



Eletrobras 2021 SASB Report



Eletrobras



Contents

Introduction

**Message from the Chief Corporate
Management & Sustainability Officer**

Risk management

Environmental management

**Installed capacity and electricity generated
and transmitted**

SASB Content Index

SASB reporting status

Credits

Introduction

Eletrobras (Centrais Elétricas Brasileiras S.A.) is the leading generation and transmission company in Latin America, and accounts for 29% of installed generation capacity in Brazil. The Group supports 13,433 jobs across the parent company and seven subsidiaries, including employees at the Brazilian side of the Itaipu dam.

We have helped to make Brazil's energy mix one of the cleanest in the world—97% of our installed capacity derives from low-carbon, renewable energy sources: hydro, wind, solar and nuclear.

Eletrobras annually publishes [Integrated Reports](#) based on the International Integrated Reporting Council (IIRC) framework and its capitals; the Global Reporting Initiative (GRI) Standards: Core option; the Sustainability Accounting Standards Board (SASB) sector disclosures and the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

These frameworks and disclosures were also mapped to the relevant Sustainable Development Goals (SDGs) of the United Nations (UN) 2030 Agenda for Sustainable Development.

This is the second year Eletrobras is reporting TCFD and SASB disclosures separately. This report contains SASB disclosures addressing the sector-specific topics outlined in the SASB Materiality Map, issued in 2021. Eletrobras reports the sector-specific disclosures for Electric Utilities & Power Generators. In developing its standards, the SASB identified sustainability topics from a set of 26 broadly relevant sustainability issues organized under five sustainability dimensions: *environment, social capital, human capital, business model and innovation, and leadership and governance.*

Eletrobras has helped to make Brazil's energy mix one of the cleanest in the world—97% of our installed capacity derives from renewable energy sources

Message from the Chief Corporate Management & Sustainability Officer

In recent years, a wide range of stakeholders—rating agencies, research institutes, among others—have inquired about how Eletrobras Group companies are addressing ESG (Environmental, Social and Governance) issues across their different aspects. In response to these inquiries, we have developed our second-consecutive separate report on Sustainability Accounting Standards Board (SASB) disclosures.

This report is integrated and consistent with other Eletrobras Group reporting; it has drawn guidance from the International Integrated Reporting Framework (<IR> Framework), the Global Compact, and the Agenda 2030 and its Sustainable Developing Goals (SDGs). It has also been prepared in accordance with the framework proposed by the Task Force on Climate-Related Financial Disclosures (TCFD) and the Global Reporting Initiative (GRI) standards.

Our aim in meeting these standards and recommendations is to enhance transparency in reporting to stakeholders on our initiatives to address pressing issues like climate change; our efforts to safeguard the health and safety of our employees, who work daily to ensure that electricity is reliably delivered to our customers; and our actions to help improve quality of life in the communities surrounding our operations. Through these reports and our Management Report we also provide an account of our progress in implementing good governance practices, and our financial performance.

These different reporting methods form a multifaceted [polyhedron](#) that reflects the wealth of diversity that exists across the Eletrobras Group. We have chosen this figure because it embodies and interconnects our different approaches to reporting on our disclosures, initiatives, results and goals across the economic, environmental, social and governance dimensions.

In this 2021 report, we highlight the review we completed of our materiality matrix and its importance in keeping us focused and up-to-date on priority topics, and fully aligned with our business objectives. We provide key information to current and future investors who see this approach to reporting as the most useful to understanding the extent of ESG impacts on our financial performance.

It is important to note that, while this three-letter acronym, ESG, has increasingly become mainstream, the underlying concept of sustainability goes much deeper than this. At the Eletrobras Group, it is a journey that we embarked on many years ago and that we must and will continue to pursue consistently and unwaveringly. Along the path there will be a great many challenges: from climate change and biodiversity, through the circular economy, to digital transformation, social and economic issues, and energy efficiency, and we will need to interlink and integrate the myriad of social, economic and environmental aspects affecting Eletrobras Group companies.



We are not, however, dismayed by these challenges. Rather, they accentuate the importance of our sustainability journey as a business and as a company with an important role to play in society.

Luiz Augusto Pereira de Andrade Figueira

Risk management

Dimensions: Human Capital, Leadership and Governance

Eletrobras implemented a Group-wide Integrity Program in 2016. The program, called Eletrobras 5 Dimensions, comprises a set of ongoing initiatives to disseminate a culture of integrity and prevent misconduct in Group companies. The program's five dimensions are centered around creating a business management environment focused on compliance; periodic risk assessment; development and implementation of policies and procedures; internal communications and training; continuous program monitoring; and remediation action and penalties. Illustrating the level of maturity we have attained in our Integrity Program, Eletrobras has recently been awarded a *Pró-Ética* Mark, which recognizes companies that have implemented robust measures to prevent, detect and mitigate corruption and fraud.

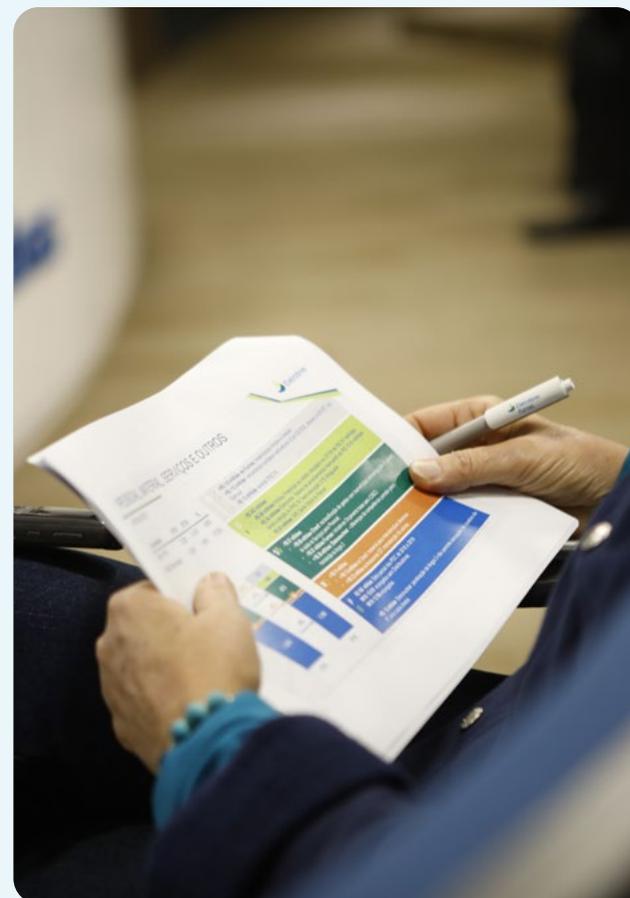
Eletrobras' risk management system is integrated Group-wide, and aims to prevent events from materializing which could adversely affect our strategic objectives and our ability to generate and preserve value, and to provide transparent information to the market and shareholders. The risk management process is governed by our unified Corporate Risk Management Policy, which is reviewed and approved

by the Board of Directors. The most recent edition was issued in June 2021 and is available on our website. The most significant changes in the 2021 edition were adjustments for compliance with the COSO 2017 ERM Framework, the Brazilian Corporate Governance Institute's (IBGC) Code of Best Practice for Corporate Governance, and the Institute of Internal Auditors' (IIA) Three Lines Model 2020.

Risk management is coordinated at the parent-company level in order to provide an integrated view of and standardize the process across Group subsidiaries, and is implemented on the ground by risk management and internal controls functions and risk committees at each Eletrobras Group company. Risk management results are reported to the Executive Board and Board of Directors via the Statutory Audit & Risk Committee (CAE).

At Eletrobras Group companies, risks are identified and mapped in a Corporate Risk Matrix, classified as business, financial, operational and compliance risks.

View the Eletrobras [2021 Annual Report](#) for the complete risk matrix.



IF-EU-320a.1: Total recordable injury rate (TRIR), fatality rate, and near miss frequency rate (NMFR)



Eletrobras Chesf's Casa Nova wind farm. Photo: André Schuler

Occupational health and safety is an important topic for Eletrobras and our Group companies, and is integral to our strategy, to our corporate values, and to our approach to ensuring the sustainability and on longevity of our business.

Eletrobras has invested heavily in strategic health and safety initiatives through our Energy and Occupational Health and Safety Program and through each Group company's occupational health and safety department. The goal is to help prevent work-related injuries and illnesses from occurring and enhance our occupational safety culture across the Eletrobras Group. As part of this, we have been working to implement a structured HSE System to support a preventive approach and Group companies' operations and strategies.

This includes implementation of an incident management methodology for investigating accidents, near misses and deviations. The methodology is supported by a digital tool to effectively and promptly report incidents, share lessons learned, and follow up on actions to mitigate risks and prevent recurrence of similar incidents in the future, through improvements and measures to ensure safer operations.

In 2021 we also made a major investment to train employees at all levels (supervisors, coordinators, and occupational health and safety professionals) with segmented programs based on a methodology provided by a specialized consulting firm. In addition, we plan to provide training to the entire workforce to raise individual awareness on conscientiously avoiding risks in day-to-day operations.

In 2021 we strengthened Occupational Health and Safety Governance, with structured meetings with senior managers to reinforce the approach to this theme by Eletrobras Companies at the strategic level, ratifying the commitment and engagement of company C-level executives to value the safety of their employees in the corporate environment.

Employee and workplace health are monitored by the Specialized Workplace Medicine Engineering Service (SESMT), responsible for compliance and adjustment to applicable legislation, and for implementing best practices in prevention regarding employee and contractor health and safety.

In 2021 the Eletrobras Group reported a no-lost-time injury frequency rate (injuries/man-hour worked) of 3.86; a lost time injury frequency rate (lost-time injuries/man-hour worked) of 2.35; zero fatalities; and a severity rate (days lost/man hour worked) of 86.03.

There are no employees or contractors whose work or workplace involves a high incidence or high risk of diseases related to their occupation.

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



Macaé-Campos Transmission Lines I, II and III. Photo: Daniela Monteiro

The Eletrobras Group has governance processes for mitigating risks affecting the availability, integrity, confidentiality and authenticity of our corporate data and information, or which could cause damages, information and financial losses, disruption of services, unlawful disclosure, our reputational damage. These governance processes are based on a set of guidelines, including our Information Security Policy and Risk Management Policy. Group companies also have policies on addressing information security breaches, and governance on privacy and personal data protection.

Our initiatives to address information security risks also draw guidance from the NIST Cybersecurity Framework, developed by the National Institute of Standards and Technology in partnership with the private sector. As a priority topic, our Statutory Audit & Risk Committee (CAE) receives quarterly reports on key risk factors and the status of risk mitigation initiatives being implemented at Group companies within our Information Security Plan.

On another front, our Information Security Program works to ensure that the Eletrobras Group’s internal processes are aligned with industry best practices, in order to mitigate the risk of events which could compromise the availability, integrity and confidentiality of information and its storage media. Through this program, we expect to increase visibility around information security risks and enhance decision-making at the senior management level, while minimizing the likelihood and impact of incidents and standardizing processes, roles and procedures across Eletrobras Group companies.

In February 2021, Eletronuclear was targeted by a ransomware attack. Because it was technically well prepared, the Eletronuclear was virtually unscathed by the incident, which was duly reported to the market.

There were no reported breaches of customer privacy or data in 2021.

IF-EU-540a.1: Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column

IF-EU-540a.2: Description of efforts to manage nuclear safety and emergency preparedness

Through Eletronuclear, a majority government-owned company, the Eletronuclear Group operates two nuclear power plants—Angra I and Angra II—with an installed capacity of 1,990 MW, equivalent to 3.93% of Eletronuclear’s total installed capacity, and a net output of 13,462 MW in 2021. These two plants produce approximately 3% of the electricity consumed in Brazil. Brazil is not aligned with the U.S. Nuclear Regulatory Commission (NRC) Action Matrix.

Eletronuclear is responsible for addressing and monitoring risks related to its nuclear power plants. It has an annual budget earmarked for modernizing and implementing the most recent safety requirements at its plants. Risks related to environmental issues are reassessed on a regular basis. In addition, Eletronuclear recently assessed its emergency preparedness following the stress test procedures adopted by the European Union for nuclear plants under construction or in operation in Europe. As a result, Eletronuclear has implemented several additional safety measures.

Nuclear safety is the top-ranked among the company’s ten priority strategic measures. All processes and operations are compliant with global best practices in the nuclear industry, and the procedures, guidelines and technical instructions issued by certification bodies.

Eletronuclear’s Independent Nuclear Safety and Oversight function is responsible for disseminating a safety culture, and reports directly to the CEO and the functions under the Chief Operations and Trading Officer responsible for nuclear plant safety. Eletronuclear’s safety culture is designed to ensure compliance with the procedures contained in its Integrated Safety Management Policy. This policy, in turn, is underpinned by seven principles: priority, presence, accountability, training, prevention, and communications and continuous improvement. Among the prevention precautions contained in the policy, the radiological safety of workers and the general public is among the most important.

Nuclear emergency preparedness is supported by a crisis prevention framework that details procedures for responding to a crisis, including measures implemented jointly by the global nuclear industry. Employees undergo emergency preparedness training, and plans are in place for the event of an environmental or natural disaster.

Two emergency response plans have been developed, a Local Emergency Response Plan (PEL) and an External Emergency Response Plan (PEE), led by the Rio de Janeiro State Civil Defense Agency. The PEL outlines measures to protect people on Eletronuclear property, while the PEE contains measures to protect communities surrounding the nuclear power plants.

*Based on consumption in Brazil as reported in the 2020 Electric Power Statistical Yearbook, for year 2019.



Angra 1. Photo: Eletronuclear Archives

Environmental management

Dimension: Environment

Our businesses are directly reliant on natural resources, and therefore robust and efficient environmental management is essential for our operations. Three core pillars underpin the Eletrobras Environmental Management System: the Eletrobras Group Environmental Policy ([view our Policy here](#)), the Eletrobras Group Environmental Committee and our Corporate Sustainability Disclosures System (IGS System).

Eletrobras Group operations are compliant with applicable Brazilian laws and regulations, and are assessed and monitored by environmental licensing authorities. Environmental and social impacts are addressed in and inform each stage of our projects.

In developing our projects, we carry out assessments to identify and assess impacts. The results from these assessments are submitted to environmental licensing authorities for review. Depending on the results from these assessments, our projects may be modified to better address or mitigate impacts. For every impact identified in an assessment, mitigation and offset measures are

outlined to be taken before, during and after development of the project. During operation, we monitor our projects to determine whether other initiatives, such as deploying new technologies, are needed to mitigate negative impacts. In 2021, we invested R\$ 264.7 million in socio-environmental actions.

To learn more about Environmental Management at Eletrobras Group companies, [visit our website](#).

GHG Emissions

Eletrobras Group companies have published emissions inventories since 2009 in accordance with Intergovernmental Panel on Climate Change (IPCC) methodology and the Greenhouse Gas Protocol.

IF-EU-110a.1: Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations, and percentage covered under emissions-reporting regulations

Eletrobras Group is committed to minimizing climate-change impacts and supporting the transition to a new development model in Brazil based on a low-carbon economy. In 2021 our Scope 1 emissions stood at 5,955,000 tCO₂e, exceeding the target of 4,123,000 tCO₂e under our Business & Management Plan (PNG 2021-2025).

Brazil has regulatory limits on NO_x, SO_x and PM (particulate matter) emissions, which are monitored by environmental protection agencies. Sustainable Development Goal 13 – Climate action is prioritized by senior management and addressed in our PDNG through indicators and targets for reducing emissions, electricity consumption, and fossil fuel combustion in our vehicle fleet. Another related initiative is our Sustainability Program 4.0, a set of 12 projects directly related to climate change management in the Group. These include the following: Energy Transition, and GHG Emissions Offsets and Environmental Protection.

IF-EU-110a.2: Greenhouse gas (GHG) emissions associated with power deliveries

Eletrabras Group’s total emissions were 8,288,650 tCO₂e in 2021, an increase of approximately 37% from the previous year reflecting the need to dispatch thermal power plants to offset the reduction in hydropower output. The bulk of emissions are scope 1 (72%), followed by scope 3 (17%) and scope 2 (11%). Further information is available in the Eletrabras Group [Greenhouse Gas Emissions Inventory](#) 2021.

Emissions (tCO₂e)

Scope	2020	2021	Change 2020-2021 (%)
Scope 1	4,164,151	5,955,500	+43.02
Scope 2	503,305	949,727	+88.70
Scope 3	1,378,753	1,383,422	+0.34
Total	6,046,210	8,288,650	+37.1

IF-EU-110a.3: Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emission-reduction targets, and an analysis of performance against those targets

The Eletrabras Group Environmental Policy outlines specific guidelines on climate change, based on PDNG 2022-2026. These are also integrated with our Sustainability Program 4.0., a set of assessments and initiatives to mitigate, offset and adapt to climate change.

Our parent company has set a target of achieving net zero emissions, in line with its goal of supporting the shift to a circular economy. This target was not met in 2021, with net emissions standing at 551.7 tCO₂e in the year.

IF-EU-120a.1: Air emissions of the following pollutants: NO_x (excluding N₂O), SO_x, particulate matter (PM), Pb, and Hg^{**}; percentage of each in or near areas of dense population

Due to the increased dispatching of thermal power plants, NO_x, SO_x and MP10 emissions rose by approximately 73%, 33% and 123%, respectively, from 2020.

NO _x , SO _x and Particulate Matter	2020	2021
NO _x (t/year)	7,411	12,825
SO _x (t/year)	9,788	13,023
Particulate Matter (PM) (t/year)	342	764
HCFC-123	0.18	0.003
R-22	5.09	0.35
R-141b	0.01	0.0001

*Pb is not applicable to our business.

**Eletrabras CGT Eletrosul performs two annual measurements to determine the concentration of mercury in air emissions from its coal-fired thermal power plants. In 2021 our direct mercury emissions amounted to 0,034 metric tons.

Water and Wastewater Management

In 2010 the Eletrobras Group launched a unified Water Resources Policy designed to ensure the sustainable and responsible use of water resources across their multiple uses in the energy sector. ([Learn about our Policy here](#)).

IF-EU-140a.1: Total water withdrawn and total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress

Eletrobras Group companies monitor water withdrawal and discharge in their operations, including hydroelectric power generation (non-consumptive) in areas with water stress.

Total water withdrawal in 2021	797,105,159.45
Total water discharged in 2021	797,087,068.52
Total water consumed in 2021	18,090.93
Percentage of water withdrawals in regions with high water stress	< 1%

*Eletrobras (through its subsidiaries) monitors water withdrawal and discharge for hydroelectric power generation (non-consumptive) in areas with water stress. Eletrobras Group companies consume no water in areas with water stress.

IF-EU-140a.3: Discussion of water management risks and description of strategies and practices to mitigate those risks

Water-related matters are monitored by a group of representatives from our parent company and subsidiaries, which since 2005 have been tasked with addressing water-related issues affecting our operations and business results. In 2021 we carried out assessments on water balance (to identify any power plants located in areas with water stress), multiple water uses and conflicts over water use, water security, and regulatory water-related issues.

Recognizing that water is essential for our business, we have joined several initiatives to further improve our water management practices: Water and Sanitation Agency (ANA) situation rooms; drainage basin committees; water resource boards; National Water Resource Council chambers; water resource working groups; and important technical forums on the topic.

At the Eletrobras Group, the water flowing through our hydropower plants is returned in its entirety to the downstream water body with the same level of quality as at the intake. Our thermal power plants withdraw water from surface water bodies for cooling and to

generate steam. This water is returned to the source water body at the temperature and with the quality required by applicable regulations, minimizing impacts on ecosystems and habitats. At our nuclear power plants, seawater is used for secondary system cooling and is entirely returned to the ocean with a minor increase in temperature.

Eletrobras’s generation assets are primarily hydroelectric plants. For the company as a whole, the most important risk related to hydropower is hydrological risk, or the risk that the electricity generated by hydroelectric assets operating within the regulated market could fall below their guaranteed capacity. This risk is more likely to materialize in the event of a drought, such as in 2021.

We work to prevent this risk from materializing by renegotiating hydrological risk and through “electricity hedges”.

Dam safety risk is managed and monitored locally by our subsidiaries. Dams and their appurtenant structures undergo Periodic Safety Reviews (RPS) in accordance with applicable laws and regulations. In addition, as a requirement established by the Board of Directors, Periodic Safety Reviews of our assets are also being conducted by independent external appraisers.

Our procedures to ensure compliance at our facilities may include observations made by water resource users (self-monitoring) in accordance with the relevant regulatory frameworks (CONAMA Resolution 357), environmental license conditions and permit requirements. Both the frequency of monitoring and the parameters monitored are established by the relevant authorities.

The total volume of water discharged by our subsidiaries’ operations into rivers experiencing critical or very critical water stress was 2,619,418.58 m³ in 2021, as measured using the methodology established by the Brazilian Water Agency (ANA).

IF-EU-150a.1: Amount of coal combustion residuals (CCR), percentage recycled

Only Eletrobras CGT Eletrosul has coal-fired power plants and the ashes from the combustion process account for approximately 99% of total residuals, of which approximately 18.14% are sold and reused in other production processes (311,608.13 t). An additional 81.86% are reused in mine land reclamation (1,406,077.96 t).



A Floating Solar Platform at Sobradinho. Photo: André Schuler

Installed capacity and electricity generated and transmitted

Dimensions: Social Capital, Business Model & Innovation, Leadership & Governance

Eletrobras has a nation-wide presence and accounts for 28% of installed generation capacity in Brazil. Most (approximately 97%) of our installed capacity derives from low-carbon energy sources: hydro, wind, solar and nuclear. This helps to make Brazil's energy mix one of the cleanest in the world. Coal, natural gas and diesel power plants account for just 3.01% of our installed capacity.

IF-EU-240a.4: Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory

IF-EU-420a.3: Customer electricity savings from efficiency measures, by market

The “Light for All Program” (Programa Luz para Todos—LPT) aims to provide electricity supply to all unserved rural communities in Brazil by 2022. Launched in 2003, the LPT Program is supervised by the Ministry of Mining & Energy (MME) and executed by Eletrobras, which manages execution contracts and monitors rural electrification works within the Program.

The LPT Program also provides solutions for using electricity as a driver of social and economic development in low-income communities, as access to electricity supports access to healthcare, education, water supply and sanitation, and other federal government programs and services. These initiatives support poverty reduction, higher household incomes and better living standards, as well as helping to avoid rural flight.

Program funding is sourced from electric power sector players, the Energy Development Account (CDE), an industry fund managed by the Electric Power Trading Chamber (CCEE), and other sources managed by the MME jointly with other government agencies.

In 2020, Eletrobras was tasked with executing the National Program for Universalization of Access and Use of Electricity in the Brazilian Amazon, or More Light for the Amazon (*Mais Luz para a Amazônia, MLA*), instituted by Decree no. 10.221. The program, led by MME, benefits families in remote Amazon areas without access to electricity or who generate electricity using nonrenewable sources. Eletrobras is responsible for contract management and project oversight. The program provides capabilities to generate electricity from clean and renewable sources to support the development of communities, especially riverine, indigenous and *quilombola* communities.

Eletrobras operates and manages the funding of the National Energy Conservation Program (PROCEL), a Federal Government program that aims to improve energy efficiency, reduce waste and increase cost efficiency in industry. The program comprises a set of sectoral initiatives throughout Brazil in the areas of education, knowledge dissemination, buildings and facilities, environmental sanitation, municipal energy management, public lighting, and industry. For more information, read our [Annual Report](#).

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

We ended 2021 with a total of 74,088 kilometers (km) of transmission lines, including 9,408* corporate km not renewed; 57,148 corporate km under Operation & Maintenance agreements, renewed pursuant to Law No. 12 783/13; and 7,532 km corresponding to our stakes in projects developed by the Eletrobras Group via SPEs. The Permitted Annual Revenue (RAP) of our corporate transmission lines (a total of 66,556 km) was R\$ 11,292 million.

Including only transmission systems with a voltage level equal to or greater than 230 kV—i.e. only ±800, 750, ±600, 525/500, 345 and 230 kV transmission lines—Eletrobras operates a total 68,359 km, or 40.2% of transmission lines in Brazil at these voltage levels.

At year-end 2021, 109 large-scale projects were in progress (21 transmission line and 88 substation projects), with an Associated Permitted Annual Revenue (RAP) of R\$ 433 million.

In 2021 we had a transformation capacity of 273,333 MVA, including 93.04% (254,306 MVA) in corporate substations and 6.96% (19,027 MVA³) operated by SPEs. On a leveraged basis, i.e. including the total capacity of the SPEs in which we have stakes, Eletrobras provided the grid with 520 MVA of transformation capacity.

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

In 2021, electricity sold in regulated markets (ACR, Guaranteed Capacity Quotas and Nuclear Power Quotas) amounted to 61% of total electricity generated. The calculation excludes Itaipu and SPEs.

The following calculation was used to determine the percentage in regulated markets: after determining the percentage of electricity sold in the Regulated Contracting Environment (ACR)—not including Physical Capacity Quotas and Nuclear Power Quotas—and in the Free Contracting Environment (ACL), this proportion was used to calculate the electricity generated in each environment. This yielded the estimated percentage of electricity generated in the regulated market out of total generated electricity.

Total electricity generated in 2021 was 8.4% higher than in 2020. Of this total, 86% was hydropower; 8% was nuclear; 1% was wind power, less than 1% was solar power and the remaining 5% was thermal power, across wholly owned, co-owned (including Itaipu Binacional) and SPE-owned plants.

Total generated electricity also includes generation by plants that were operational throughout the year but at year-end were no longer owned by Eletrobras and no longer included in our installed capacity.

Net generation by source (in GWh) ¹	2019	2020	2021
Solar	1.0	1.0	1.0
Wind	3,402.0	3,404.0	2,365.2
Hydro	156,739.0	172,074.0	154,090.0
Natural gas	6,585.0	5,726.0	6,677.6
Uranium	16,127.0	12,866.0	13,461.7
Coal	1,668.0	1,100.0	2,215.6
Oil	503.0	12.0	0.4
Total²	185,025.0	195,183.0	178,811.7

1. Wholly owned, co-owned (including Itaipu Binacional) and SPE-owned plants

2. Total generated electricity includes generation by plants that were operational throughout the year but at year-end were no longer owned by Eletrobras and no longer included in our installed capacity.

IF-EU-000.E: Total wholesale electricity purchased

The Eletrobras Group purchased a total of 10 TWh of electricity in 2020. This includes pass-through contracts, which do not involve an economic impact. Of the total amount, 17% was purchased from trading companies, 78% from primarily hydroelectric generators, and 5% from primarily wind-based generators.

It is important to note that when purchasing electricity from generators, even though their portfolio largely consists of power plants generating electricity from a given source, there can be no assurance that the electricity we purchase is derived from that source, as generators can also generate electricity from other sources or purchase electricity in the market for resale. When electricity is purchased from trading companies, the source of the electricity cannot be determined.

IF-EU-550a.2: (1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days

SAIDI is the only indicator applicable to our business. SAIFI and CAIDI are not applicable to the regulation of the transmission industry in Brazil as they specifically relate to distribution operations. We therefore have no data available within our transmission business that can be used to calculate the above disclosures.

The Eletrobras Group’s Robustness Index measures the ability of the backbone grid to withstand contingencies without interrupting power supply to consumers, considering only those disruptions originating within the Eletrobras Group’s transmission system. The Eletrobras System has maintained strong performance in recent years, with the number of disruptions causing load disconnections stabilizing in 2021. In relation to the transmission system, technical losses have been reduced in the last few years, reflecting the dispatching policy of the National Grid Operator (ONS) and grid topology improvements orchestrated by the Ministry of Mining & Energy (MME) and the Brazilian Energy Research Corporation (EPE).



Working on a transmission line, Eletrobras Chesf. Photo: Eduardo Vilaça

Transmission Performance (Reliability)	2018	2019	2020	2021
System Average Interruption Duration Index (SAIDI) (hours)	8.37	4.33	4.89	5.77
Interruptions per 100 km/TL	1.57	1.57	1.57	1.46
Systemic Robustness ¹	97.60%	96.02%	96.42%	96.61%
Transmission Losses	1.62%	1.52%	1.16%	0.81%
Average Service Availability Index (ASAI)	99.90%	99.95%	99.94%	99.93%

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

The Elektrobras Group sold a total of 139 TWh of electricity in 2021, across corporate assets and quota system contracts. Not including contracts under the quota system, the figure would have been 76 TWh. Electricity sold by Itaipu and sales under pass-through contracts, which do not involve an economic impact, are not included. The figures are shown in the following table:

Customer	TWh
Distribution Companies	94
Free Consumers	18
Generators	3
Trading Companies	23
Total	139

Out of the 94 TWh of electricity sold to Distributors, 75% were from hydropower, 15% from nuclear, 7% from gas-fired, 2% from coal-fired and 1% from wind power plants.

Electricity supplied to commercial customers cannot be broken down by type of source as they are served from the Elektrobras Group’s broader pool of generation assets, which include hydro, thermal, gas and wind power plants.

It is also important to note that the local distribution utility is responsible for delivering electricity to captive residential, commercial and industrial consumers.

IF-EU-420a.1: Percentage of electric utility revenues from rate structures that are decoupled and contain a lost revenue adjustment mechanism

In 2021, 52% of electric utility revenues from rate structures were decoupled and contained a lost revenue adjustment mechanism. Among the contract types available in the Brazilian power sector (Regulated Contracting Environment (ACR) and Free Contracting Environment (ACL)), the following are responsive to this

disclosure: Guaranteed Capacity Quota Agreements and Nuclear Power Quota Agreements, in the regulated contracting environment. Some of the features of these agreements, which include regulated and periodically adjusted rates, are shown below.

Physical Capacity Quota Agreements: These agreements are signed between hydropower plants and distribution companies. This framework was created by Law no. 12 783 (January 11, 2013) specifically for generators whose concessions had expired. Generators renewing their concessions are entitled under this law to an Annual Generation Revenue (RAG) calculated based on a plant’s operation and maintenance costs. The Brazilian power sector regulator, ANEEL, annually apportions generators’ guaranteed capacity among distribution companies, and these capacity allotments are known as quotas. These quotas, in turn, are used to determine the RAG revenue of each generator.

Nuclear Power Quota Agreements: Electricity generated by nuclear power plants is sold to all distribution companies within the National Grid under a system of quotas set annually by ANEEL. The generator receives an Annual Fixed Revenue set by ANEEL and paid by distribution companies in monthly installments.

The percentage of 52% was calculated as the ratio of the revenue earned by plants under the Physical Capacity Quota System and the Nuclear Power Plant Quota System, to total regulated revenue (ACR, Physical Capacity Quotas and Nuclear Power Quotas) for fiscal year 2021.

SASB Content Index

Disclosure	Page	GRI equivalent
Environmental management		
IF-EU-110a.1: Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations, and percentage covered under emissions-reporting regulations.	9	305-1
IF-EU-110a.2: Greenhouse gas (GHG) emissions associated with power deliveries.	10	305-2
IF-EU-110a.3: Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emission-reduction targets, and an analysis of performance against those targets.	10	305-4; 305-5
IF-EU-110a.4: (1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage fulfillment of RPS target by market	Under the current institutional model, the expansion of the national power system is primarily tasked to industry agents, who are responsible for making investments sufficiently in advance in implementing new projects. The Brazilian Energy Research Corporation (EPE) develops plans that guide and inform future auctions for new generation projects, and determine what technical and economic feasibility and social and environmental assessments are required for new generation projects, including renewables projects. The EPE develops these plans under guidelines issued by and with support from the Brazilian Ministry of Mining and Energy (MME). However, we believe Brazil's market has no specific regulations on renewable portfolio standards (RPS) for generation companies.	305-3
IF-EU-120a.1: Air emissions of the following pollutants: NO _x (excluding N ₂ O), SO _x , particulate matter (PM _{xx}), Pb, and Hg; percentage of each in or near areas of dense population.	10	305-7
IF-EU-140a.1: Total water withdrawn and total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress.	11	303-1, 303-3, 303-5

Disclosure	Page	GRI equivalent
IF-EU-140a.2: Number of incidents of non-compliance associated with water quantity, quality permits, standards, and regulations	No information available.	307-1
IF-EU-140a.3: Discussion of water management risks and description of strategies and practices to mitigate those risks	11	303-1
IF-EU-150a.1: Amount of coal combustion residuals (CCR), percentage recycled	12	305-6 G4-EU11
Risk management		
IF-EU-320a.1: Total recordable injury rate (TRIR), fatality rate, and near miss frequency rate (NMFR)	6	403-9
IF-EU-540a.1: Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	8	xx
IF-EU-540a.2: Description of efforts to manage nuclear safety and emergency preparedness	8	xx
IF-EU-550a.1: Number of incidents of non-compliance with standards or regulations on physical and cyber security	7	418-1
Installed capacity and electricity generated and transmitted		
IF-EU-000.B: Total electricity delivered to: personal, residential and other customers, and to wholesale consumers	16	-
IF-EU-000.C: Length of transmission and distribution lines	14	G4-EU4
IF-EU-000.D: Total electricity generated, percentage by major energy source, percentage in regulated markets	14	G4-EU2
IF-EU-000.E: Total wholesale electricity purchased	15	-
IF-EU-240a.1: Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	No information available.	-
IF-EU-240a.4: Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	13	G4-EU23

Disclosure	Page	GRI equivalent
IF-EU-420a.1: Percentage of electric utility revenues from rate structures that are decoupled and contain a lost revenue adjustment mechanism.	16	-
IF-EU-420a.2: Percentage of electric load served by smart grid technology.	No information available.	
IF-EU-420a.3: Customer electricity savings from efficiency measures, by market	13	G4-EU27
IF-EU-550a.2: (1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	15	G4-EU28; EU29; EU30

SASB reporting status

Our SASB reporting status is presented below based on the level of coverage of the different dimensions. Percentages have been calculated based on the extent to which information is responsive to sector-specific disclosure requirements for Electric Utilities & Power Generators.



Credits

This SASB Report has been prepared as a collaborative effort by teams across the Eletrobras Group. We wish to thank all collaborators for their participation and dedication.

For communications related to this report, please write to: sustentabilidade@eletrobras.com

Sustainability Channel

Dedicated to addressing requests for information about ESG (environmental, social and governance) aspects: <https://www.eletrobras.com/canaldasustentabilidade>

General Coordination:

Chief Corporate Management & Sustainability Officer
Eletrobras
Sustainability Management Department

Sustainability Disclosures Group

Eletrobras Group Sustainability Management Committee

Writing, editing, SASB consulting and design
grupo report - rpt.sustentabilidade

English Translation

Ivan van Rheenen

