE/AL/BA”;
- Organized the Eletrobras Group Call for Social and Environmental Projects – 2021 Edition

PRESENTED THE CHILD CITIZEN ORCHESTRA PROGRAM



# Planet

Protecting our planet from degradation through sustainable consumption and production, striving to manage natural resources efficiently, and taking urgent action against climate change are some of the ambitions within our business purpose, ensuring that we are responsive to the needs of present and future generations.

# Climate change

Chesf’s installed capacity has historically been highly weighted in renewable generation assets. Today, our expansion pipeline essentially consists of wind and solar projects.

In 2021 we offset greenhouse gas emissions for 100% of office consumption and 7.7% of emissions from transmission losses via RECs (Renewable Energy Certificates).

The RECs were issued in respect of the following plants: Casa Nova A, Apolônio Sales, Boa Esperança, Funil, Luiz Gonzaga, Paulo Afonso (Paulo Afonso I, II, III and IV), Sobradinho and Xingó, covering 98.7% of our installed capacity. These certificates are in addition to those obtained in 2020, for Casa Nova II and Casa Nova III.

## Emissions

SCOPE	2019 (tCO <sub>2</sub> e)	2020 (tCO <sub>2</sub> e)	2021 (tCO <sub>2</sub> e)
Scope 1	20,645	12,360	8,607
Scope 2	140,447	101,412	260,438
Scope 3	1,268	240	293
<b>Total</b>	<b>162,360</b>	<b>114,012</b>	<b>269,337</b>

## Waste

NONHAZARDOUS WASTE DISPOSAL (T)	2021		
	HYDROELECTRIC GENERATION	ADMINISTRATIVE ACTIVITIES	TRANSMISSION
Recycling	977.21	14.64	797.74
Composting	0	41.64	0
Landfilling	ND	169.49	ND
<b>Total</b>	<b>977.21</b>	<b>225.77</b>	<b>797.74</b>

HAZARDOUS WASTE DISPOSAL (T)	2021		
	HYDROELECTRIC GENERATION	ADMINISTRATIVE ACTIVITIES	TRANSMISSION
On-site storage	209.40	265.30	49.50
Industrial landfill	10.76	0.00	0.20
Co-processing	0.00	1.30	21.75
Reverse logistics	17.60	1.70	161.00
<b>Total</b>	<b>237.76</b>	<b>268.30</b>	<b>232.45</b>

## Water

In 2021 the total volume of turbined water flow through hydropower dams located on rivers experiencing water stress (based on the method outlined by the Brazilian Water Agency (ANA)) was 335,729,664.00 m<sup>3</sup>. All hydroelectric plants have or are in the process of securing permits to use water resources.

Chesf-owned hydroelectric plants all pay Financial Compensation for the Use of Water Resources pursuant to Law no. 7 990/1989. The amount of compensation paid in 2021 was R\$ 163,643,822.06.

Our administrative operations consumed a total of 33,981.30 m<sup>3</sup> of water in 2021. These data are derived from direct measurements at our facilities.

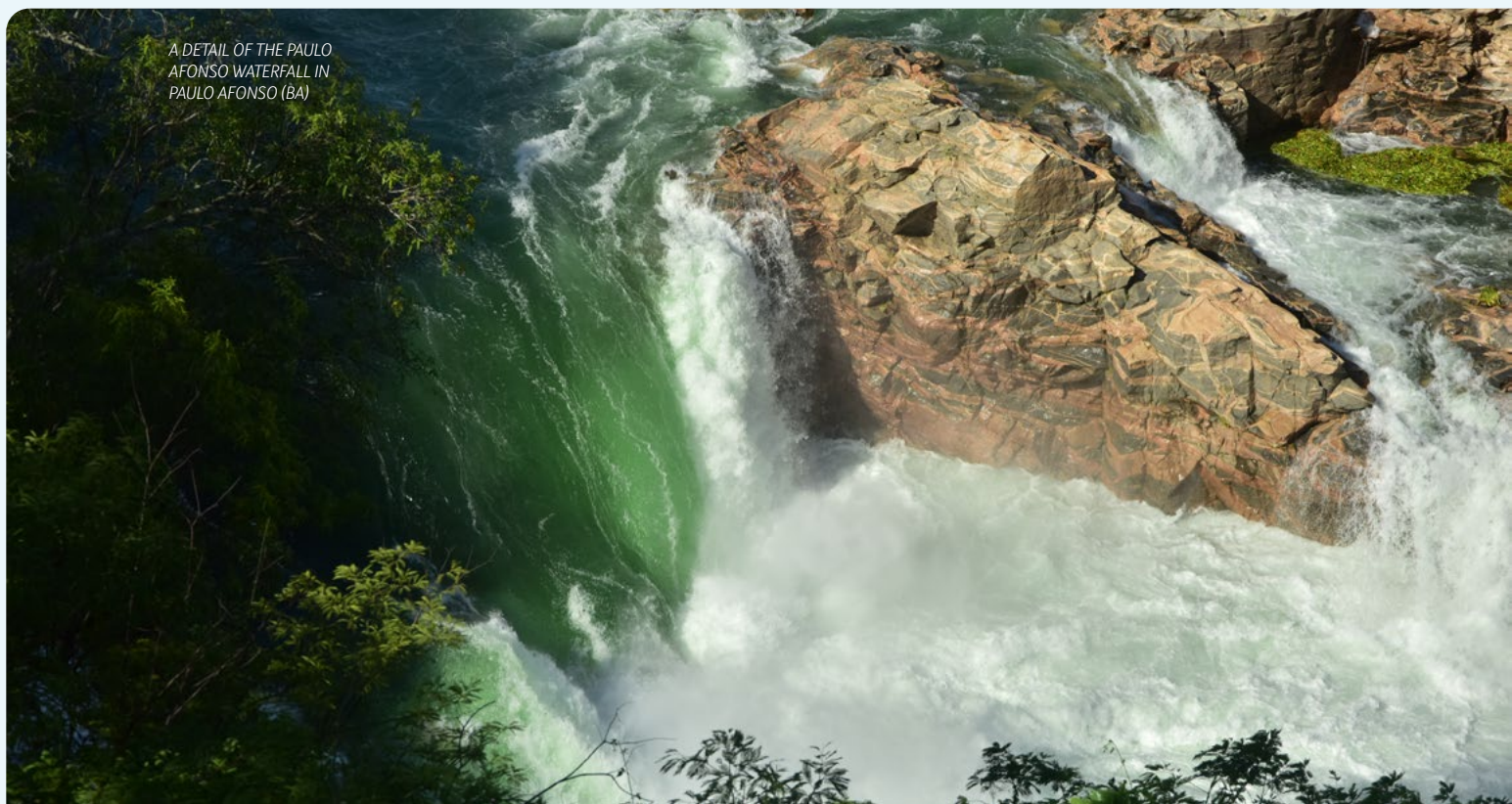
## Biodiversity

In 2021 Chesf prioritized two habitat protection and rehabilitation projects:

- Revegetation of the Mata do Junco Wildlife Refuge, in Sergipe: maintenance planting in 10.35 hectares of rehabilitated area, with a total of 20,000 seedlings of different species;
- Protected Area Monitoring and Rehabilitation along the 230 kv Socorro/Penedo Transmission Line right-of-way. An area of 3.58 hectares was re-vegetated with 5,659

native seedlings. In 2021 a total of 469 seedlings were planted and the complete area was rehabilitated.

Chesf runs a Voluntary Reforestation Program. In 2021 we engaged a firm to conduct planting and maintenance services in a 2.5 hectare area in Natal (RN) and are currently arranging for additional rehabilitation areas for implementation in 2022.



A DETAIL OF THE PAULO AFONSO WATERFALL IN PAULO AFONSO (BA)

## Credits

### Overall coordination

Corporate Sustainability Management  
Department, Head of Business Strategy  
and Equity Management

### Writing and editing

grupo report - rpt.sustentabilidade  
(Alisson Coutinho and Tita Berton)  
(Beatriz Miranda, project management)

### Graphic design

grupo report - rpt.sustentabilidade

### Translation

Ivan van Rheenen

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Annual Report.



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