Chesf

2021 SASB Report

Eletrobras
Chesf

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Introduction

Companhia Hidro Elétrica do São Francisco (Chesf), an Eletrobras company was founded on October 3, 1945. Headquartered in Recife, Chesf has 3,084 employees and operates in power generation, transmission and commercialization.

Power generation from clean sources is concentrated in the Northeast and then distributed to the North/ Northeast and Southeast/Midwest regions through transmission lines feeding the National Interconnected System (SIN).

As a publicly traded company, Chesf abides by the rules of the Brazilian Securities and Exchange Commission (CVM). Eletrobras holds 99.578% of the company shares.

With 12 hydroelectric plants and 14 wind farms, Chesf's corporate generation adds up to 10,460.43 MW installed power. Special Purpose Entities (SPEs) account for an additional 2,642.95 MW, reaching a total 13,103.38 MW. This is 20.7% of the total installed capacity in Eletrobras companies.

In line with its holding company, Chesf publishes an Annual Report presenting information on company performance, key results, achievements and goals. The report is based on four pillars – Governance, Prosperity, People and Planet – and prioritizes economic, environmental, social and governance factors (EESG).

The Annual Report presents integrated contents grouped around the pillars and adopts global and sectoral reporting standards and good practices: the guidelines of the Global Reporting Initiative (GRI), the framework of the International Integrated Reporting Council (IIRC), the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainable Development Goals (SDGs) and the principles of the United Nations Global Compact. Chesf also reports on the material sectoral topics of the Sustainability Accounting Standards Board (SASB) in this document.

This first-ever specific Report on SASB material topics is another step towards increasing transparency for Chesf results.

The SASB Report follows the materiality matrix defined by Chesf in 2018 establishing specific standards for reporting on company operations. SASB identifies sustainability topics from a set of 26 relevant issues organized into five dimensions: environment, social capital, human capital, business model and innovation, leadership and governance.

This Report is based on the Chesf materiality matrix and follows specific standards for reporting on each business activity.

A message from the President

We are in the process of building the Chesf of the future. We are forging ahead along a well-defined road map to become a perennial Brazilian benchmark for the development and delivery of sustainable, innovative enegy solutions that generate high value for society. This means connecting to advanced efficiency solutions in power generation, transmission and commercialization to drive transformation and growth and create necessary and fundamental opportunities for Brazilian citizens.

Our chosen path requires a robust, structured organization and clear, transparent corporate governance. That is what we strive for at Chesf. Over the last few years and very especially in 2021, we created new areas in the company, defined roles more clearly and empowered our professionals so they can deliver bold solutions to meet company targets and translate our potential into positive results for shareholders, society and the planet while generating 100% clean and renewable energy.

An important and inseparable part of the Chesf corporate transformation involves embedding environmental, social and corporate governance in every aspect of our organization, management practices and company culture. Beyond mandatory compliance with legislation, we aim to have every Chesf initiative, project and action reflect our conviction that these three aspects are necessary and indispensable conditions for the success of our business.

Our internal rules and policies guide our employees and ensure we all follow advanced business practices. We are also proud to be part of Eletrobras, and we follow the rules and guidelines defined by our holding company.

Chesf is prepared to face the transformational changes of the energy market in Brazil and around the world. As a generation company based on renewable sources - hydroelectric and wind - we invest in research, development and innovation to proactively participate in the new possible designs of our production chain.

Our positive results in 2021 reflect the commitment of the Chesf workforce to delivering results and confirm that we are on the right track. This first-ever report on Sustainability Accounting Standards Board (SASB) material topics provides an objective and transparent view of the relevant information and data on our performance. We aim to keep our stakeholders updated on Chesf's main projects and actions and communicate our efforts focused on sustainability an on the ESG pillars.

Enjoy your reading!

Fabio Lopes Alves
Chesf Chief Executive Officer

Risk Management

Dimensions: Human capital, Leadership and Governance

The risk management process at Chesf follows the principles and guidelines established in the Eletrobras Companies Risk Management Policy, based mostly on ISO 31000:2018, COSO ERM 2017 and IIA:2020, the 2020 Three-Line Model of the Institute of Internal Auditors.

Chesf has a formally established Risk Committee, a Risk Management area and the Statutory Audit and Risk Committee (CAE) headquartered at the holding company responsible for overseeing all Eletrobras companies. The risk management methodology comprises identifying, evaluating, handling, monitoring and communicating different types of risks.

Chesf has a Risk Matrix and adopts the Eletrobras Crisis Communication Management Regulation. The regulation provides for the establishment of a Crisis Management Committee and defines the roles and responsibilities of committee members.

Besides analyzing the corporate risks featured in the Risk Matrix, other risk factors that may impact Chesf's Business and Management Plan (PNG) are also evaluated in this phase.

Chesf reviewed its Risk Matrix in 2021; the new matrix was adopted in November 2021. The current matrix outlines 25 risk events around four categories: "Business", "Financial", "Operational" and "Compliance". All risks in the Matrix are considered relevant and must be analyzed by the responsible areas with the support of the risk management area; periodic resports are then submitted to the Eletrobras CAE.

Chesf adopts a number of policies and corporate guidelines against fraud and corruption, including the Eletrobras Integrity Program (also known as the Eletrobras 5 Dimensions Program) based on the Code of Ethical Conduct and Integrity of Eletrobras Companies The dimensions of the program comprise establishing an environment that is conducive to integrity management, carrying out periodic risk evaluations, defining and implementing policies and procedures, promoting and monitoring communication and training activities, implementing remedial measures and enforcing sanctions and penalties.

IF-EU-320a1: Total rate of recorded incidents (TRIR), fatality rate and near miss frequency rate

Chesf complies strictly and fully with all current legislation on occupational health and safety, especially the Regulatory Standards of the Ministry of Economy. A normative resolution of the company defines its entire occupational health and safety policy.

Other regulations define rules for the acquisition, use, storage and conservation of personal protective equipment (PPE) and collective protective equipment (EPC), several occupational safety training programs and training on occupational safety and health during interventions in the electroenergy system, besides risk analysis.

These regulations are valid for all employees and must be followed in all functions and activities. The same occupational health and safety requirements apply to service providers contracted by Chesf. To underscore the importance of the requirements, Chesf holds safety integration meetings before entering contracts with suppliers. The company also conducts periodic safety inspections and audits on these contracts.

Chesf assesses hazards and risks associated with its activities through tools such as Hazard and Risk Matrices, Preliminary Hazard Analysis (APP) and Preliminary Risk Analysis (APR). The objective is to protect our workforce and others under our labor responsibility, preventing work-related injuries and illnesses, reducing absenteeism due to sickness, promoting the continuous improvement of Occupational Health and Safety (OHS) processes, stimulating the improvement of the prevention culture and promoting safe and healthy behavior.

Since the change from OHSAS 18001 to ISO 45001, Chesf has implemented an Occupational Health and Safety Management System (OHSMS) in all generation facilities. The project called Prevenir+ started in mid-2020 aiming to implement SGSSO in all 12 Chesf plants; it is also a valuable tool for monitoring and evaluating company performance in occupational health and safety.

In 2021, SGSSO was implemented at the Paulo Afonso IV and Xingó plants under ISO 45001:2018. The scope of certification covers all processes: operations, mechanical, electrical, civil and support maintenance in hydroelectric plants. This means it encompasses employees, outsourced personnel and visitors working in the two plants.

The company complies with the Eletrobras Program of Occupational Health and Safety developed in partnership with consulting firm DuPont. Chesf manages health and safety in all processes and operations, in mechanical, electric, civil maintenance and support services in its HPPs and other generator parks, thus covering all employees, outsourced personnel and visitors in all areas of the company.

Chesf is currently implementing an incident management methodology that investigates and analyzes accidents, near-misses and deviations using a digital tool that enables fast incident communication; it can also be used for sharing lessons learned and monitoring actions designed to control risks and avoid the repetition of similar occurences, contributing to continuous improvement and safer operations.

Chesf manages health and safety in all its operations, as well as in mechanical, electrical, civil and support processes of hydroelectric plants and other generating parks: this covers all employees, contractors and visitors operating in all areas. The project being developed together with the consulting firm will also track near-misses.

In 2021, the Accumulated Frequency Rate of Typical Lost Time Accidents (TFAT) closed the year at 3.63, higher than the tolerance limit of 2.59 specified for the company. The increase over 2020 can be attributed to: improved employee awareness leading to more reported cases; fewer employees in the company; return to face-to-face activities for all employees, including those who had been working remotely during several months in 2020.

The Accumulated Severity Rate of Typical Lost Time Accidents (TGAT), in turn, closed 2021 at 90.72, below the limit of 113 established as tolerable for this indicator.

Work-related injuries *

Variable Name	Variable Value
Number of employees (monthly average) [1]	3,295
HHTER (man hours worked)	6,602,679
Absolute number of lost-time injuries (less than or equal to 15 days (employees)	18
Absolute number of lost-time injuries -- more than 15 days (employees)	6
Absolute number of accidents without lost time (employees)	6
Total absolute number of accidents (employees)	30
Man days lost time (employees)	599
Man days debited (employees)	0
Total man days lost (employees) [3]	599
Number of deaths (employees)	0
Lost Time Frequency Rate (TFCA) (employees)[2]	3.63
TF (Frequency Rate) (employees)[2]	4.54
TG (Severity Rate) (employees)[2]	90.72

[1] The following assumption is considered for this indicator: based on current legislation, employees are those workers who have formal employment contracts, and their employer is identified by the company corporate taxpayer identification CNPJ in their Work Card, as determined by Brazilian labor laws (CLT). The following categories are included: own employees present in the company, assigned to other organizations or on paid/unpaid leave; amnestied employees present in the company and assigned to other organizations, young apprentices; and own employees on paid/unpaid time off or holding an elective office. The following categories are not included: employees requested from other companies; individuals holding the position of president/director and trainees.

[2] Frequency rates of lost time accidents (TFA), frequency rate (TF) and severity rate (TG) are calculated considering the following formula for the number of hours worked: sum of the monthly average hours worked x 167 x 12 (considering cutoff date as December 31, 2021).

[3] In lost days, 43 days were recorded in 2021 due to an accident that occurred in 2020.

* In 2019 and 2020, there were three unreported accidents in Chesf statistics. One of the employees had an accident in 2019, with lost days in 2020. At that time, the technical understanding was that the lost days were to be recorded as final by the end of the year, without passing them on to the following year. From 2021, however, there was a change in this understanding. Another employee had an accident in August 2020, initially with no presumed lost time. Yet the employee's condition worsened, and he took a medical leave by the end of 2020. Finally, a third employee was injured in December 2020. The incident was not communicated to SESMT in time to be recorded in the company's accident statistics.

Hazard and Risk Matrix

This matrix is used to identify and evaluate habitual or extraordinary risks impacting Chesf workers. Employees have different channels available to voice concerns or report a situation of risk: the company's Specialized Services in Safety Engineering and Occupational Medicine (SESMT), the Internal Accident Prevention Commission (CIPA) and the Ombudsman. Employee privacy is guaranteed in all channels.

A Chesf safety policy revised in 2021 determines that no work may ever be performed without considering worker health and safety. This policy also ensures compliance with the technical and legal provisions applicable to employee health and safety.

Training of workers in occupational health and safety

In 2021, there were face-to-face and remote training activities. Highlights: handling and operation of hazardous products (MOPP); risk factor training; emergency brigade formation; defensive driving; basic and complementary training in NR-10; CIPA training; prevention of human error shutdown; NR-35; NR-13; receipt and control of chemicals; chainsaw operator; among others.

IF-EU-550a.1: Number of incidents of non-compliance with physical and cyber security standards or regulations

Cybersecurity is considered a priority and aligned with business strategies at Chesf. Breaches can compromise sensitive information, administrative services or critical infrastructure, and directly impact company results.

The company has a Superintendence of Risks, Compliance and Information Security linked to the Presidency and has an information security department responsible for governance and strategic security planning. Cybersecurity is handled by the Information Technology Superintendence and the Operational Technology Superintendence.

Cybersecurity management is based on key security frameworks, federal regulations, the Eletrobras Code of Ethical Conduct and Integrity and applicable company policies – approved by the Executive Board, published, updated and audited.

Chesf assesses its cybersecurity by continuously monitoring the execution of its information security plan and related indicators. Company audits validate the maturity of processes, identifying and correcting flaws in internal controls. Actions based on risk factors are implemented to reduce the probability of impacts related to safety events.

In 2021, several actions were taken to strengthen IT and OT cybersecurity, upgrading the technology used in access control and monitoring and improving existing processes through regulations and normative instruments aimed at addressing vulnerabilities.

The consolidated and integrated operation of the new solutions has brought greater maturity to Chesf's cybersecurity, providing greater protection to the company's computing environment.

No privacy breaches or loss of customer data were detected or reported in 2021.

This topic is managed as prescribed in key security frameworks, federal regulations, the **Eletrobras Code of Ethical Conduct and Integrity and applicable company policies.**

Environmental Management

Dimension: Environment

Chesf decisions having an impact on socio-environmental aspects consider the information, studies, possibilities and technical proposals provided by the responsible areas. The Company's Bylaws determine that its actions must seek economic, financial, social and environmental balance in operations and business opportunities. The Executive Board and the Board of Directors aim for minimal social and environmental interference, always leveraging positive impacts and minimizing negative effects.

Chesf's environmental management is guided by the biodiversity guidelines of the Eletrobras Companies' Environmental Policy and the environment is always considered when planning new projects and in daily operations at the units. Plans and programs include limnological and water quality monitoring, ichthyofauna monitoring, environmental education, erosion control and vegetation restoration.

Chesf created the Environmental Management Superintendence (SEA) in 2021. The new Superintendence is now responsible for carrying out actions and projects and disseminating results. There are two areas within the new structure: one focuses on environmental compliance and regularity in new ventures and assets in operation and the other prioritizes Chesf's environmental sustainability.

In 2021, Chesf continued implementing its Environmental Management System (EMS) to align environmental management objectives with strategic and sectoral goals established by company. The company uses indicators, goals and action plans to avoid, minimize and remedy negative impacts while boosting positive effects. Chesf is working hard to achieve ISO 14 001 certification for the licensing processes of its generation and transmission projects still in 2022.

Related to this goal, Chesf developed its Social and Environmental Risk Management process, with quarterly assessments of actions and timelines. From the design phase to energization, projects are followed through quarterly project monitoring meetings that evaluate the environmental indices in terms of the PNG and all other relevant aspects.

Generation plants and transmission lines in operation are monitored for environmental regularity, with periodic reports on their licensing status. The company also relies on its Environmental Licensing System (SISLIC), a computerized tool for recording and sharing information and documents about the company's projects and units.

Highlights among the licenses issued in 2021 are the Operating Licenses (LO) for many transmission lines (TL): the 230 kV Banabuiú – Fortaleza C1 and C2 TL, the 230 kV Pau Ferro/Santa Rita II TL, the 230 kV Mossoró II/Açu II – C2 TL, the 230 kV São Luís II/São Luís III – C2 TL, as well as the LOs related to substations in Rio Grande do Norte and Ceará.

With the evolution of this activity, Chesf's Environment area identified the need to improve its periodical communication on the environmental compliance status of its ventures to the other areas of the company.

Chesf's environmental management is guided by the **guidelines of the Eletrobras Companies' Environmental Policy.**

GHG emissions and air quality

Chesf monitors and evaluates its progress towards the **absolute and relative GHG reduction goals defined in the company's strategic plan.**

IF-EU-110a.1: Gross global scope, emissions covered by percentage, emissions– regulation limitation and reporting regulation.

As part of the socio-environmental strategy defined for Eletrobras companies, Chesf calculates its GHG emissions as determined by the holding company, that is, based on the National Policy on Climate Change established by Law 12.187/2009 and regulated by Decree 7.390/2009.

In addition to measuring GHG emissions, Chesf complies with the National Policy by fostering the development of processes and technologies for GHG reduction and sequestration, and seeking solutions for greater savings in energy, water and other natural resources.

Chesf's strategy in relation to GHG emissions relies on the pillars expressed in its Declaration of Commitment on Climate Change: they guide the company's current practices and future planning.

The company's emission sources are continuously monitored; since 2009, the results are published annually in the Eletrobras Companies' Inventory of Greenhouse Gas Emissions. Emissions are recorded using the methodology of the UN Intergovernmental Panel on Climate Change (IPCC) and the guidelines of the GHG Protocol. Chesf monitors and evaluates its progress towards the absolute and relative GHG emissions reduction goals defined in the company's strategic plan.

The annual GHG Emissions Inventory available on the company website is guided by the Environmental Policy of Eletrobras Companies and enables Chesf to provide the environmental reports required by the market. Based on the inventory findings, Chesf establishes strategies, plans and goals for reducing and managing greenhouse gas emissions.

Aiming for continuous improvement, sources of direct and indirect emissions are mapped and monitored through the System of Indicators for Sustainability Management (IGS). After validation, the data is exported to a set of computational tools designed to calculate and monitor the historical evolution of variables related to GHG emissions.

IF-EU-110a.2: Greenhouse gas (GHG) associated with energy supply

Chesf's GHG emissions are measured and classified into three distinct scopes:

Scope 1:
- Mobile sources;
- Fugitive emissions (SF_6 refrigeration);
- Sanitary effluents;
- Other fixed sources: LPG, natural gas, diesel from generator sets and auxiliary boilers

Scope 2:
- Emissions by amount of energy purchased from the grid;
- Losses in transmission.

Scope 3
- Air travel;
- Transport of non-energy products;
- Transport of fuels;
- Employee transportation

In 2021, Chesf's total GHG emissions were equivalent to 269,336.97tCO_2. Scope 2 emissions predominate with 96.7% of the total, followed by Scope 1 (3.2%) and Scope 3 (less than 0.2%).

Scope	2019 (tCO_2e)	2020 (tCO_2e)	2021 (tCO_2e)
Scope 1	20,645	12,360	8,607
Scope 2	140,447	101,412	260,438
Scope 3	1,268	240	293
Total	**162,360**	**114,012**	**269,337**

IF-EU-110a.3: Discussion of the long-term and short-term strategy or plan to manage Scope 1 emissions, emission reduction targets, and a performance review against these targets.

Eletrobras companies are committed to minimizing their impacts in relation to climate change and to advancing the transition to a low-carbon economy.

The Environmental Policy of Eletrobras companies has specific guidelines for climate change. There are two specific GHG reduction targets included in the Chesf 2021-2025 PNG, as shown in the following table.

Indicator	Unit	Results			Target
		2019	2020	2021	2021
Scope 1 + 2 emissions, no transmission losses/MWh	$kgCO_2e$/ MWh	1.03	0.37	0.35	1
Total GHG Emissions / RoI	tCO_2e/ (R$ thousand)	0.032	0.017	0.033	0.029

The total GHG/RoI emissions target has not been achieved. Although power consumption and transmission losses are lower than in 2019 (pre-pandemic year), there was a significant increase in Scope 2 emissions (more than 85%). This can be attributed mostly to the increase in the grid emission factor, given the greater dispatch of thermoelectric power plants in 2021.

Sustainable Development Goals (SDGs)

Chesf also sets GHG emission reduction targets in its commitments linked to the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda. These actions are connected to SDG 11 ("Sustainable Cities and Communities") and SDG 13 ("Combating Climate Change").

One of the 2021 initiatives linked to SDG11 was the implementation of the Emergency Action Plans (EAP) to ensure effective actions in case of emergencies endangering the safety of the dam structures. Completed actions include project planning and structuring, technical studies with suppliers and teams, dam emergency plan and internal emergency training. The "Períodic Dam Safety Review (RPSB)" aims to diagnose general dam safety status taking into account technological advances, updated hydrological information regarding the respective river basin, design criteria and conditions of use and occupation of land upstream and downstream of the plant. This plan was completed in December 2021 for all Chesf plants, and the action plans reflect the agricultural, economic and environmental diversity of the region, including activities such as honey production, animal husbandry, fruit and vegetable crops, as well as environmental preservation and recovery of riparian forests.

With regard to ODS 13, the "Conta Zero" Program (PCZ) advanced with the implementation of micro and mini-photovoltaic projects to be installed in Chesf units taking advantage of its own area and connection. Until 2021, 2,700 kW of the PCZ photovoltaic plants were in full operation, generating around R$4 million annual savings in the company's electricity bills.

Chesf also sets GHG emission reduction targets in its commitments linked to the **Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda.**

Water and wastewater management

Chesf's activity is essentially related to the use of water: it is our main environmental asset, and we rely predominantly on the São Francisco River.

According to National Water Agency (ANA), in 2021, the total volume of water turbined by Chesf hydroelectric plants located in rivers under water stress (that is, in a critical or very critical situation) was 335,729,664 m³. All Chesf projects already have or are currently requesting a grant for the use of water resources.

In administrative activities, water comes mostly from the supply network. Chesf monitors water consumption through indicators collected and passed on by the different operational units. As of 2021, in cases where there are no water meters to measure administrative use, the volume is estimated by multiplying the average number of fixed employees by a consumption of 50 liters/day per employee.

In 2021, Chesf consumed a total of 33,981.30 m³ of water in its administrative activities. This data was obtained from direct measurements at the company's premises.

As an Eletrobras subsidiary, Chesf relies on the holding company's Water Resources Policy based on Law 9.433/97. The company set an annual internal goal of reducing consumption by 0.3% in the administrative facilities that feature meters. This enables Chesf to monitor and manage consumption in several units.

Having a reduction target encourages greater commitment to consuming less and managing water use more effectively. In 2021, the company met its reduction target. In 2019 and 2020, the reduction was 10.95% and 6.82%, respectively.

Periodic maintenance was carried out in the hydro-sanitary facilities in 2021, and older equipment was replaced more efficient models. During 2021, Chesf began to work on technical specifications for the installation of water meters with remote reading using telemetry.

Installation in some facilities is planned for 2022. The main effluents generated by Chesf come from its sanitary facilities and from generation in hydroelectric turbines. In relation to effluents from sanitary facilities, 100% are directed to conventional treatment systems and do not pose risks to water bodies.

All Chesf projects already have or are currently **requesting a grant for the use of water resources.**

IF-EU-140a.1: Total water withdrawal, total water consumed, percentage in regions with high or extremely high baseline water stress.

	2019	2020	2021
Total annual volume of water turbined by hydroelectric plants (m^3)	112,850,428,608	189,815,758,560	138,783,408,480
Water drawn from underground sources – administrative activities (m^3)	34,506.2	27,869.42	29,008
Total water withdrawal from the sanitation utility supply network – administrative activities (m^3)	99,696	92,901.67	89,699
Total annual volume of water turbined by hydroelectric plants located in water stressed rivers (m^3)	59,559,840	306,875,520	335,729,664
Annual percentage of total volume of water turbined by hydroelectric plants in water-stressed rivers (%)	0.0528	0.1617	0.2419

* All Chesf projects already have or are currently requesting a grant for the use of water resources.

Total water disposal (m^3)

	2019		2020		2021	
Type of source	All Areas	Water stressed areas	All Areas	Water stressed areas	All Areas	Water stressed areas
Surface water	112,850,428,608	59,559,840	189,815,758,560	306,875,520	138,783,544,405	335,729,664

IF-EU-140a.3: Description of water management risks and discussion of strategies and practices to mitigate these risks

The generation of power through hydroelectric plants does not significantly change the water quality of the water bodies where the activities occur. However, with respect to legal environmental parameters, Chesf performs the management and periodic monitoring of the quality and quantity of water in its reservoirs, as well as in its areas of influence.

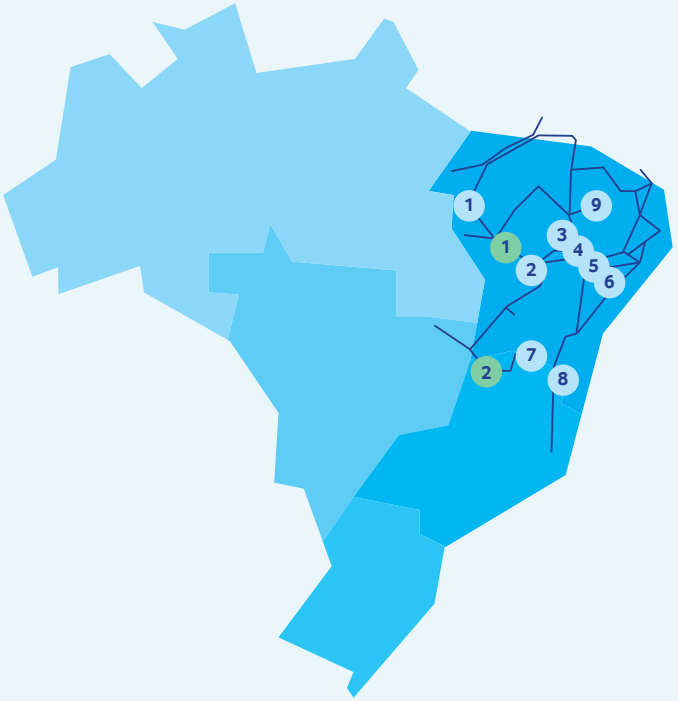
Measurements are taken at hydrometric stations in the São Francisco, Parnaíba and Contas river basins. Based on the data collected, the company reviews and updates its Annual Flood Control Plan, operating rules and guidelines for flood control, inventory of hydraulic operating restrictions, flood control manuals and the systematic disclosure of information on the basins.

There is an Education and Social Communication Program in place to raise awareness and support the populations living around these basins. The Company also participates actively other related Committees and Working Groups.

Chesf pays Financial Compensation for the Use of Water Resources (CFURH) in its hydroelectric plants, in accordance with Law 7.990/1989. In 2021, the amount paid by Chesf was R$163,643,822.06.

Installed generation and transmission capacity

Dimensions: Activity metrics and Leadership and Governance



Corporate hydroelectric 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 Complex (11 parks)

Transmission lines

POWER PLANTS *	RIO	INSTALLED CAPACITY (MW)
Hydroelectric Power Plants		**10,262.33**
Sobradinho	São Francisco	1,050.30
Luiz Gonzaga (Itaparica)	São Francisco	1,479.60
Apolônio Sales (Moxotó)	São Francisco	400.00
Paulo Afonso I	São Francisco	180.00
Paulo Afonso II	São Francisco	443.00
Paulo Afonso III	São Francisco	794.20
Paulo Afonso IV	São Francisco	2,462.40
Xingó	São Francisco	3,162.00
Funil	de Contas	30.00
Pedra	de Contas	20.01
Boa Esperança	Parnaíba	237.30

* Considers corporate ventures

POWER PLANTS *	RIO	INSTALLED CAPACITY (MW)
Curemas	Piancó	3.52
Wind farms		**198.10**
UEE Casa Nova II	–	32.90
UEE Casa Nova III	–	28.20
UEE Casa Nova A	–	27.00
EOL Acauã	–	6.00
EOL Angical 2	–	10.00
EOL Arapapá	–	4.00
EOL Carcará	–	10.00
EOL Corrupião 3	–	10.00
EOL Coqueirinho 2	–	16.00
EOL Caititu 2	–	10.00
EOL Caititu 3	–	10.00
EOL Papagaio	–	10.00
EOL Teiú 2	–	8.00
EOL Tamanduá Mirim 2	–	16.00
Total		**10,460.43**

In 2021, Chesf's operation was strongly impacted by two aspects: the COVID-19 pandemic, which changed the work dynamics in generating parks and transmission lines, and the water scarcity in the South and Southeast, which forced the company to operate at the limit of its capacities to supply the interconnected national system. The two aspects are closely connected: even during the pandemic, Chesf had to ensure uninterrupted, reliable power generation since the Northeast had slightly better water availability, making up for the impaired generation in the South and Southwest which faced severe water scarcity. Thanks to the safety and health protocols established in 2020, the company was able deliver positive results.

IF-EU-000.C: Length of transmission and distribution lines

Chesf did not participate in any transmission line auctions in 2021; neither did any new transmission lines start operations in 2021.

Transmission line in operation, all voltage levels (km) - corporate	21,801.35
Extension of transmission lines	1,768.15

Transformation capacity in operation (MVA) - corporate	70,296.37
Transformation capacity in operation (MVA) - SPE	5,688.89
Inlet or output of transmission lines operation, all voltage levels (km)	309.70
Net variation in processing capacity (MVA)	500
Annual Allowed Revenue (RAP) approved for transmission assets operated by the company (R$)	3,372,981,856.90

IF-EU-000.D: Total electricity generated, percentage by main energy source, percentage in regulated markets

The net electric power generated by Chesf is calculated from data collected by electronic meters every five minutes. The information is consolidated hourly and sent to the Electric Energy Trading Chamber (CCEE), where it is audited and returned to the company.

Total volume of net power generated (MWh)	26,356,833.37
Net energy generated by hydroelectric plant (MWh)	25,875,728.27
Net energy generated by wind (MWh)	481,105.1

*Considers corporate ventures and shared property; does not include SPEs.

Annual growth rates:

In 2019 and 2020, generation grew significantly. This can be attributed to the recovery of the hydrological conditions at Chesf reservoirs. The decline in generation in 2021 was due to the water crisis in the Northeast; yet even with lower volumes, the region still generated enough power to ensure national supply during the period marked by severe droughts in the South and Southeast.

IF-EU-550 a.2: (1) Average System Outage Duration Index (SAIDI), (2) Average System Outage Frequency Index (SAIFI), and (3) Average Customer Outage Duration Index (CAIDI), including days of major events, percentage of transmission loss

SAIDI is the only indicator applicable to Chesf's business.

SAIFI and CAIDI do not make sense under Brazilian Transmission Regulations: these indicators have specific characteristics related to energy distribution. Under the Brazilian Regulation on Energy Transmission, the necessary data and parameters to calculate such indicators are not available.

The Electrobras System Robustness Index measures the capacity of the company's basic network to withstand contingencies without disrupting power supply to consumers, considering only disturbances within the transmission network of Eletrobras companies.

Average plant availability factor, by energy source and regulatory system	
Number of hours of scheduled interruption - Hydroelectric	9,166.23
Number of hours of unscheduled interruption - Hydroelectric	22,975.6
Average generation availability – Hydroelectric (%)	96.77
Number of hours of unscheduled outage - Wind	1,897.47
Average generation availability – Wind (%)	99.03

IF-EU 000.B: Total electricity delivered to customers: commercial, residential, all other customers and wholesale consumers

In 2021, Chesf delivered 46,288 GWh to distributers and traders; (92.2%); 3,908 GWh went to industrial clients (7.8%).

IF-I-000.E: Total electricity purchased on the market

Chesf purchased 119 GWh for resale in 2021.

Transmission Performance (Reliability)	2019	2020	2021
Operational Unavailability (SAIDI) (hours)	8.37	4.33	3.97
Shutdowns per 100 km of Transmission Line (*Interruptions per* 100km/TL)	1.08	1.13	0.95
Systemic Robustness [1]	92.40%	94.84%	91.39%
Transmission losses	3.28%	1.16%	0.78%
Operational Availability (ASAI)	99.90%	99.95%	99.95%

1The value reported for this indicator considers the RAP-eligible corporate transmission lines in operation at the end of the reporting period.

SASB Summary

Indicator	Page	Correspondent GRI
Environmental Management		
IF-EU-110a.1: Gross global scope, emissions covered by percentage, emissions – regulation limitation and reporting regulation.	10	305-1
IF-EU-110a.2: Greenhouse gas (GHG) associated with energy supply.	11	305-2
IF-EU-110a3: Discussion of the long-term and short-term strategy or plan to manage Scope 1 emissions, emission reduction targets, and a performance review against these targets.	11	305-4; 305-5
IF-EU-110a.4: (1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage of compliance with the RPS target per market.	The Brazilian market does not have any specific regulation on requirements for power generators regarding renewable portfolio standards (RPS).	305-3
IF-EU-120a.1: Atmospheric emission of the following NO_2 pollutants (excluding N_2O), SO_x, particulate matter (PM_{xx}), conductors (Pb) and mercury (Hg), percentage of each in or near areas of dense population.	There are no significant NO_x, SO_x or other atmospheric emissions from Chesf operations.	305-7
IF-EU-140a.1: Total water withdrawal, total water consumed, percentage in regions with high or extremely high baseline water stress.	14. Eletrobras monitors the volume of water used by its companies in water stressed areas for hydroelectric generation (non-consumptive use). There is no water consumption by Eletrobras companies in water stressed areas.	303-3, 303-4, 303-5
IF-EU-140a.2: Number of non-compliance incidents associated with water quantity and/or quality licenses, standards and regulations.	In 2021, there were no incidents referring to violations of regulations on the volume and quality of water leading to formal accountability actions.	307-1
IF-EU-140a.3: Description of water management risks and discussion of strategies and practices to mitigate these risks.	14	303-1
IF-EU-150a.1: Amount of coal combustion waste (CCR) generated, percentage recycled.	Does not apply to Chesf's business.	305-6

Risk Management		
IF-EU-320a.1: Total rate of recorded incidents (TRIR), fatality rate and near miss frequency rate.	6	403-9
IF-EU-550a.1: Number of incidents of non-compliance with physical and cyber security standards or regulations.	8	418-1
Installed generation and transmission capacity		
IF-EU-000.B: Total electricity delivered to customers: commercial, residential, all other customers and wholesale consumers.	17	
IF-EU-000.C: Length of transmission and distribution lines.	16	G4-EU4
IF-EU-000.D: Total electricity generated, percentage by main energy source, percentage in regulated markets.	16	G4-EU2
IF-EU-000.E: Total electricity purchased on the market.	17	
IF-EU-240a.1: Average retail electric tariff for (1) residential, (2) commercial and (3) industrial consumers (first column).	Does not apply to Chesf's business.	
IF-EU-240a.4: Discussion of the impact of external factors on customer accessibility to electricity, including economic conditions of the service territory.	Does not apply to Chesf's business.	G4-EU23
IF-EU-420a.1: Percentage of electricity utility revenues from tariff structures that are decoupled and contain a revenue adjustment mechanism.	Does not apply to Chesf's business.	
IF-EU-420a.2: Percentage of electrical load served by smart grid technology.	Does not apply to Chesf's business.	
IF-EU-420a.3: Electricity savings by customer from efficiency measures, by market.	Does not apply to Chesf's business.	G4-EU27
IF-EU-550a.2: (1) Average System Outage Duration Index (SAIDI), (2) Average System Outage Frequency Index (SAIFI), and (3) Average Customer Outage Duration Index (CAIDI), including days of major events, percentage of transmission loss.	17	G4-EU28; EU29; EU30

Status of adherence to SASB indicators

Chesf's adherence status to SASB indicators covers the five dimensions. The percentage was calculated based on the compatibility of the responses vis-a-vis the information requested in each indicator applicable to the Electric Utilities & Power Generators sector, regardless of the qualitative approach of the information provided.

The indicators related to the dimensions of social capital and business model and innovation are not applicable to our business.

Credits

Companhia Hidro Elétrica do São Francisco (CHESF) provides several stakeholder contact channels.

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