

ANNUAL REPORT 2019



CPFL Energia's headquarters at Campinas (SP)



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Message from Chairman

2019 Highlights

The year of 2019 was marvelous for CPFL Energia. The Company has fulfilled the follow-on offering in the global capital market and became the major player in Brazilian energy sector in terms of market value. The integration of generation business, including conventional and renewable energy, resulted in huge operational synergy. By accomplishing the 2020-2024 Strategic Plan, the future direction and ways for the perfection have been indicated. By pursuing clean and sustainable development, in 2019, the integrated service quality has been continuously improved in both supply and demand sides of electricity consumption. The Company's business showed dynamics and better performance with gross annual revenue of R\$ 45.01 billion and EBITDA of R\$ 6.39 billion, increased by 5.6% and 13.4% respectively on a year-on-year basis, and market value reached R\$ 42 billion. We believe that CPFL Energia has created value for both shareholders and corporate, and strode firm steps towards the vision of becoming a leading power company in Brazil and Latin America.

• **Distribution business** – Continued investment has been utilized to modernize the electricity grid by attaching importance to innovation and digitalization. The Company proactively implemented Smart Grid pilot projects by exploring better ways to upgrade the service quality of electricity supply.

• **Generation business** – The integration of generation segments has been proved effective and began to unleash potential synergy. The conventional generation delivered the yearly availability of 97.67% while remaining leading position in the power sector. Some of our wind farms realized in-house operation and maintenance with significant availability improvement.

• **Unregulated energy service** – CPFL Soluções, a brand and platform of one-stop energy solution, has been materialized including distributed generation, energy trading, and engineering construction service for customers.

• **Safety management** – Safety culture has been extended throughout CPFL Group and safety is the prioritized action for all employees. In 2019, internal working accidents decreased by 32% and Disabling Injury Frequency Rate decreased by 34% on a year-on-year basis. The Company hit the historical record of the safety results which obviously reinforced employees' confidence and competence.

• **Corporate governance** – The governance structure has been optimized by taking reference of the best practice in the market. The Corporate Governance Department has been established with the excellent professionals joining the team. The relevant corporate regulations have been updated to keep the Company operating effectively and to ensure the return of our shareholders to the maximized extent.

• **Social responsibility and sustainability** – The Company cultivated corporate culture through high-end exchange of cultural and philosophical ideas for employees and local communities, supported healthy growth for the younger generation with diversified programs, kept on helping underprivileged groups and respecting the environment protection, which demonstrated its social responsibility and practical capability as a major power utility company in Brazil.

In 2019, the Company has honorably won the IASC Award conferred by ANEEL and also the most sustainable company in the Brazilian energy sector named by Exame Sustainability Guide 2019, as well as the only significant energy company recognized in Você S/A's Top 150 Brazilian Employers listing.

Market prospective

Brazilian economy has been gradually recovering in recent years. As the biggest nation in South America, its bright prospects of the social and economic development are attractive for international investors. Electricity supply has vital role in propelling economic progress, we firmly believe that CPFL will find more opportunities in such a historic process of economic recovery.

It is common knowledge that energy transformation is evolving at fast pace globally. Renewable energy expands pervasively, Smart grid is updating. Big data, Internet of things (IoT) as well as block-chain technologies have been utilized from concept to reality. The traditional electricity system and utilities are facing various challenges driven by rapid global energy transformation nowadays.

In an intensely competitive market, the capable workforce is crucial to success. Based on the market-oriented principle of employment selection, the professional training and practical skill improvement will be strengthened systematically, and the career planning for the new recruitment will be encouraged, while the performance evaluation at all levels will be supportive as well. We believe, by forging integrity, professionalism and innovativeness of workforce, the momentum of Company's innovation and advancement will be enormous.

Furthermore, these strategic thinking, including keeping abreast of the trend of the times, establishing strategic insight, optimizing the strategy portfolio, consolidating core business advantages, exploring better progress paths, relying on technology and management innovation to strengthen core competence, nourishing service-oriented and innovative business ecosystem, are the key elements to determine the future of CPFL group.

Way forward in 2020

Opportunities and challenges coexist in 2020, CPFL commits to realizing both corporate and shareholder value as a goal. Following the strategic plan, corporate governance improvement, core competence enhancement and corporate cultural inclusion can be further fostered. The Company will continuously improve the quality and efficiency of business development to consolidate and promote the brand image and its influence in the Brazilian power industry.

CPFL will focus on sustainable development and highly efficient business operations, listening to viewpoints from all walks of life, while continuing to nurture the harmony among company, society and environment. With assurance on safety, high efficiency, clean and environment-friendly in the full life cycle of construction and operation of power grid assets, we can provide reliable and sustainable electricity supply with high quality service for our customers.

Taking Instituto CPFL as the platform, the Company will proactively fulfill its social responsibility by contributing to social well-being of the communities. Based on normalizing and branding strategy, the Company will seek to build up brand-oriented programs, which can create a lasting and extensive value for the society, serve for economic development and civilian life, as well as promote the corporate value comprehensively.

The strategy of State Grid Corporation of China (SGCC) international business adheres to long-term sustainable, market-oriented and localization collectively, which has borne fruit abundantly and accumulated expertise richly. In recent years, the in-depth communication between SGCC and CPFL has expanded knowledge and experience sharing of both sides, boosted mutual understanding and trust, and improved management efficiency of the Company. There is no doubt that SGCC will continue to support the high-quality development of CPFL Group.



Last but not least, on behalf of Board of Directors of CPFL Energia, I would like to extend my heartfelt thanks to the management team and all employees who have been contributing their utmost effort in transforming the Company. And I sincerely acknowledge the people from communities who have supported and enlightened us in moving forward business. I believe, with steadfast endeavor of us, CPFL group will definitely embrace much progress, better results and promising future in 2020.

Wen Bo
Chairman of Board Directors
of CPFL Energia S.A.

Message from the CEO

CPFL Energia is committed to generating value for its stakeholders and to the objective of supporting the resumption of the country's economic growth, taking the lead in discussions about improving the power sector and encouraging sustainable development.

In 2019 we carried out a public offering of shares of the holding company on the São Paulo stock exchange and increased the amount of capital on the market to 16.23%, maintaining a listing on the Novo Mercado segment, which strengthens our commitment to adopting best practices in corporate governance when interacting with all our shareholders.

In the distribution segment we invested R\$ 2.0 billion in 2019 to update and expand our networks, implementing new technologies, digitalizing several processes, incorporating analytics and big data systems, and further developing telemetry. On this last front, we moved forward with our pilot project to install smart meters at 100% of our customers in the municipality of Jaguariúna, São Paulo. All of this with the aim of creating smarter cities and further improving our service quality indicators.

Another important milestone was the expansion of our generation portfolio, which grew to 4.3 GW with the integration of CPFL Renováveis – turning us into leaders in renewable energy in Brazil, with a significant portion coming from wind power. With the know-how we acquired

we are now ready to leverage our growth capacity through the acquisition of greenfield projects in this segment, ensuring our commitment to decarbonizing the energy matrix.

Through CPFL Soluções we expanded our supply of products and services so that our clients can obtain even more advantages in the energy free market, meeting their power demands in a sustainable way and with greater freedom of choice. We provide support for strategies around trading, distributed generation, improving efficiency, infrastructure services, and various other solutions to take advantage of opportunities that have arisen as a result of the energy sector's development.

As part of our efforts to better align our actions with society's major demands and our shareholders' long-term vision, we approved our 2020-2024 Sustainability Plan, which provides guidelines and commitments for our businesses to grow and generate value for all stakeholders. The Plan brings together, in a comprehensive and objective way, the vision proposed by the UN's Sustainable Development Goals (SDG) and Global Compact principles with the main trends in our market.

One of the main actions proposed under this Plan is the CPFL in Hospitals Program, an innovative project targeting public and philanthropic health institutions. With planned investment of R\$ 150 million through 2022, the program

seeks to install photovoltaic panels for self-generation and other combined solutions in order to reduce energy costs and provide these institutions with greater capacity to allocate resources to improve service conditions in favor of the public health and the well-being of the population.

At the same time, Instituto CPFL intensified its efforts in social, cultural and sports projects that transform the communities in which we operate, directly impacting more than 320,000 people in 121 cities across 9 states through programs such as CineSolar, Carreta Literária, a partnership with Orcampi to train athletes, among many other projects. In addition, Café Filosófico CPFL, which provides reflections on relevant topics to society, was watched by about 830,000 viewers through its live broadcasts and another 12 million viewers through TV Cultura. The project also reached 7.5 million views on its YouTube channel, and hosted 5,300 people at its recording studios.

We also upheld our commitment to our non-negotiable value: the safety of our employees and of the population. The Guardião da Vida program, a permanent campaign to disseminate and reinforce the safety culture, focuses on actions that raise awareness, prevent accidents and reduce the risks associated with electric energy. We see this as a continuous investment and we cannot accept any deviations from the protocols and procedures we currently have in place, and which we are always improving.

Supported by a management model that is responsive to all the economic, social and environmental aspects that impact every one of our businesses, we have achieved significant results. In 2019, the company's EBITDA reached R\$ 6.4 billion, expanding 13.4% from the previous year. We achieved record net profit of R\$ 2.7 billion.

All of these results are only possible thanks to the commitment and discipline of our more than 13,000 employees. In the past year, more than R\$ 18 million was invested in programs focused on the evolution of key competencies, with emphasis on the Innovation Culture, which encourages the development of new leadership and people-management skills, new processes, and the creation of opportunities.

Our outlook is that Brazil will resume a healthy pace of economic growth and productive activity starting in 2020. The strengthening of the energy sector is fundamental to supporting this development, and all of us at CPFL Energia are ready for this moment. In light of this scenario, our plan is to invest approximately R\$ 13.5 billion through 2024 to continue offering services with more technology, efficiency and quality.

With the support and trust of State Grid - our majority shareholder - our investors, and capital market agents, the company will continue to fulfill its role of building an increasingly renewable power matrix and guaranteeing that society has access to energy in ways that are innovative, reliable and secure.

Thank you to all of you,

Gustavo Estrella
CEO of CPFL Energia

CPFL Energia is committed to **generating value** for all stakeholders, acting as a protagonist to support the **power sector** improvement and foster Brazil's **sustainable development**



1.

ENERGY OF THE FUTURE



Campinas (SP)
aerial view

Energy of the future

The Brazilian power sector is undergoing transformations that will increasingly give the customer an unprecedented role in this business ecosystem. The greater demand for energy generated from renewable sources, the incorporation of new distribution technologies, and new models for self-production of energy are some of the factors that are leading to the redesign of our business model, increasingly focused on customers, on digitalization of processes and services, and on operational efficiency.

The revision of regulations underway in Brazil's Congress, with bills currently being discussed in the Senate and in the Chamber of Deputies, should boost the expansion of the energy free market. An increasing number of consumers will gain access to opportunities to choose their supplier and sources of energy.

In the distribution segment, investments in automation and artificial intelligence make possible a more efficient operation model and ensure better service-quality indexes for customers. With the consolidation of the Internet of Things, connecting electrical-network equipment to reliable digital operating environments, the country can make greater progress towards the implementation of smart grids, with remotely accessible meters and several other possibilities that give customers more control over their consumption.

These trends herald a sector that is undergoing a profound and unprecedented transformation, which requires that power companies be able to generate value in a decentralized, decarbonized, digitalized, and increasingly democratized model. For us at CPFL Energia, these changes are already part of our operating strategy and guide all our businesses towards this new sector landscape.

Foz do Rio Choró Wind Farm (CE)



Transformations in the electricity sector further empower **customers** and encourage the generation of energy from **renewable sources**

2019 Highlights

R\$ 29.9 billion
in net operating revenue

R\$ 6.4 billion
in EBITDA

R\$ 2.7 billion
in net profit

R\$ 2.3 billion
invested



TRANSMISSION

Initiated implementation of **three new** developments

- Maracanaú II Substation (Ceará)
- CPFL Transmissão Sul I (Santa Catarina)
- CPFL Transmissão Sul II (Santa Catarina and Rio Grande do Sul)



GENERATION

Integration

of CPFL Renováveis

13.1 terawatt-hours (TWh)
of generated energy

98.3%
of total power generated from renewable sources



DISTRIBUTION

68.1 TWh
of distributed energy

1.8%
increase in customer base

329,400 kilometer
network



SOLUTIONS

Delivery of projects for customers in various segments, such as data centers, paper and pulp, automotive, wind generation, and others

Construction of Americana Solar Plant, with **3,320** generation units



SUSTAINABLE ENERGY

Close to 9,000 transformers
updated by Equipment Refurbisher

Dam safety

Execution of first safety drill with population of Americana and Limeira (São Paulo)



SMART SOLUTIONS

20,300 smart meters
already installed in Jaguariúna (São Paulo)

80% of services executed
through digital channels

Second edition of CPFL Inova, with
12 scale-ups selected for acceleration



SOCIEY SHARED VALUE

Launch of CPFL nos Hospitais Program,
with forecast of R\$ 150 million in investments

34% reduction in accident rate

R\$ 39.4 million invested by Instituto CPFL

BUSINESS MODEL

2.



CPFL Energia
employees

Business model

Our company, with more than 100 years of experience, has a history of leadership in the Brazilian power sector, contributing to the country's economic progress and to the comfort and safety of millions of citizens. Our business model is vertical and diversified, covering all energy segments: generation, transmission, distribution, and services and solutions for customers.

We rank among the 20 largest companies in Brazil in terms of net revenue. Our ability to generate value is based on the knowledge, experience, and competence of our employees. That is why we are recognized in the market for our ability to develop and implement innovative and sustainable solutions, always in line with the concerns of customers, investors, government authorities, and society.

Our ability to execute and manage energy assets was further strengthened by State Grid Corporation of China's (SGCC) arrival in Brazil. The Chinese group, the world's largest electric energy company, is our majority shareholder and is the driver behind the integration of the most advanced technologies in the electric sector, which boosts the operational efficiency of all businesses.

MISSION

- We provide sustainable, accessible and reliable energy to all walks of life, and enhance a safer, healthier and prosperous life of people in regions where we operate.
- We propel our business growth in a more strategic and competitive way, keep its dynamics and vitality, and create a more standardized, diversified and international corporate culture, while nurturing its legacy.
- We protect the level playing field for each employee's growth and attract all talents to join CPFL.

VALUES

- For us, **safety** is a nonnegotiable commitment
- Our strength comes from **collaboration** among people
- We **innovate** to deliver the best solutions to our customers
- We strive to evolve always in the pursuit of **excellence**
- We are **ethical** and **responsible** in all we do to deliver sustainable results

VISION

- We pursue to be the leading power utility in South America that supplies reliable electric energy and credible services.
- We pledge to forge the prolonged strength in developing business and innovation as well as culture.

How we stand out



Sustainable brand

Sustainability is a central element for our business model and, therefore, it is part of our corporate strategy and incorporated into our decision-making process. In 2019, we developed our Sustainability Plan, which systematizes actions and objectives for the next five years under the scope of sustainability management. Thus, we consolidated the work we have carried out since 2014 with the creation of the Sustainability Platform, which monitors the company's performance through indicators and strategic themes and reinforces our alignment with the United Nations' Sustainable Development Goals (SDGs) and its 2030 Agenda.



Safety

We have a genuine commitment to promoting the safety of our employees, customers, third parties, and the general population. We want to be sure operations do not put people's physical integrity, health, and lives at risk. For this reason, we continuously invest to improve safety conditions, with technical and administrative processes focused on reducing possible risks and zeroing internal and external occurrences related to our activities. In addition, through different communication channels we carry out awareness campaigns - such as the *Guardião da Vida* ("Guardian of Life") program - that alerts the general population about risks related to the power grid.



Technology

In line with our strategic objectives, we invest in technological innovation along the entire electricity chain. In generation, we support research and development projects that promote the use of new technologies in dam-safety inspection and, in distribution, we implement energy-efficiency and smart-grid initiatives. The pilot project to install smart meters in Jaguariúna (São Paulo) stands out in this regard, as it contributes to the Brazilian electric sector's modernization and places us at the forefront of technological development in the sector.



Innovation

We have intensified our efforts to map out innovative initiatives that offer new avenues for the electricity market. CPFL Inova's startup-acceleration platform carried out its second edition in 2019, with the participation of 12 companies that received support and guidance to develop solutions for topics such as artificial intelligence, smart grids, and the internet of things, among others.



Digitalization

In our quest for greater efficiency in our operations and to improve the quality of our relationship with customers, we have implemented digitalization solutions, analytics systems, and big data to reduce operating costs and improve customers' service experience. Improvements to digital channels and service tools, such as our website and smartphone app, help expand accessibility to our services and improve the customer experience.

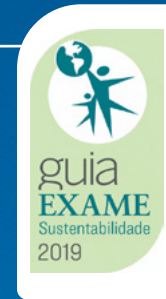


Knowledge

Knowledge management is an essential intangible asset for our company's evolution. That is why we are working on two fronts to produce and share knowledge and information. CPFL University provides specialized training and skills-building to our employees, in addition to qualified training programs for the populations in our concession areas (such as Electrician Schools). The Instituto CPFL, meanwhile, which manages the company's social investments, supports social-transformation initiatives and promotes activities that disseminate far-reaching areas of knowledge, such as the *Café Filosófico CPFL*.

AWARDS

The awards we receive are a public recognition of the quality of our services and the sustainability that we practice in all our businesses. Sharing these achievements with all employees and celebrating another year of great victories is part of our culture.



CPFL Energia was named the best company in the power sector in **Exame magazine's Sustainability Guide**, with special mention of our community relations programs.



CPFL Energia and CPFL Renováveis were recognized by the **2019 SDG - Global Compact Award** and received special mention at the "2019 SDG in Brazil" event held at UN headquarters in New York (USA). CPFL Energia's Living Lab project was the winner in the Planet group. The Raízes Program's Water Security Project was recognized with the Water and Sanitation Award from the Global Compact Network Brazil for its contribution to Sustainable Development Goal 6.



CPFL Energia was selected to take part in **Pró-Ética 2018/2019**, developed by Brazil's Federal Comptroller General. This initiative recognizes organizations with outstanding programs to combat corruption and to enhance ethics.



CPFL Energia was named one of the **150 Best Companies to Work For** in the ranking prepared by Você S/A magazine, in partnership with Fundação Instituto de Administração (FIA).

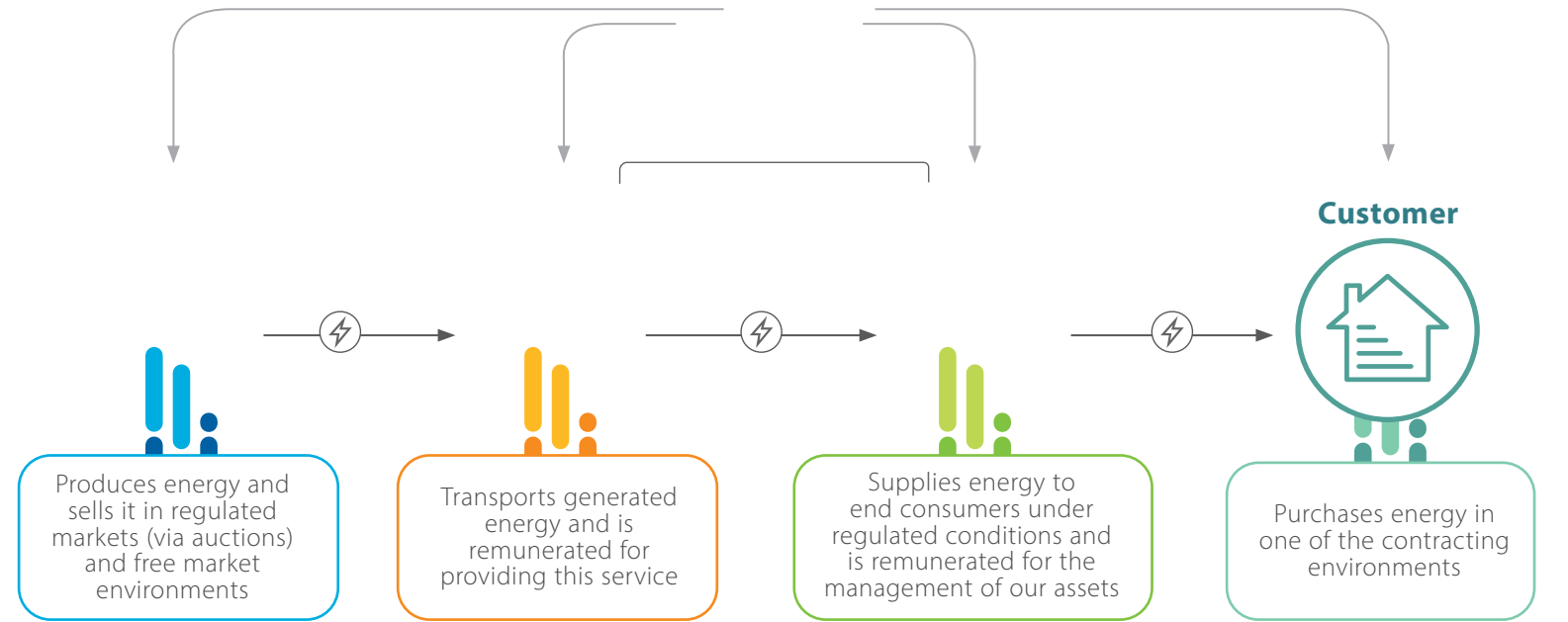


CPFL Santa Cruz and RGE were the winners of the **Abradee Social Responsibility Award** for energy-distribution companies.



Our brands

Click on the icons of the power sector chain to learn more about our brands




Map of business

DISTRIBUTION



-  cpfl paulista
-  cpfl piratininga
-  cpfl santa cruz
-  RGE

SERVICES

-  cpfl soluções
- 20 Operational Basis (SP)
- 1 Refurbisher (SP)
- 5 Market Business Offices (SP, AM, PE, RS, PR)

-  ENVO
-  cpfl total
-  cpfl atende
-  cpfl pessoas
-  cpfl supre
-  cpfl finançãs
-  cpfl infra

TRANSMISSION

-  7 Substations
2 (SP), 1 (CE), 1 (SC), 3 (RS)
-  5 Transmission lines
2 (SC), 4 (RS)

GENERATION¹

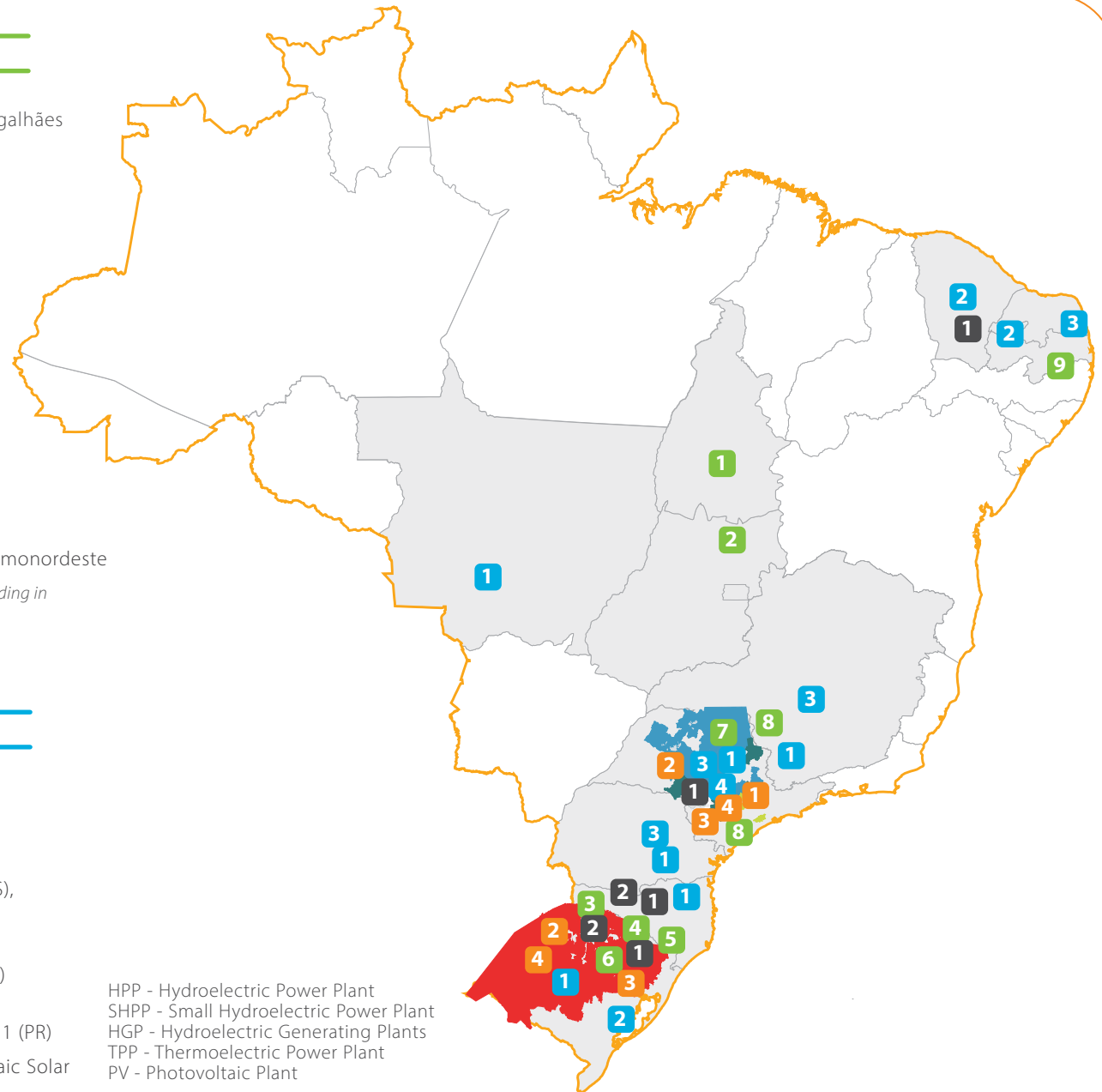
-  HPP Luís Eduardo Magalhães
-  HPP Serra da Mesa
-  HPP Foz do Chapecó
-  HPP Campos Novos
-  HPP Barra Grande
-  Ceran Complex
• HPP Monte Claro
• HPP Castro Alves
• HPP 14 de Julho
-  2 SHPPs (SP)
-  6 HGPs
4 (SP), 2 (MG)
-  TPPs
Termoparaíba and Termonordeste

¹See the CPFL Geração shareholding in the assets on page 27.

RENEWABLE



-  40 SHPPs
17 (SP), 10 (MG), 4 (RS), 6 (SC), 2 (MT), 1 (PR)
-  45 Wind Farms
12 (CE), 29 (RN), 4 (RS)
-  8 TPPs (Biomass)
5 (SP), 1 (RN), 1 (MG), 1 (PR)
-  Tanquinho Photovoltaic Solar Plant (PV) (SP)



Generation

In the past year, our activities in the generation segment were strengthened through the integration of CPFL Renováveis, the country's largest renewable energy generator, into our asset portfolio. The shares that State Grid owned in the company were acquired by the holding company CPFL Energia through a purchase and sale agreement, allowing us to take advantage of synergies, reduce costs, and boost efficiency, fostering continuity of our investments in renewable generation projects.

Thanks to this operation, our installed capacity now totals 4.3 gigawatts (GW) in assets spread out across four of the country's five regions, making us the third-largest privately held company in terms of generation and the Brazilian leader in renewable energy. In 2019, we generated

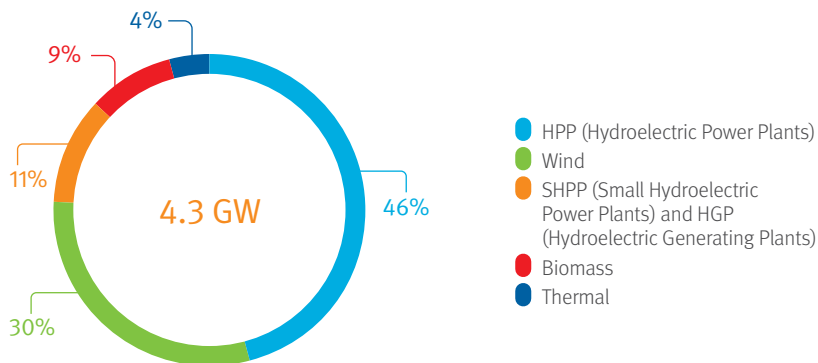
13.1 terawatt-hours (TWh), which represents an increase of 19.5% from the previous year. Of this total, approximately 98.3% came from renewable sources.

With our cutting-edge asset management structure, we achieved average availability of 96.1% for all generation assets in 2019, in line with our performance in the previous year. Maintaining this high rate is the result of our efforts that target efficiency and optimization in operations, especially in monitoring, maintenance, and operations. Some initiatives that stand out include the Integrated Operation Center (COI) and predictive technologies projects, with machine learning tools that help identify early on any equipment that is susceptible to failures.

HPP Foz do Chapecó (SC/RS)

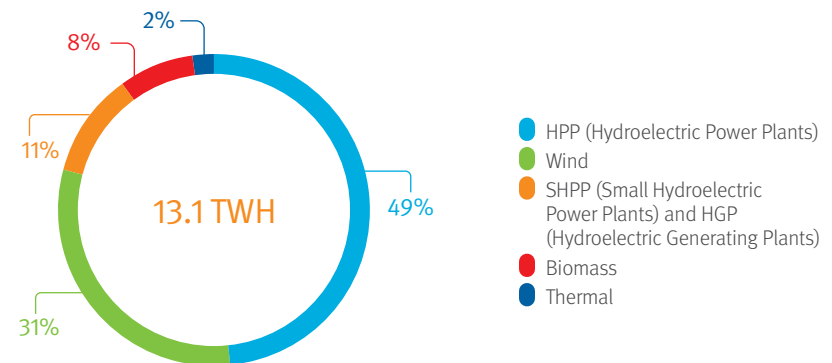


INSTALLED CAPACITY BY SOURCE*



*Includes installed capacity of CPFL Geração and CPFL Renováveis projects in proportion to stakes held by CPFL Energia. Solar sources represent less than 1% of total installed capacity.

ENERGY PRODUCTION*



*Includes net production of CPFL Geração and CPFL Renováveis projects in proportion to stakes held by CPFL Energia. Solar sources represent less than 1% of total energy generation.

Transmission




Our activities in the transmission sector seek to take advantage of synergies between generation and distribution assets, with a focus on diversifying our portfolio through opportunities in niche businesses. Therefore, we direct investments to smaller operations, focusing on improvements in operational efficiency that also add value to the Group's generating units and benefit customers in our concession area.

In 2019, we began the process of implementing three projects that were auctioned off by the National Electricity Regulatory Agency (ANEEL) at the end of the previous year:

- Construction of the Maracanaú II substation in the state of Ceará;
- CPFL Transmissão Sul I (Lot 5), which includes improvements in the Itá substation and 320 kilometers of transmission lines;
- CPFL Transmissão Sul II (Lot 11), with the construction of two new substations and 85 kilometers of transmission lines, working in the states of Santa Catarina and Rio Grande do Sul.

In the state of São Paulo, two business units already operate power transmission systems: CPFL Transmissão Piracicaba and CPFL Transmissão Morro Agudo.

In this segment, the sharing of experiences and knowledge with State Grid can serve as a driver for our business. In Brazil, the company operates long-distance and high-voltage transmission networks, using the latest technologies to build more robust and intelligent systems.

	CPFL Transmissão Piracicaba	CPFL Transmissão Morro Agudo	CPFL Transmissão Maracanaú	CPFL Transmissão Sul I	CPFL Transmissão Sul II
Power 	800 MVA	800 MVA	450 MVA	224 MVA	549 MVA
Concession through 	2043	2045	2048	2049	2049
AAR* 	R\$ 12.1 million	R\$ 14.3 million	R\$ 8.3 million	R\$ 27.3 million	R\$ 35.0 million

*Allowed Annual Revenue (updated as of June 2019).

Distribution

We are the second largest company in the electricity distribution segment in Brazil in terms of the amount of energy sold, with a 14% share of the national market. Our four companies operate in the states of São Paulo, Rio Grande do Sul, Minas Gerais and Paraná, with a concession area that covers 687 municipalities and serves approximately 9.8 million customers.

In 2019, we distributed approximately 68.1 TWh of energy in our concession areas, up 1.3% from the previous year. During the same period, our customer base increased by 1.8%.

In recent years, the investments we have made in improving infrastructure, modernizing equipment and implementing new technological solutions have allowed us to achieve levels of quality that are a benchmark in the national market. This advancement is being accelerated with the unification of RGE's operations, concluded last year. With the standardization and centralization of processes, we are improving customer service and the supply of power in Rio Grande do Sul.

Two projects illustrate our investment strategy in this segment. The first is the development and implementation of our Advanced Distribution Management System (ADMS), a platform that integrates a wide range of data and allows us to monitor assets with more agility and intelligence, facilitating the identification of possible failures and enabling a more efficient reestablishment of energy supply.

The second initiative underway is our project to swap out and install smart meters in Group B consumers (low-voltage customers, such as homes, small businesses and rural properties) in the municipality of Jaguariúna, in the interior of São Paulo. This technology will allow us to remotely read meters and reduce losses, among other benefits. At the same time it will also give customers more control over how they use electricity, allowing them to change consumption habits to be more efficient and reduce costs.

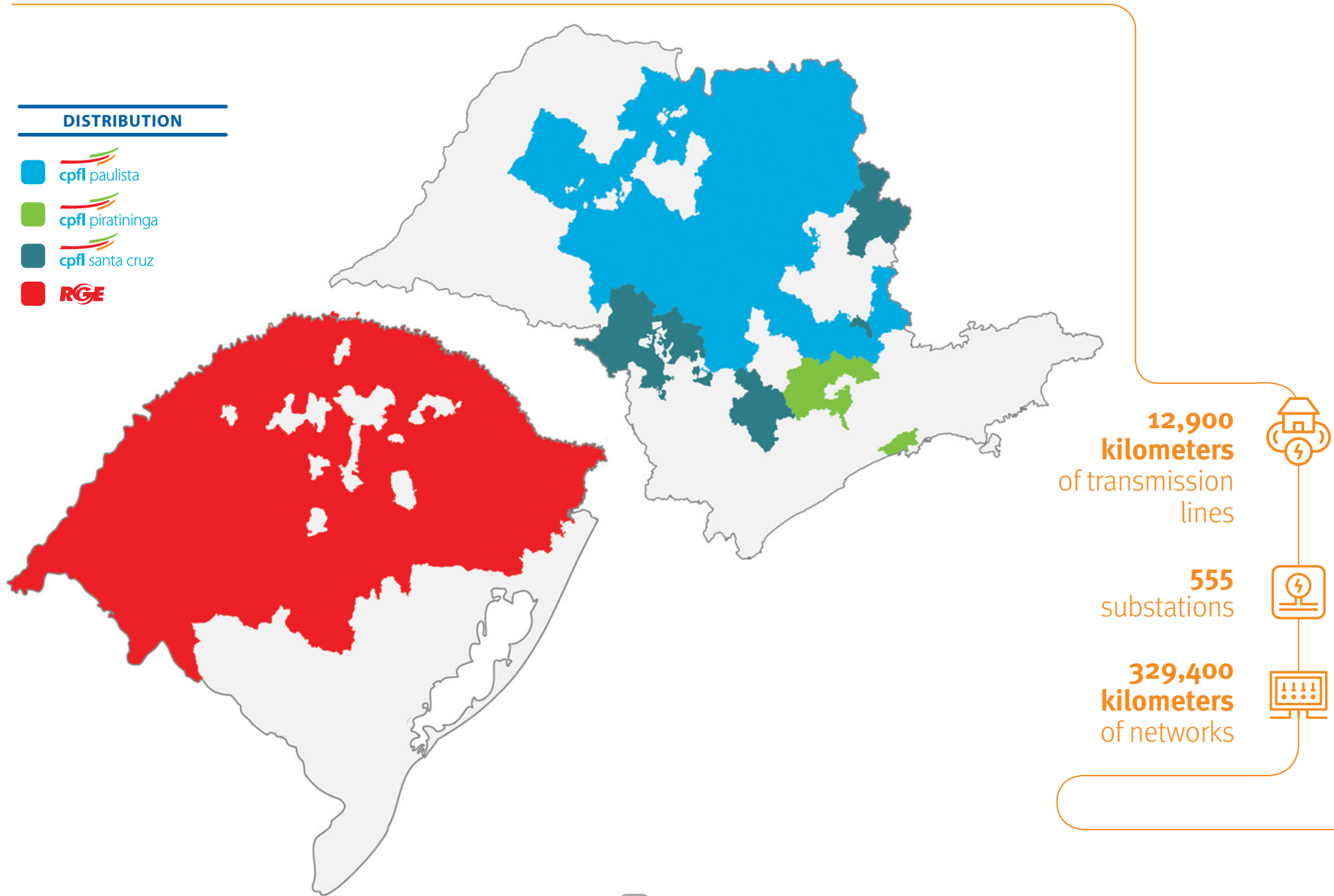


Maintenance on live line

NUMBER OF CPFL ENERGIA CUSTOMERS IN DISTRIBUTION SEGMENT

	2017	2018	2019
Residential	8,330,237	8,544,035	8,721,256
Industrial	59,825	58,241	57,116
Commercial	545,095	532,592	529,815
Rural	359,106	361,908	363,500
Government	60,639	60,685	61,868
Public services	9,790	10,194	10,512
Public lighting	11,230	11,659	11,809
Own consumption	958	982	943
Total	9,376,880	9,580,296	9,756,819

Map of distribution concessions



Solutions for the free market

To meet consumers' different energy demands, CPFL Energia relies on two companies that offer customized solutions: CPFL Soluções and ENVO.

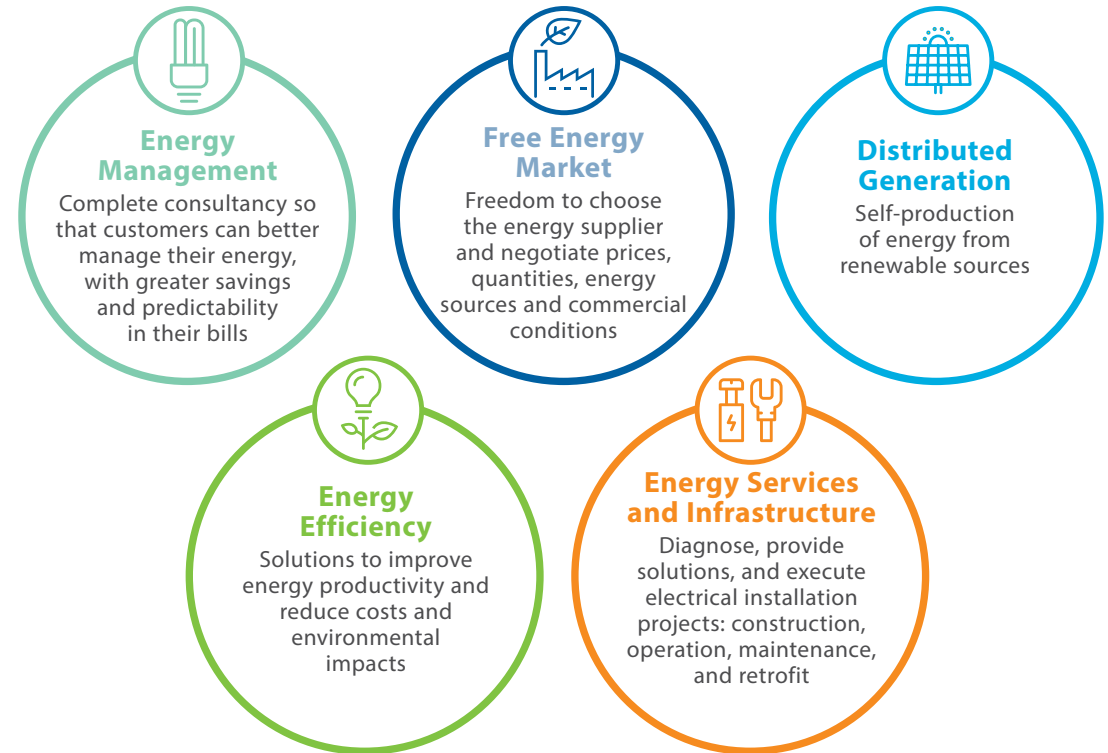
CPFL Soluções is a unique platform that offers integrated solutions that generate value and increase customer competitiveness, taking advantage of all opportunities offered in the new energy market. In 2019, the unit achieved positive results with the delivery of projects serving customers across the country in segments including data centers, pulp and paper, automobiles, and wind power generation, among others.

ENVO is another company in our portfolio that focuses on offering distributed solar generation solutions to medium- and low-voltage consumers, such as homes and small businesses and companies. Under this model, we operate across all stages of the project – from the technical design, supply and installation of solar panels, to gaining access approval with the local DisCo.

Construction of the Americana Solar Plant in the city of Americana, São Paulo, was one of the highlights of 2019. With 3,320 generator modules, the new plant has 1.12 MW of capacity and annual generation capacity of 1,771 MWh – enough to supply 738 houses with average consumption of 200 kWh/month during the period.

This plant's operation can reduce connected customers' energy bills by up to 95% and prevent the emission of 131 tons of carbon dioxide (CO₂), the equivalent of planting around 900 trees.

CPFL Soluções includes an ample portfolio of



CPFL Soluções has more than **2,100 customers**, and in 2019 achieved **6% growth** in EBITDA

Services supporting the Group

Our business model relies on the performance of a group of companies that support the company's administrative and operational activities. This way we can guarantee the standardization of processes, with operational optimization and cost reductions.

As part of this structure, CPFL Atende and CPFL Total add value to our business model through the provision of services.

CPFL Atende

Customer service through a toll-free 0800 telephone number, virtual chats, social networks, and the Group's distribution companies (DisCos) e-mail contacts. The company is based in Ourinhos, with a branch in Araraquara – both cities located in the interior of São Paulo state.

CPFL Total

Financial services, focused on facilitating the use of electricity bills as a means of payment in partner transactions.

In 2019, NECT, our Shared Services Center, was split into **four different brands**



CPFL Pessoas

Personnel and human resources management service, with operations covering payroll, benefits, third-party management, and recruitment, selection and admission of employees

CPFL Supre

Logistics and supply-chain planning and management, with purchasing, materials planning, distribution, and logistics services

CPFL Finanças

Financial organization and operationalization to support companies' decision making process, with accounting, budgeting, billing and payment services

CPFL Infra

Service to manage assets such as car fleets, real estate, administrative services, and building maintenance and security



Universidade CPFL

Activities related to training, skills-building, and improving our employees are led by Universidade CPFL. With investment of R\$ 18 million in 2019, the program promotes development actions, technical and mandatory courses, coaching and training curricula for CPFL Energia's different areas and companies, as well as operating technical training schools open to the community, providing skills tracks such as Electricians, Designers, and Operators.

Universidade CPFL's task is to facilitate the development of knowledge, encourage professionals to take the lead in their own careers, and stimulate their colleagues to learn new skills.



*Universidade CPFL
in Campinas (SP)*

Instituto CPFL



CPFL Running and Walking Circuit

Instituto CPFL is responsible for managing the private social investment we make, bringing our brand closer to the communities we work in and boosting our businesses' contribution to local development. Since 2003, the institute has promoted and supported activities and projects in the areas of knowledge-building, sports, and culture, with a focus on civic engagement and transforming the reality of the regions in which we operate.

One example of this engagement is our support for Instituto Vanderlei Cordeiro de Lima (IVCL/Orcampi), which works to train young athletes, offering comprehensive monitoring and medical and educational support to children and adolescents in the region of Campinas, São Paulo. Learn more about Instituto CPFL's activities on page 81.

Transparency in governance

Our company adheres to the best corporate governance practices to ensure that decision making is aligned with shareholders' strategic vision to generate value in the long term while complying with the principles of transparency, equality, and ethics.

With this goal in mind, we list our shares in the Novo Mercado segment of B3 S.A. – Brazil, Bolsa, Balcão ("B3") – which instructs companies on how to adopt the highest standards of governance and management. For this reason, our actions and initiatives are disclosed and communicated to the market with the utmost transparency, ethics, equity, and quality in information, adhering to the country's most stringent guidelines.

In 2019, we carried out a new (follow-on) public offering of shares, boosting the percentage of the company's free-floating shares in the market to 16.29%. In addition to increasing the liquidity of our shares, the operation also raised R\$ 3.7 billion.

Our participation in the capital market opens up opportunities to boost capitalization and investments in our business. The follow-on offering, for example, was preceded by a roadshow to talk to investors in order to clarify any questions they may have about our business. We held 61 face-to-face meetings in Brazil, the United States, and the United Kingdom, as well as 14 videoconferences, reaching more than 115 investors.



CPFL employees in Campinas (SP)

CPFL Energia's follow-on share offering on the B3 exchange increased **free-floating capital to 16.29%** and raised R\$ 3.7 billion, opening up opportunities to boost capitalization and investments in our business

Reorganization in the capital market

In 2019, our Board of Directors approved the company's delisting of shares on the New York Stock Exchange (NYSE), where American Depositary Shares (ADS) were traded. The board concluded that under the current scenario there was no longer an economic rationale for utilizing this instrument to trade common shares and to increase brand visibility in the United States.

The criteria guiding this decision were the increase in the volume of shares traded by foreign investors on the Brazilian stock exchange (B3 S.A.) and the downward trend in ADS trading volume. The delisting process was completed in February 2020.

Another change in the capital market structure was board approval of a Public Tender Offer (OPA) for outstanding common shares of CPFL Renováveis. This category of stock represents 0.056% of the company's capital, and the operation - to be carried out in 2020 - depends on registration with Brazil's Securities and Exchange Commission (CVM) and authorization from B3 S.A.

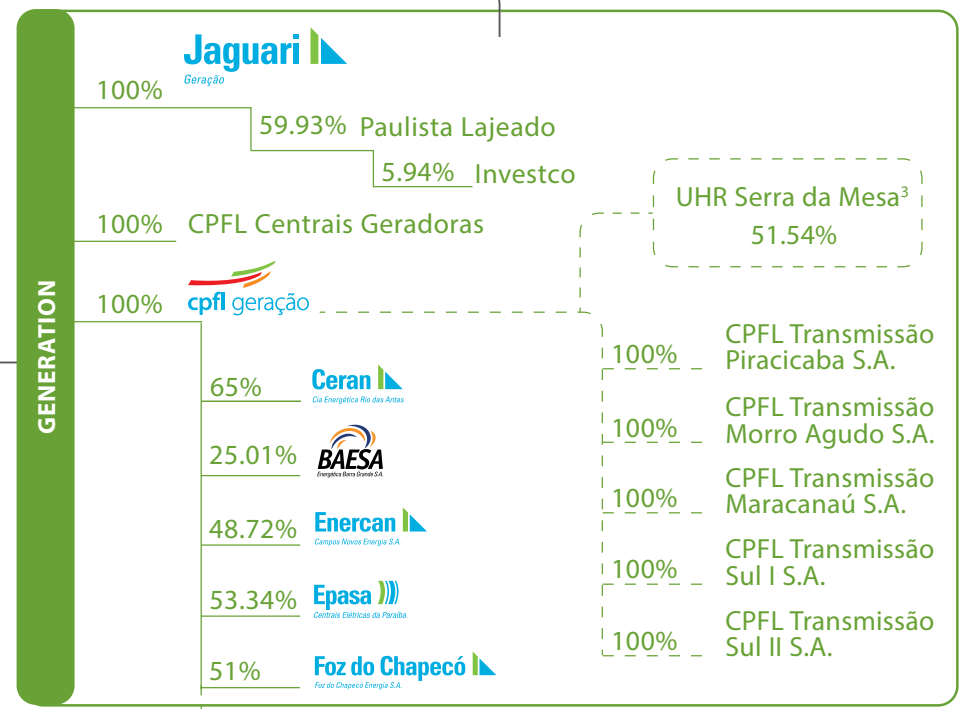
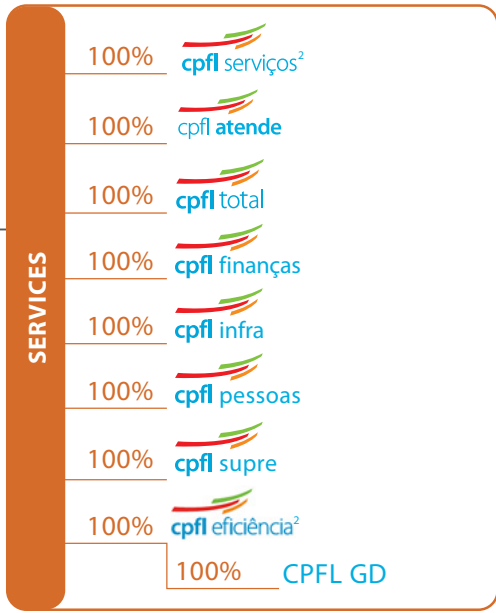
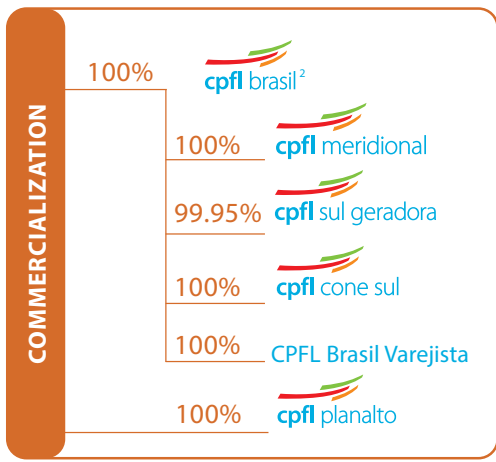
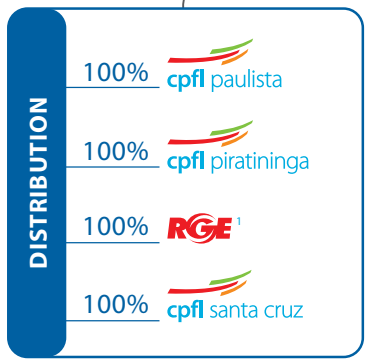


State Grid is our company's main shareholder, controlling 83.71% of capital, and the world's largest energy sector company, with operations in several countries - including Australia, Philippines, Georgia, Greece, Hong Kong, Italy and Portugal. Since 2010, State Grid has had operations in Brazil, and is present in 15 states, investing more than US\$12.5 billion in the country's electric sector.

The shareholder aspires, through its worldwide businesses, to be a global reference in the energy industry. To this end, it acts as a transformative hub for energy solutions and a value-generating platform that benefits society and the entire value chain.

- **5th place** on the Fortune Global 500 list, which ranks the world's biggest corporations
- Close to **US\$600 billion** in assets
- **1.6 million** employees
- Serves **88%** of China's population, equivalent to 1.1 billion people
- **Global leader** in distribution technology and a benchmark in long-distance power transmission

Corporate structure



¹ RGE Sul is controlled by CPFL Energia (89.0107%) and CPFL Brasil (10.9893%).
² CPFL Soluções = CPFL Brasil + CPFL Serviços + CPFL Eficiência.
³ 51.54% stake of the availability of power and energy of Serra da Mesa HPP, regarding the Power Purchase Agreement between CPFL Geração and Furnas.
⁴ CPFL Renováveis is controlled by CPFL Energia (46.7609%) and CPFL Geração (53.1831%).

Governance structure

In conjunction with the follow-on, we strengthened our corporate governance structure so that the company's decision-making process keeps up with market trends and changes.

In this sense, the composition, attributions, and internal regulations of the Committees that advise the Board of Directors have been revised, as have the policies for Transactions with Related Parties and Dividend Distribution.

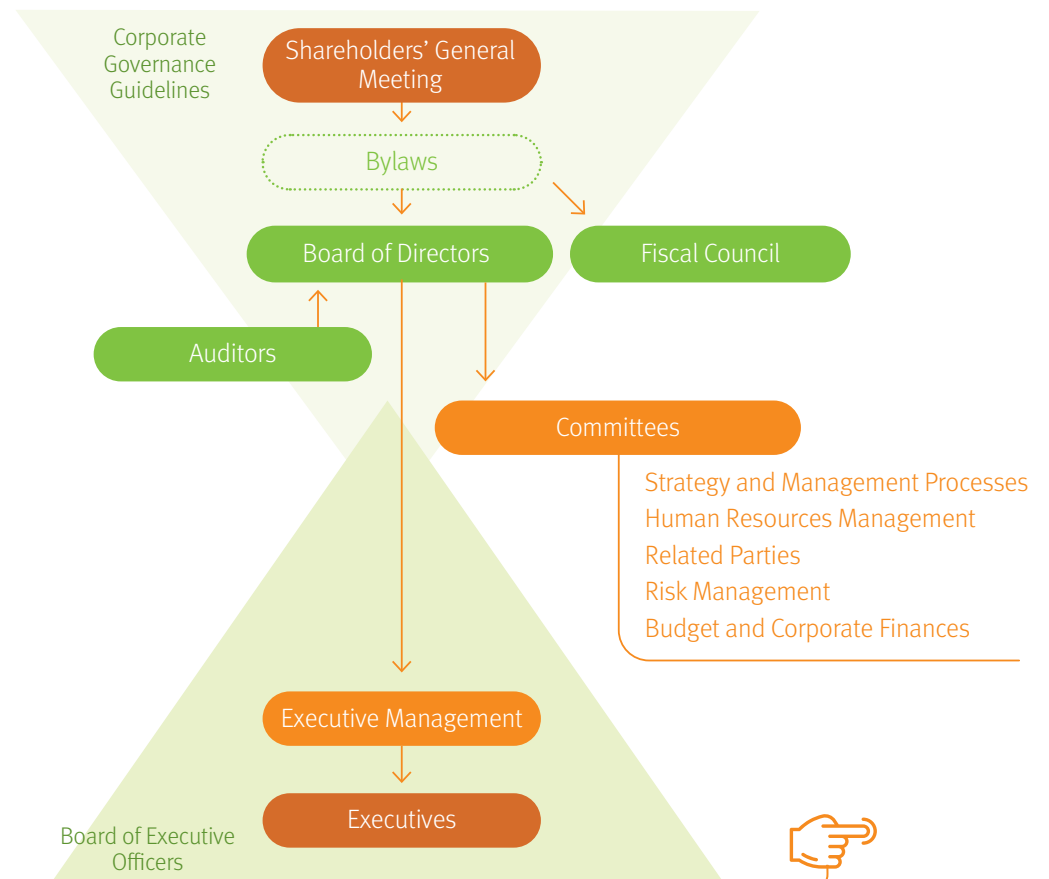
Our Board of Directors is made up of members from different cultures, with recognized technical capacity and knowledge in different business areas, elected at the Shareholders' General Meeting for an annual term. Among the elected members there are two independent directors, in accordance with Novo Mercado Rules. Furthermore, the company's Chief Executive Officer and two Vice-Presidents are also on the board.

Currently, five Committees advise the Board of Directors, analyzing ahead of time all the issues submitted to the board in accordance with their attributions established in the Internal Regulations. Members whose resumes and professional experiences are more aligned with these aspects are appointed to these committees.

In the past year the company also approved the creation of the Corporate Governance Department to manage, monitor and constantly improve the Group's governance processes. The new structure operates transversally, following the Board of Executive Officers, Fiscal Council, and Board of Directors' decision flow, along with the respective analyses of their Committees, and of shareholder meetings or meetings with partners.

The Board of Executive Officers is the body responsible for proposing and executing the corporate strategy. The Chief Executive Officer and Vice-Presidents are elected by the Board of Directors for a two-year term, and all of them may be re-elected, ensuring continuity of management.

Governance structure



[Click here](#)

to learn more about our governance structure and the committees

Fiscal Council

The Fiscal Council complements our governance structure by acting independently from management and external auditors. At our company, the council operates permanently and performs functions similar to an audit committee, a configuration that follows the best practices in governance. The Fiscal Council's three members meet monthly and follow a minimal schedule of activities, which include periodic meetings with internal and external auditors, the Board of Executive Officers, and the Board of Directors.

Conflicts of interest

We comply with the provisions of Law 6,404/76 (Brazilian Corporation Law) regarding conflicts of interest and have established principles on this topic in our main governance documents: Internal Regulations of the Board of Directors, Internal Regulations of Board of Directors Committees and Advisory Commissions, Governance Guidelines, and the Code of Ethical Conduct.

Each governance agent is responsible for preventing and managing conflict of interest situations of divergences in procedures. In addition, anyone with a real or potential conflict of interest should refrain from participating in meetings that deliberate on such topics. This abstention is recorded in the respective meeting minutes, which, in the case of the Board of Directors, are made publicly available.

In situations of a potential conflict in transactions with related parties, we comply with the applicable requirements in Brazilian Securities and Exchange Commission (CVM) regulations.

COMPOSITION OF BOARD OF DIRECTORS

Bo Wen	Chairman
Shirong Lyu ¹	Vice Chairman
Yang Qu	Advisor
Yumeng Zhao ²	Advisor
Gustavo Estrella ³	Advisor
Hong Li	Advisor
Anselmo Henrique Seto Leal	Advisor
Antonio Kandir	Independent Member
Marcelo Amaral Moraes	Independent Member

¹ Also holds the position of Senior Executive Vice President of CPFL Energia and Interim Vice President of Strategy, Innovation and Business Excellence.

² Also holds the position of Executive Vice President of CPFL Energia.

³ Also holds the position of Chief Executive Officer of CPFL Energia.

COMPOSITION OF BOARD OF EXECUTIVE OFFICERS

Gustavo Estrella ¹	Chief Executive Officer
Shirong Lyu ¹	Senior Executive Vice-President Strategy, Innovation and Business Excellence Vice-President (interim)
Yumeng Zhao ¹	Executive Vice-President
Yuehui Pan	Chief Financial and Investor Relations Officer
Luís Henrique Ferreira Pinto	Regulated Operations Vice-President
Karin Regina Luchesi	Market Operations Vice-President
Gustavo Pinto Gachineiro	Legal and Institutional Relations Vice-President
Vitor Fagali de Souza ²	Business Development Vice-President
Flávio Henrique Ribeiro ²	Business Management Vice-President

¹ Also a member of the Board of Directors.

² Executives assumed their respective roles in January 2020.

Sustainability in strategy

Strategic planning

The operation and development of our businesses follow the Strategic Plan created by the Board of Executive Officers, based on the analysis and evaluation of macroeconomic and market trends over a five-year horizon (through 2024). This management tool is updated and approved by the Board of Directors annually, allowing the establishment of goals and prioritization of investments to promote the company's solid and long-term growth.

In 2019, the updating process engaged all leadership in workshops that discussed critical themes and industry scenarios. In a more participatory manner we have advanced in defining the objectives and levers that drive our capacity to generate value and align our company with State Grid's strategic vision.



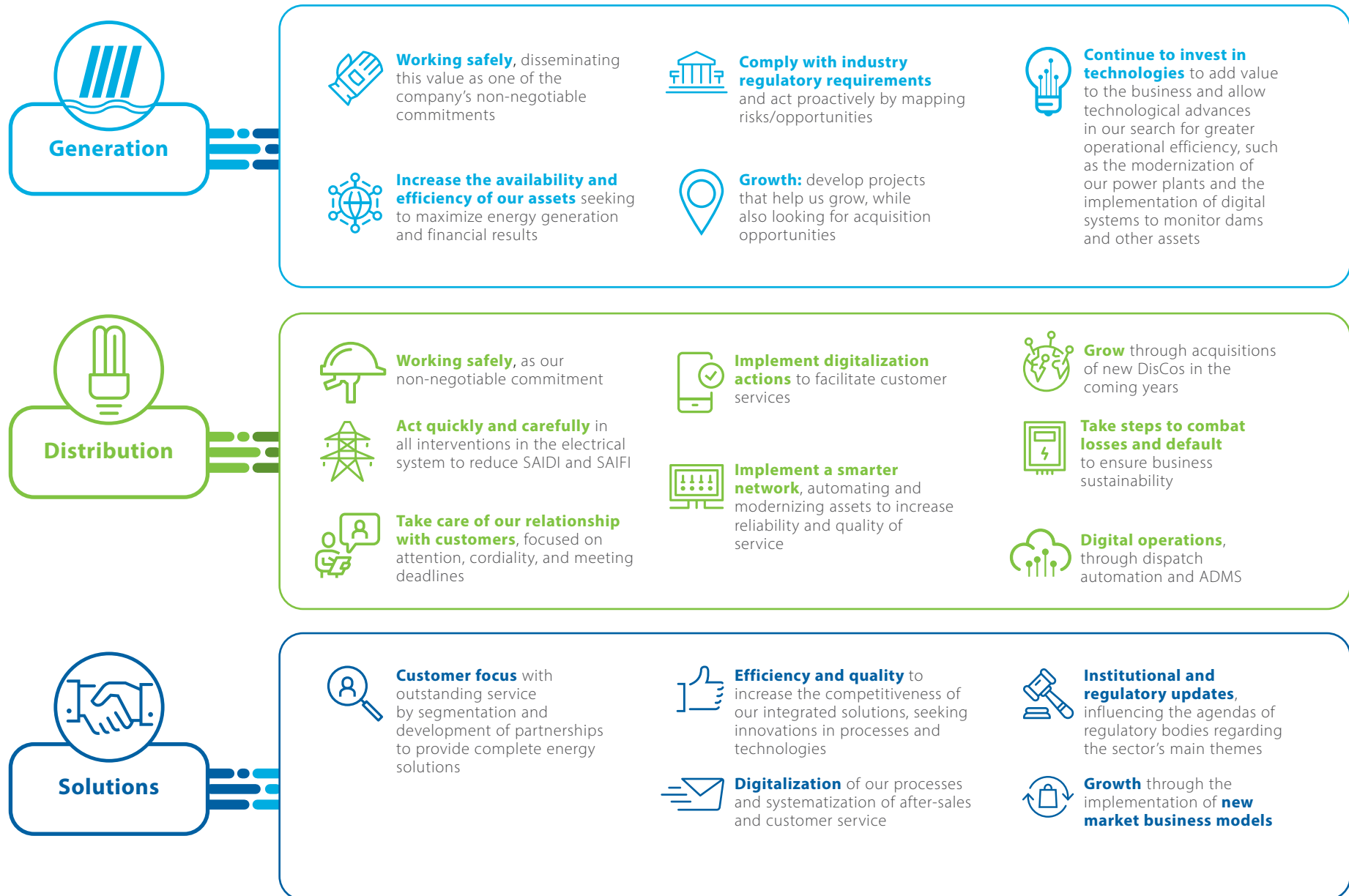
The **annual strategy-update process** involves the entire CPFL leadership and considers the expectations of our main stakeholders



We also considered the expectations of our main stakeholders - shareholders, customers, society, employees, regulatory bodies and suppliers. Identification of these demands occurs through different sources of information and includes evaluation of studies carried out by industry associations and by ANEEL, internal climate surveys, events and meetings with suppliers, benchmarks of other companies in the electricity sector, and interviews with shareholders, among other inputs.

This way we were able to map out opportunities for all businesses, taking advantage of synergies through an efficient and vertical performance model for project execution. Our organizational model creates a favorable structure for the "Plug & Play" of new assets and organic growth.

Our main directives for the next five years are



Sustainability plan

For our shareholders, the way we develop our activities is as important as achieving the strategic objectives and goals that are established annually. For this reason, the Board of Directors asked the Board of Executive Officers to define the Sustainability Plan, which guides business development and investments in a way that is aligned with our values and with global trends to promote sustainable development.


Approved in 2019, the Plan establishes guidelines so that we can “provide sustainable, affordable and reliable energy at all times, making people's lives safer, healthier, and more prosperous in the regions where we operate.” Our corporate objective is to power the transition to a more sustainable and smart way of providing and using energy, maximizing our positive impacts in the community and value chain.

To this end, we have identified three pillars that sustain the way we conduct our business and execute our strategy: Sustainable Energy, Smart Solutions and Society Shared Value. Based on these pillars we made 15 public commitments to contribute to economic, social, and environmental growth across the value chain.

The construction of the Sustainability Plan took place through a collaborative process between the different departments and operational areas of the company. At the end of 2019, the end result was presented to the Board of Directors, and its execution is already underway.

Our sustainability management structure

Our governance follows guidelines established by the Sustainability Policy, in effect since 2015, which strengthens sustainability management across all businesses and the monitoring of actions by the Board of Executive Officers and the Board of Directors.

 **Click** on each body in this structure to learn about their attributions and responsibilities within the scope of sustainability management.



CPFL'S SUSTAINABILITY DRIVER

Provide sustainable, accessible and reliable energy to all walks of life, and enhance a safer, healthier and prosperous life of people in regions where we operate

POWER SECTOR TRENDS

Transition to a low carbon matrix Changing customer profiles and habits New technologies and digitalization Regulatory framework modernization

OBJECTIVE

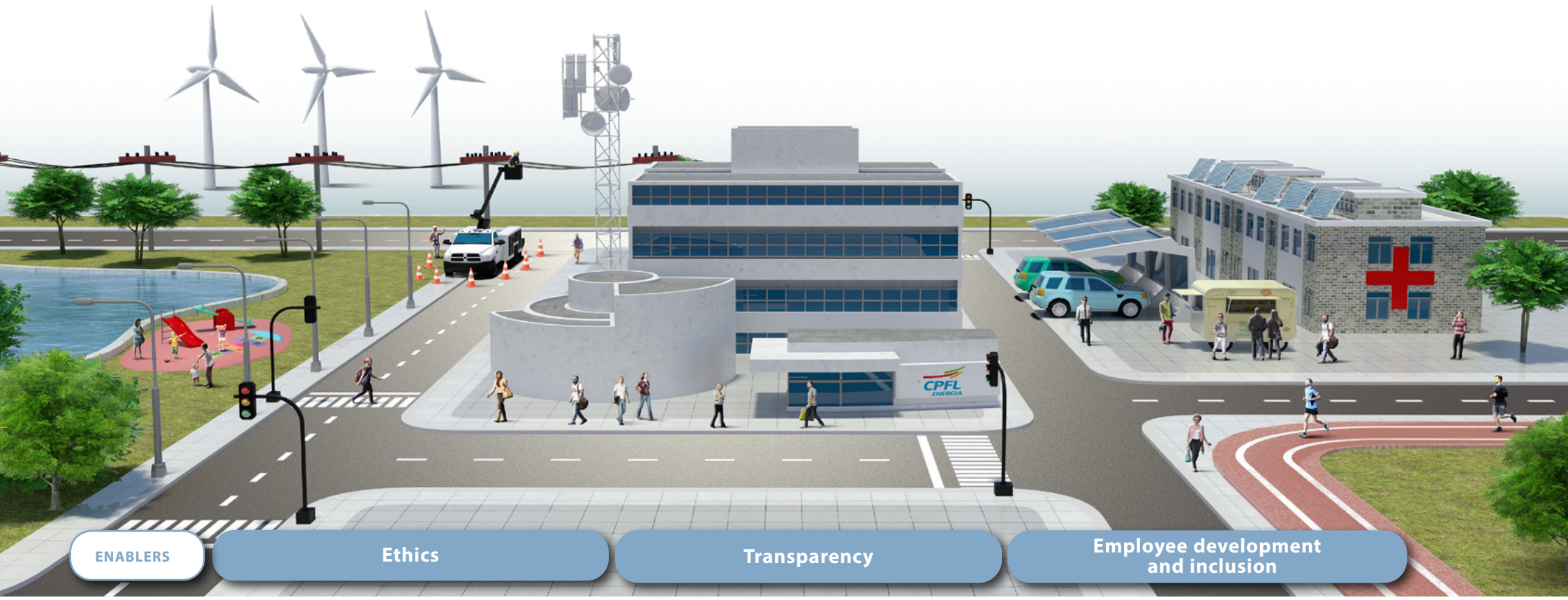
Power the transition to a more sustainable and smart way of providing and using energy, maximizing our positive impacts in the community and value chain

PILLARS


SUSTAINABLE ENERGY
Aiming for the smallest possible environmental footprint


SMART SOLUTIONS
Providing the solutions for the future of energy


SOCIETY SHARED VALUE
Maximizing our positive impacts in the community and value chain



ENABLERS

Ethics

Transparency

Employee development and inclusion

Contribution toward Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) released worldwide in 2015 are the result of a joint effort by governments, business organizations, civil entities, and several other social actors to build an agenda for economic, social and environmental prosperity. These actors were engaged by the United Nations (UN) and, through multilateral conferences and meetings, structured an ambitious set of 169 goals to be achieved globally by the year 2030.

Our company sees the 17 SDGs as a powerful tool to guide our performance and our positioning relative to sustainability. We believe that their development is capable of reflecting humanity's desire for concrete

actions that promote economic growth, respect for human rights, women's inclusion and empowerment, the protection of children and youth, the preservation of biodiversity, and actions to prevent climate change, among other topics.

Therefore, in order to develop and undertake the 15 public commitments in our Sustainability Plan, we evaluated the connection of our businesses to the SDGs. Our objective was to identify the greatest possible contributions to these objectives and, thus, to enhance them through more relevant action plans and investments.



How we developed our Sustainability Plan

1

How is sustainability related to our business?

Analysis of trends and externalities that impact the electricity sector

2

How does the market manage sustainability?

Benchmarking against companies seen as references by the market

How do we manage sustainability?

Internal diagnosis of our performance

3

Where are we going?

Internal engagement and collaborative plan to identify our ambitions and propose action plans

4

Sustainability in practice

Defining public commitments
Presentation of the Plan to the Board of Directors
Execution of the sustainability strategy



SUSTAINABLE ENERGY



SMART SOLUTIONS



SOCIETY SHARED VALUE

1 Keep at least **95% from renewable sources** in our generation portfolio until 2024

2 Reduce in **10%** our carbon intensity indicator until 2024

3 Publish our **climate change adaptation** actions

4 Refurbish at least **40,000 equipments** (transformers, voltage regulators, reclosers etc.) until 2024

5 Ensure the destination of **100% of the main grid components** to recycling or to the reverse supply chain until 2024

6 Reach **100% of Group A clients** with telemetering until 2020

7 Invest **R\$ 350 million** in distribution network automation until 2024

8 Achieve **90% of attendance** by digital channels until 2024

9 Invest **R\$ 45 million** in the development of electrical mobility technology until 2024

10 Offer to our clients **low carbon solutions** for their energy transition

11 Invest **R\$ 150 million** in Energy Efficiency actions in Public Hospitals between 2020 and 2022

12 Invest **R\$ 200 million** in Energy Efficiency actions toward low income communities until 2024

13 Maximize our positive impact in the communities, investing at least **R\$ 60 million** in social projects until 2024

14 Continuously seek to **improve health and safety indicators**, intensifying our actions towards employees, community and suppliers

15 Integrate sustainability aspects in the monitoring process for **100% of our critical suppliers** until 2024

CONTRIBUTION TO SDGS

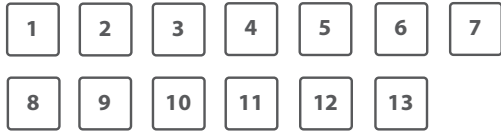


Sustainability Platform

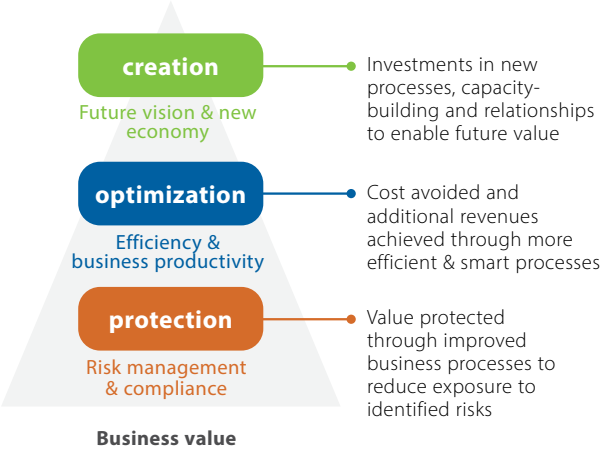
The Sustainability Plan will be monitored through our Sustainability Platform, a management tool created in 2014 and updated annually, which establishes indicators and targets for the protection, optimization and creation of value in our businesses, taking into account economic, social, and environmental impacts and risks. Below we report on the structure of the 2019 cycle, as well as the main results achieved. In 2020, it will be reformulated to adapt its structure to our 2020-2024 Sustainability Plan.



13 BUSINESS SUSTAINABILITY LEVRS


















For each one of the 13 business sustainability levrs, there are indicators (58 in total) that measure the protection, optimization and value creation of the company



and set goals for the 5 year cycle to improve our performance in sustainability

Main goals and results

		KPI	2018	2019
 	Efficient supplier management	Performance index for critical business suppliers	Goal → 76% Results → 79%	Goal → 81% Results → 85%
		Supplier compliance rate	Goal → 82% Results → 94%	Goal → 91% Results → 91%
   	Service efficiency	Equipment reverse logistics revenue	Goal → R\$ 38.4 million Results → R\$ 48.5 million	Goal → R\$ 50.2 million Results → R\$ 57.8 million
		Number of refurbished equipment	Goal → 8,400 Results → 8,672	Goal → 8,400 Results → 9,011
		Investment in safety campaigns for the community	Goal → R\$ 3.3 million Results → R\$ 3.7 million	Indicator replaced by the number of people in the community engaged in safety campaigns Goal → 144,822 Results → 350,388
 	Human capital development	Average hours of training for leaders	Goal → 18.0 Results → 22.7	Goal → 20.0 Results → 36.0*
 	Low carbon economy and GHG emissions	Emissions avoided	Goal → 2.1 million tCO ₂ e Results → 2.0 million tCO ₂ e	Goal → 2.2 million tCO ₂ e Results → 2.6 million tCO ₂ e
	Strengthening of relationships	Percentage of services performed through digital channels	Goal → 75% Results → 78%	Goal → 80% Results → 80%
   	Community development	Instituto CPFL social investment	Goal → R\$ 26.3 million Results → R\$ 28.2 million	Goal → R\$ 27.1 million Results → R\$ 39.5 million
Cities served by Instituto CPFL programs		Goal → 249 Results → 249	Goal → 100** Results → 121**	

* Management of this indicator has been improved, and encompasses specific training conducted by executives inside and outside the company, in addition to courses offered by Universidade CPFL.

** The way of accounting for cities has been changed. In 2018, all the cities served over the years up to 2018 were considered. Starting in 2019, we began counting only those cities served in that specific year.

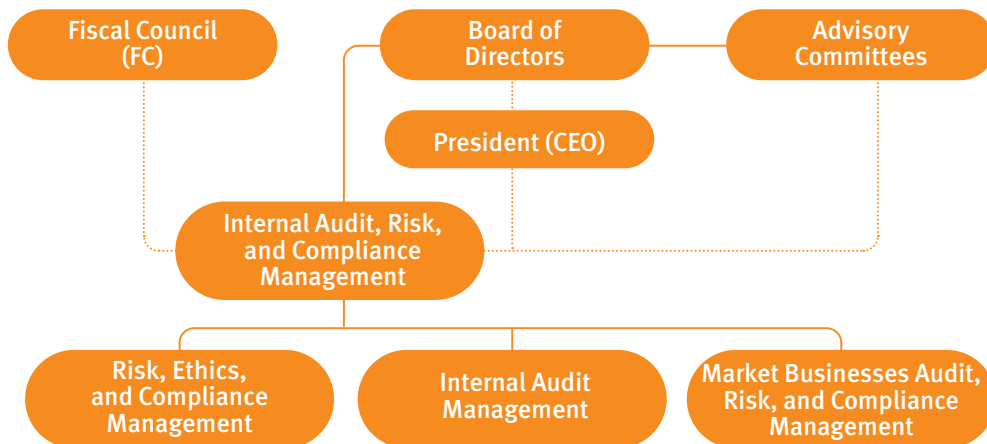
Integrated risk management

The **corporate risk map** consolidates the main trends affecting our business and the main strategic risks to which CPFL Energia companies are exposed, organized into the following categories: Financial, Operational, Legal, Energy Market, Sector Regulation, Environmental, and Reputational. The Corporate Risk Management Policy, approved by the Board of Directors, provides models, indicators, and limits for risk exposure, and these are approved by the highest governance body, as well as laying out in detail the treatment and reports required should these thresholds be surpassed.

The Policy also lays out the roles and responsibilities of each level of the corporate risk management structure. The approach when developing this management is based on four pillars - planning, execution, verification, and action. The indicators and limits are continuously evaluated and, when necessary, the Board of Executive Officers proposes changes and submits them to the Board of Directors for deliberation.

In 2019, we began collecting data and migrating from CPFL Renováveis' corporate risk map to that of the holding company. The proposal follows the model of CPFL Energia, consolidating the main trends and strategic risks in the power generation sector that affect the business.

Risk management structure



Synergies also include the governance, roles, and responsibilities established in the Corporate Risk Management Policy. For the year 2020, we will begin monitoring works in progress.

To complement our activities, a consolidated report was created with the main highlights of risk management, compliance, internal controls, and internal audit. Customized reports are prepared for the vice-presidencies every two months. This practice allows executives to keep up to date on these issues and to make ever-more timely decisions to ensure the achievement of strategic objectives and the generation of value.

Barão Geraldo is a neighborhood in Campinas – a municipality in the state of São Paulo – where about 50,000 people live. We chose this region to create one of the largest living laboratories for testing new technologies and innovations in the electrical sector: the Living Lab. This is a real platform to build bridges to a future of renewable energy and less carbon intensity in the production models. The community will benefit from an innovation ecosystem focused on environmental preservation, sustainable electricity generation and consumption, and the development of smart cities for future generations.



R\$ 95 million invested in

- ▶ Purchase of materials
- ▶ Acceleration of startups
- ▶ Laboratory equipment
- ▶ Personnel training
- ▶ Construction to adapt the local distribution network
- ▶ Installation of photovoltaic generation systems
- ▶ Implementation of charging stations for electric vehicles



Technologies studied

- ▶ Electric mobility
- ▶ Solar energy
- ▶ Energy storage
- ▶ Smart consumption
- ▶ Smart campus

Challenges

- ▶ Testing new technologies in real time
- ▶ Accelerating the insertion of emerging technologies
- ▶ Preparing the energy sector for the future
- ▶ Getting support among the region's population for real testing



- ▶ 79 scientific articles published
- ▶ 13 master's dissertations
- ▶ 10 doctoral dissertations
- ▶ 3 postdoctoral dissertations

SUSTAINABLE ENERGY



Tanquinho Solar Plant in Campinas (SP)

Sustainable energy

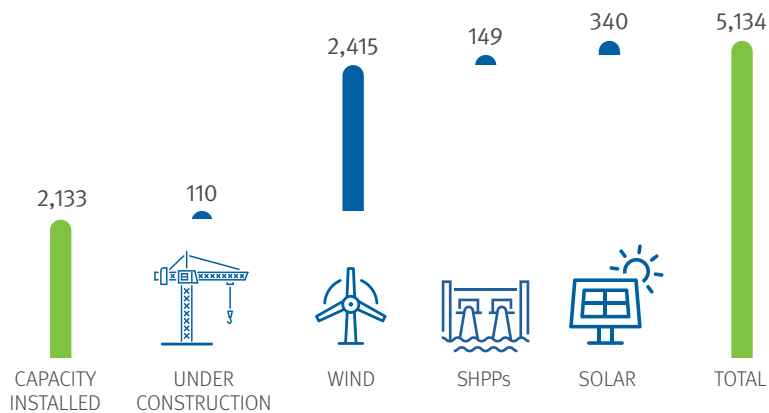
Our business model has great potential to contribute to a cleaner energy matrix and one that is less dependent on fossil fuels. One commitment we make in our Sustainability Plan is ensuring that through 2024 at least 95% of our generation portfolio continues to consist of renewable sources.

In this regard, the 2019 integration of CPFL Renováveis into our business structure is strategic, as is the consequent capture of synergies that leverage our investment capacity in this segment. The company, the leader in its segment in Brazil, mapped out a pipeline of new businesses capable of adding 2.9 GW to installed capacity, amid a highly pulverized sector with

opportunities for acquisitions and development of greenfield projects.

Part of this growth is already underway, with the construction of two projects that were successfully bid on in 2018: SHPP Cherobim (+ 28 MW) and the Gameleiras Wind Complex (+ 81.7 MW), comprising four wind farms. In 2019, we obtained the installation license for the two new plants and complied with the projected timeline. Our expectation is that we will be able to begin operations at the Wind Complex ahead of schedule, a relevant strategy to ensure its economic competitiveness and return on investment.

PIPELINE OF CPFL RENOVÁVEIS PROJECTS (MW)



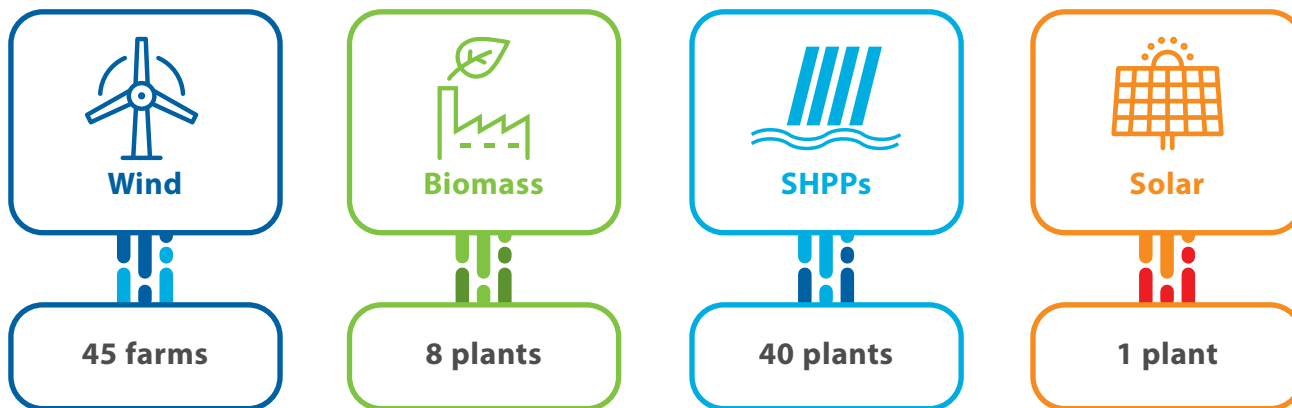
In addition to the development of new projects, CPFL Renováveis is developing an asset maintenance and operation plan that seeks to maximize operational efficiency - ensuring that assets add as much renewable energy as possible to the national energy matrix. In the past four years, the company has executed its Avançar (Advance) Plan, which includes a series of initiatives to improve plant operations, standardize processes, train employees, and implement new technological tools.

Management of these assets is carried out at the Integrated Operation Center (COI), located in the municipality of Jundiá, São Paulo. In 2019, this structure was reinforced with the creation of the Asset Monitoring Center, an advanced engineering unit that monitors the main pieces of equipment through sensors installed at the generation units, which communicate remotely with the operating systems.

Our commitment is to ensure that through 2024 at least 95% of our generation portfolio will continue to be made up of **renewable sources**



Distribution of CPFL Renováveis portfolio



This solution allows CPFL Renováveis to take proactive steps to ensure the plants' availability and reliability. Our expanding use of data analysis tools and machine learning enables us to identify possible failures and create more assertive preventive maintenance plans, reducing costs and decreasing downtime.

In addition to these improvements, CPFL Renováveis recovered its efficiency indicators at wind farms in Rio Grande do Norte, which were extraordinarily affected when an Operation and Maintenance supplier in Brazil ceased its activities. To resolve the issue, the company is handling operations in house, generating gains from greater control over assets and better performance evaluation.

Dam safety

Ensuring the safety of our employees and the general population is a priority for all our businesses. In the generation segment, one of our main initiatives concerns the inspection of the dams that form the reservoirs for our hydroelectric plants and SHPPs, using state-of-the-art equipment and internationally recognized methodologies to ensure the structures' reliability.

Every single plant has a designated team that monitors high-precision instruments installed in the structures and inputs this information into the Dam Safety Management System (SGSB), a digital tool developed by the company to provide real-time management of dam conditions through a database with cloud computing resources. In addition, an engineering team carries out regular inspections so that, in conjunction with the monitored data, we can attest to our assets' good performance.

The processes we have adopted are in accordance with Brazil's laws and standards, especially the National Dam Safety Policy, instituted in 2010 through Law 12,334/10. This law stipulates, among other things, that all generating units must be classified in terms of the risk of breach and its potential damage with the most critical assets (classification A or B) required to prepare and deliver an Emergency Action Plan (PAE) to the competent authorities. The PAE is a legal document that provides support in emergency response actions, establishes procedures for security controls, and helps municipalities prepare their own contingency plans.



Campos Novos HPP (SC)

All of our plants covered under the pertinent legislation have up-to-date **Dam Safety Plans**, with the necessary steps to prevent risks

All of our units classified as A or B have drawn up their respective Dam Safety Plans (PSB), which include a list of steps necessary to avoid risks and take action in case of non-compliance. The PAE, which is part of these plants' PSB, was duly delivered to city administrators and civil defense forces in order to be incorporated into local contingency plans.

One example of our commitment to safety is CPFL Renováveis's actions at Americana SHPP, located on the Atibaia River close to the city of Americana (São Paulo). In 2016, we identified the need to carry out maintenance on a dam gate, even though this did not present an immediate risk for the structure's safety. Nevertheless, the company undertook actions to improve the structure, and as a preventive measure requested that the asset be classified under a more significant risk category (risk A) and readjusted the PAE in order to align it to the new situation. A year later, after completing our interventions and being evaluated by regulatory bodies, the asset was once again given a lower risk rating (risk B).

In the meantime, the Legislative Assembly of the state of São Paulo created a Parliamentary Commission of Inquiry (CPI) to assess the plant's safety conditions. The company's leadership presented state legislators with technical details of this process and also of the differences between the types of dams that exist in Brazil – explaining that the construction model for Small Hydroelectric Power Plants (SHPPs) is distinct from dams containing mine tailings and runoff.



In addition to dialoguing with public authorities, CPFL Renováveis was a pioneer in Brazil when it participated in drills held in the municipalities of Americana and Limeira to train the population about what to do in case of an incident. State and municipal civil defense forces coordinated the drill, which also included the Civil and Military Police and the Fire Department. All planning was carried out based on the PAE presented to the regulatory bodies. It was the first time that a drill like this was carried out at an SHPP in the state of São Paulo.

To reinforce our commitment to safety, we also reinforced communications with the general public through social networks, with informative ads and videos that explained the status of the dam and its safety conditions.

 **Watch the CPFL Renováveis video about the safety of the dam in Americana**



Three ongoing Research and Development (R&D) projects are linked to the improvement of dam-safety monitoring processes

Finite Elements

This project seeks to build a real-time monitoring system for dams using the finite element method, based on data from a fully automated station and instrument readings. The system will also allow us to carry out simulations in the structure under different scenarios. The plan is to complete this project by May 2021.

Slope Monitoring

The objective is to reconstruct hydroelectric dam slopes three-dimensionally through images made by specialized and autonomous drones. As a result, it will be possible to monitor the integrity of these structures and schedule safety and maintenance interventions. The plan is to complete this project by February 2021.

Tunnel Inspection

This seeks to develop an autonomous underwater vehicle to inspect the structure of adduction channels through 3D mapping. The plan is to complete this project by May 2021.

SDG

7 AFFORDABLE AND CLEAN ENERGY



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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Climate change

Climate change generates significant impacts for the entire energy sector. Changes in rainfall patterns and other atmospheric conditions can negatively affect both hydroelectric generation capacity and energy distribution as the result of greater risks to the network's integrity from more severe storms. However, demands to decarbonize the energy matrix creates opportunities to expand our generation from renewable sources and to develop projects that emit less CO₂ into the atmosphere.

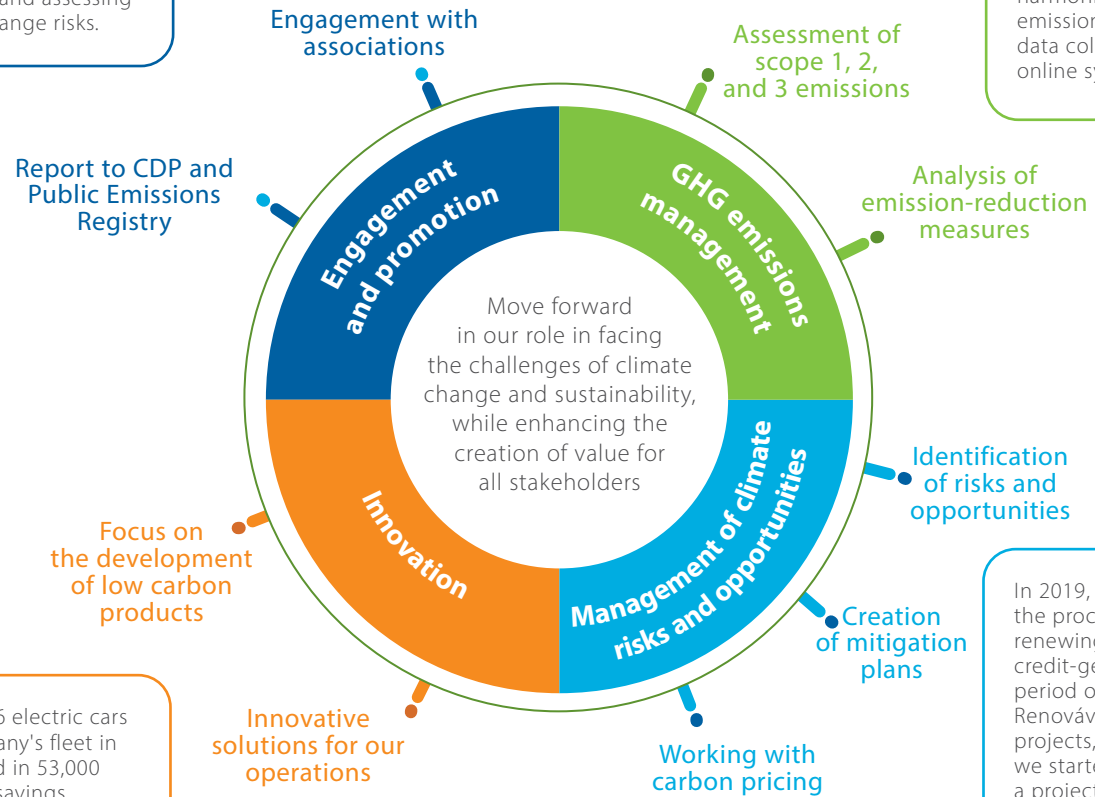
In order to deal with such a complex scenario, we have structured a model that establishes four fronts of action (see diagram). In 2019, this management system was driven by two commitments made in our Sustainability Plan:

- Achieve a 10% reduction in our carbon intensity by 2024
- Communicate the steps we are taking to adapt to climate change

We are leaders in the CDP Supply Chain, a program that engages companies committed to promoting supplier engagement in monitoring GHG emissions and assessing climate change risks.

In 2019, we integrated CPFL Renováveis into our GHG-emissions inventory in proportion to our new share in the company (99.94%). We conducted a study to harmonize activity data, emission factors, and data collection via the online system.

How we operate under climate change scenarios



Transfer of 16 electric cars to the company's fleet in 2019 resulted in 53,000 liters in fuel savings.

In 2019, we initiated the process of renewing the carbon credit-generation period of five CPFL Renováveis CDM projects, and in 2020 we started assessing a project that will generate new credits for trading.



GHG emissions management

In the course of preparing our annual emissions inventory we monitor the volume of GHG released into the atmosphere as a result of our activities. Our inventory follows the guidelines and methodology proposed by the Brazilian GHG Protocol Program and is published in the Public Emissions Registry, and stamped with the Gold Seal as a result of being submitted to third party verification.

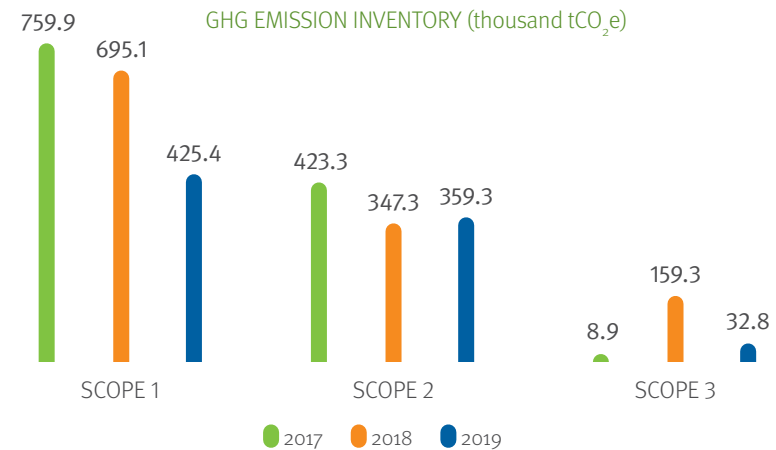
In scope 1, our emissions totaled 425,354 tCO₂e, a reduction of 39% from the previous year. Composed of direct emissions from our operations, this category was impacted by less demand for power from Epasa and by the consolidation of CPFL Renováveis data proportional to our share stake - which increased to 99.94%. In scope 2, mainly composed of technical losses in distribution, we totaled 359,285 tCO₂e in 2019, a slight increase of 3.4% that accompanies the increase in the National Interconnected System's (SIN) emission factor. In scope 3, we emitted 32,816 tCO₂e, a reduction of 80% due to a period in which there was no power plant construction. This scope includes business trips, commutes, purchase of materials (steel, aluminum, cement, among others), and treatment of effluent and solid waste from operations.

Since 2018 we have been studying the data collected to develop mechanisms to reduce or offset our emissions. This work has been carried out by an interdisciplinary working group and monitored by the Sustainability Committee.



Biomass plant in Pirassununga (SP)

Scope 1 emissions in 2019 **decreased by 39%** from the previous year



Management of climate risks and opportunities

Our business model can be positively or negatively impacted by climate change intensification. To measure this effect on our value chain, we compiled a Map of Climate Risks and Opportunities, a tool that classifies these events into three categories: changes in regulation, changes in physical parameters, and changes in other parameters.

Regulation

- Risks may be related to the creation of carbon taxation. However, there are opportunities for cap-and-trade systems. For example, we estimate a revenue-generation potential by selling approximately 1 million carbon credits per year in projects registered under the CDM.
- There are opportunities to increase renewable generation through incentives that make new energy sources more competitive.

Physical parameters

- Risks and opportunities are split between the business in which we operate and, in generation, for each energy source (learn more to the right).

Other parameters

- One of the main impacts is on the electricity consumption profile. Demand for energy tends to increase with greater use of climate control equipment (such as air conditioning) in our concession area.
- The demand for distributed-generation systems and energy-efficiency services creates opportunities for CPFL Soluções, which has experience and can offer complete services to customers.

Risks and opportunities for physical parameters



Hydroelectricity

Less rainfall

- A reduction in precipitation may affect our plants' availability for generating electricity, in addition to causing conflicts over the use of water for other purposes

Extreme weather events

- Storms pose risks to the plants' physical structures due to the dramatic increase in water volume in reservoirs. In contrast, heat waves can increase water evaporation and compromise water availability for generation



Wind

Wind intensity

- Changes that affect the intensity, duration, direction and speed of winds can make generation in wind complexes more unstable



Solar

Changes in precipitation and temperature patterns

- This condition impacts cloud formation and can reduce the incidence of solar radiation, compromising the generation capacity of solar parks



Biomass

Changes in precipitation and temperature patterns

- These conditions also affect the distribution of land suitable for agricultural cultivation and crop productivity, which may reduce the availability of biomass for generation



Distribution

Changes in temperature extremes

- Longer periods of heat or cold can increase electricity consumption, overloading distribution systems in our most critical operating regions

Increased incidence of storms, lightning and wind intensity

- More frequent and intense storms and lightning strikes affect our distribution network, which could interrupt supply, as well as increasing costs from network maintenance and reimbursement to customers in the event of damage to their electronic devices

We started mapping out the possible financial impacts of climate change. In generation, the main impact is related to the Generation Scaling Factor (GSF). In a scenario of an unfavorable hydrological regime, hydroelectric plants are obliged to buy energy from other sources (for example, thermal) to honor their contracts, which can generate additional costs for the entire system. We renegotiated this risk for most of our plants, but in 2019 we were exposed to an impact of R\$ 24 million.

We have invested in mitigation and adaptation actions that minimize our exposure to risks and ensure a better level of readiness to deal with the irreversible effects of climate change. In regard to our DisCos, we highlight projects that incorporate innovation into management solutions. This is the case of the Weather Translator System (WeTS), which cross-references data from weather forecasts with our operational impact and criticality levels, in proportion to the number of interrupted customers. The system uses advanced artificial intelligence techniques and establishes 24-hour and 72-hour scenarios for our entire concession area. Implemented in October 2019 at the DisCos' Operations Centers, the initiative has helped with the planning and allocation of teams in case of storms. The project was also recognized in December with an award by Project Design Management magazine in the category of Innovative Projects in 2019.

In 2020, WeTS will be improved thanks to a solution being developed by Pluvi.ON, a startup that participated in the CPFL Inova program and that will use low-cost weather stations to provide data that will provide detailed information to field operations.

PixForce, another CPFL Inova participant, is developing a project that will help implement an automated vegetation inspection system in urban networks, reducing the risk of contact with the electricity grid in case of rain. This initiative should boost synergies from the Arborização + Segura ("Safer Tree Planting") project - which focuses on replacing trees in cities with species that are better suited for the urban environment – thanks to the planned development of an algorithm to identify tree types (learn more on page 54).

In terms of generation, we have invested heavily in dam safety (learn more on page 43), in addition to seeking improvements in efficiency and operational control with the Avançar Program at CPFL Renováveis. This program will centralize the Integrated Operation Center (COI), facilitating control over the company's 94 generation assets. More than 700,000 points are now monitored on a consolidated basis, giving more flexibility to the teams' response following weather events, among other operational factors.

Projects that incorporate **innovation** into management solutions ensure a better level of readiness to deal with the impacts of **climate change**



CPFL employees

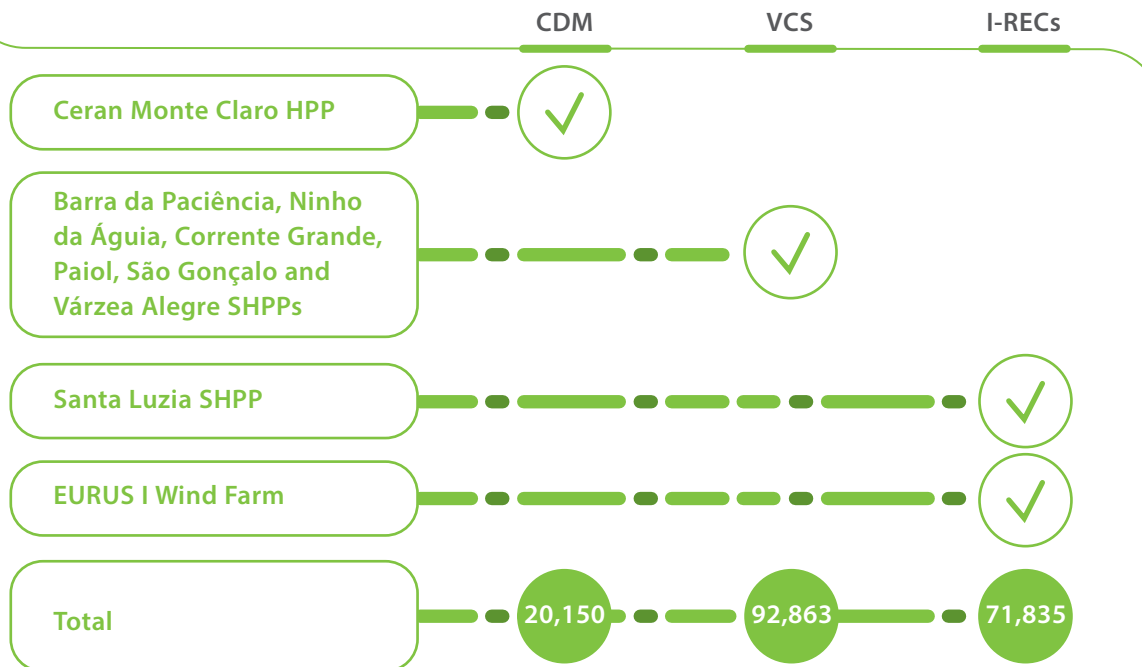
Low-carbon solutions

Our operating model creates opportunities for the sale of carbon credits and renewable-energy seals. In terms of carbon credits, we have projects registered both in the regulated market – the Clean Development Mechanisms (CDM) - and in the voluntary market - Verified Carbon Standard (VCS).

In 2019, we initiated the process of renewing the carbon credit-generation period of five CPFL Renováveis CDM projects, and in 2020 we started assessing a project that will generate new credits for trading.

As for renewable energy seals, CPFL Renováveis has two projects registered in the Renewable Energy Certificate System (RECs), a voluntary platform for trade in renewable energy certificates that was created by the International Renewable Energy Certificate (I-REC Standard) to encourage the development of renewable energy.

In 2019, we sold more than 110,000 carbon credits (CDM and VCS) and a volume of more than 70,000 renewable energy seals from the projects below.



Pedra Cheirosa Wind Farm (CE)

Environmental management

Our business model requires that the company have a far-reaching capacity to manage and monitor environmental impacts. Our generation, transmission, and distribution assets interfere in varying ways with their surrounding ecosystems, and therefore our approach seeks to improve the environmental performance of each segment's operations.

The guidelines and processes we have adopted are unified in the Environmental Management System (EMS), and calibrated according to all the legal requirements applicable to generation, transmission, and distribution projects. Through this platform we ensure compliance with environmental licenses across all operations and direct our investments towards projects that add value to the entire production chain.

Environmental licensing processes are supported by preliminary studies that identify the potential effects of our projects, and we apply the precautionary principle to minimize these impacts and mitigate risks. The same procedure occurs during the other phases of projects, using constructive techniques in the installation stage and efficient control systems in the operation stage to avoid environmental damage.

Biodiversity

The installation of generating plants and transmission and distribution lines constitute the business areas with the greatest potential to impact biodiversity. In line with prevailing legislation and our EMS, we carry out environmental impact studies that identify changes in ecosystems and support the creation of mitigation and compensation action plans. Part of our operations involves working with regulatory bodies to secure environmental licenses for the execution of projects.

The main effects caused by our assets during the construction phase are related to the reduction of vegetation, temporary changes in water, air, and soil quality, and changes in rivers' water regimes. All these impacts are evaluated when obtaining the preliminary license, by way of environmental impact studies, and classified according to their nature, duration, extent and reversibility. Effects considered irreversible are adequately compensated in accordance with requisites established by the competent agencies.



Monte Claro HPP (RS)



Foz do Rio Choró Wind Farm (CE)



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Impacts of renewable generation

The projects under construction by CPFL Renováveis can generate socio-environmental impacts as a result of the work's interference in the community's daily life, such as temporary increases in the population due to the arrival of workers, pressure on local infrastructure, and increased traffic on back roads, to name a few. On the other hand, there are positive impacts that benefit the entire local community as a result of job creation, higher tax revenues for the municipality, and incentives for local economic growth.

In 2019, the company started construction on the Gameleiras Wind Complex, but the impacts described above have not yet been observed. This is because we have merely engaged the contractor, but have yet to carry out any construction activities.

To mitigate the negative impacts, provide clear and transparent information, and enhance the positive effects of the project, we installed a Social Communication Center (CEC) in the Boqueirão community, which is close to the wind farm. The center provides a place for dialogue between the company and the community, allowing the strengthening of relationships and the peaceful resolution of conflicts and disagreements.

During the operation phase, the impact on biodiversity is positive due to the maintenance of preservation areas and, in the case of hydroelectric plants, to the conservation of vegetation along the edges of the reservoirs. In 2019, 348.9 hectares were planted at the Foz do Chapecó, Luís Eduardo Magalhães and Epasa plants, in which CPFL Energia holds a stake. Considering all the plants owned by CPFL Geração, CPFL Renováveis, and in which we hold a stake, the total protected area last year was 17,784 hectares (equivalent to almost half of the municipality of Jundiá, in São Paulo), including the Permanent Protection Areas and Legal Reserves.

The impacts on the local fauna are evaluated in accordance with the characteristics of each generating source. At our wind farms, one of the main risks refers to birds and bats colliding with wind-turbine blades. At hydroelectric plants, the main impacts are related to fish getting trapped in the turbines, and possible interference in their reproductive cycles. These aspects are managed by monitoring the fauna, chasing them away, or through rescue programs, where applicable.

The fauna-monitoring campaigns are tied to the measurement of the generating plants' environmental impacts. Generally, the maintenance of conservation areas helps restore local fauna and increase the availability of suitable habitats for the protection of endangered species. These campaigns follow specific timelines that depend on each unit's environmental license. The extinction risks of identified species are cataloged according to local, national, and International Union for Conservation of Nature (IUCN) lists.

In the transmission and distribution segments, the main effects are associated with line construction, which often requires plant suppression and can alter the local landscape, flora, and fauna. In these situations we carefully conduct all the legal requirements involved in environmental licensing, minimizing impacts and compensating them accordingly. The network layout, for example, is defined after considering the least possible impact on isolated forests and trees. In stretches where it is not possible to change the location of the towers and wires, we increase the height of the structures to avoid interacting with the local vegetation.

WATER SECURITY

Stages of the project:

1

Preliminary participatory diagnosis of the water situation in the communities involved

2

Conducting **community work** to reform local families' plate cisterns

3

Implementation of simplified **water-supply** systems for homes

4

Implementation of **irrigation systems**

5

Technical and organizational training with communities for efficient management and operation of solutions, technologies and systems implemented for water security



629
families with access to desalinated water for human consumption

278
families with access to desalinated water for irrigation

449
families trained in collaborative and collective management of water supply structures at the community level

R\$ 3.5 million
invested in the project

Approximately 45,000 people live in the municipalities of João Câmara and São Miguel do Gostoso, both in the state of Rio Grande do Norte. This is a region of stunning natural landscapes and strong winds, typical of the Brazilian Northeast, but with a chronic problem: the local population's lack of access to water. Located in the Brazilian semiarid region, it is common for both cities to declare a state of emergency as a result of droughts.

The Water Security Project, part of the Raízes Program for social development carried out by CPFL Renováveis, helped transform the situation of 807 families in nine rural communities in regions where the company operates wind generation projects. This initiative was conducted between 2016 and 2019, in partnership with the Local Economic Development Agency (Adel) and Transforma Aí, a consultancy specializing in social impact projects.

Based on a participatory diagnosis, the project led to the installation and renovation of cisterns to store drinking water and the development of irrigation structures for subsistence agriculture and the sale of surpluses, depending on the needs of each region. Moreover, families were trained to carry out collective and collaborative management of their water supply structures, creating a permanent legacy for the entire population.

Arborização + Segura ("Safer Tree Planting") Project

In the municipalities served by our energy DisCos, the focus is on promoting a safer and more harmonious interaction between vegetation and electrical networks. Since 2015, we have carried out the Arborização + Segura project, which replaces large trees with species that are better adapted to urban environments.

Each year the initiative is expanded to more cities in our concession areas through partnerships and agreements with local city governments. In the past year, the project reached 37 municipalities in the states of São Paulo, Paraná and Rio Grande do Sul. In the past five years we invested more than R\$ 2 million in urban reforestation through the replacement of 3,400 trees and the donation of 20,000 seedlings.

Among the species donated are *quaresmeira*, *manacá-da-serra*, *aroeira*, *pitangueira*, and *cereja-do-rio-grande*, among others. The seedlings are already at a minimum size, which ensures greater likelihood of rooting and less risk of loss from vandalism.

In addition to replacing trees, we develop environmental education campaigns in schools, guiding teachers and educators on how they can communicate with students about how to care for the plants properly.

This project contributes both to expanding green coverage in urban areas and to creating a financial return for the company in terms of avoided network-maintenance costs. In 2019, we carried out a calculation of return on investment (ROI) on this project's sustainability, which demonstrated the cost-benefit of replacing and planting trees more compatible with aerial networks.

Planting saplings in São Leopoldo (RS)



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Click here

to learn more about
Arborização + Segura

Waste and reverse chain

In the energy-distribution segment, the generation and proper disposal of waste materials are critical in guaranteeing our businesses' sustainable performance. To reduce our environmental footprint, we have addressed these issues in our Sustainability Plan commitments. Our goal is to refurbish and reuse at least 40,000 pieces of equipment in the distribution networks by 2024 and to direct 100% of the main components removed from the network to recycling or reverse chain systems.

To this end, and based on the principle of the circular economy, we have structured a more efficient solution to treat 640 tonnes of waste generated monthly by DisCos located in the state of São Paulo. Every month our Equipment Refurbisher evaluates 765 transformers and voltage regulators that would otherwise be discarded and manages to rehabilitate 60% of them for reuse.

Among the materials that need to be disposed of, copper is sent to cable factories, which recycle the material and return it to the company at a lower cost compared to new products. For other types of waste, such as utility poles and electric insulators, we are able to add value and sell them to licensed and approved recycling companies and groups.

Since 2017 this process of recirculating materials has generated revenue of approximately R\$ 146 million and has generated around 200 direct jobs, in addition to the environmental benefits from pollution controls and reducing the use of natural resources. In the state of São Paulo, 100% of our waste is reused, and we are evaluating mechanisms to expand the practice to Rio Grande do Sul.

Acting on this performance model is possible because we have a waste management program that identifies and classifies disposable materials in our operations. For hazardous waste (class I), we have storage and transportation standards, in addition to appropriate forms of disposal that comply with current legislation.



Equipment Refurbisher in São José do Rio Pardo (SP)

At CPFL Renováveis units this process is controlled by means of specific forms that analyze the waste that is potentially generated and evaluate the compliance of transporters, vehicles and professionals hired to dispose hazardous materials. In 2019, we generated a total of approximately 1,200 tons of class I waste.

In 2019, the Equipment Refurbisher updated around **9,000 transformers**. The company was recently certified according to ISO 14001 (environmental management) and ISO 9001 (quality management) standards





SMART SOLUTIONS



Smart meters

Smart solutions

Digital connectivity between people and equipment, provided by the evolution of telecommunication technologies, has led to a paradigm shift in the energy sector. The Internet of Things (IoT), a comprehensive concept to define how vehicles, appliances, and other devices are increasingly connected to the internet, redefined the way customers relate to the entire energy universe.

Our strategic vision is to promote the construction of a more reliable and secure network, with significant investments in expansion, automation, modernization of equipment, and innovation to generate more efficient consumption of energy resources. To this end, in 2019 we invested R\$ 2 billion to improve the quality of distribution services for customers, and over the next five years we plan to invest R\$ 11.6 billion on projects that will improve the attendance and the quality of services provided to customers in our concession area.



CPFL Energia customer

We plan to invest **R\$ 11.6 billion over the next five years** on projects that will improve the attendance and quality of services provided to customers in our concession area



INVESTMENT IN ITEMS RELATED TO THE RELIABILITY AND AVAILABILITY OF ENERGY IN DISTRIBUTION (R\$ million)

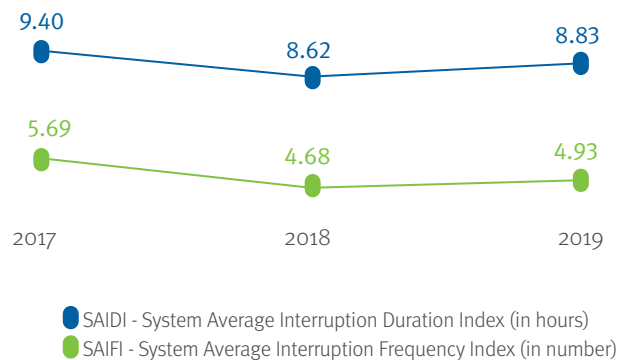
	2017	2018	2019
Customer service*	314.3	283.8	293.8
Support for market growth	397.6	228.8	400.4
Maintenance and improvements to the electrical system**	1,010.4	997.5	1,154.1
Others	160.3	259.5	185.0
Total	1,882.6	1,769.6	2,003.3

* Includes recovery of commercial losses. Net special obligation values.

** Includes special projects, personnel capitalization, MSO, and logistics operator.

Our DisCos are benchmarks because of the high quality levels reached, measured by two main indicators related to energy supply - SAIDI (duration of interruptions) and SAIFI (frequency of interruptions). In 2019, our levels were steady in comparison to the previous year, despite the greater intensity of rainfall that led to more incidents involving the electricity grid.

EVOLUTION OF DISCOS' QUALITY INDICATORS



● SAIDI - System Average Interruption Duration Index (in hours)
● SAIFI - System Average Interruption Frequency Index (in number)



Investment in reliability and availability in **energy distribution** reached R\$ 2 billion, an increase of 13% from the previous year

SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

	2017	2018	2019
CPFL Paulista	7.14	6.17	6.72
CPFL Piratininga	6.97	5.92	6.48
CPFL Santa Cruz	6.20	6.01	5.56
RGE ¹	14.17	13.43	14.01
RGE Sul	15.58	15.56	
Consolidated CPFL Group²	9.40	8.62	8.83

¹ In 2019, includes consolidated data for RGE and RGE Sul due to the unification of the DisCos.

² Calculated based on the weighted average number of customers of each DisCo and the value calculated for the SAIDI.

SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI)

	2017	2018	2019
CPFL Paulista	4.94	4.03	4.38
CPFL Piratininga	4.45	3.87	4.34
CPFL Santa Cruz	5.12	5.09	4.25
RGE ¹	7.74	6.30	6.25
RGE Sul	7.62	5.89	
Consolidated CPFL Group²	5.69	4.68	4.93

¹ In 2019, includes consolidated data for RGE and RGE Sul due to the unification of the DisCos.

² Calculated based on the weighted average number of customers of each DisCo and the value calculated for the SAIFI.

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Efficiency and quality

One of the main fronts on which we are working to offer an increasingly reliable network and to continuously improve our operations with technology and innovation is the ADMS Program (Advanced Distribution Management Systems). The implementation of the new platform at the DisCos' Integrated Operation Centers in São Paulo and Rio Grande do Sul has been underway since 2018 and is expected to be completed by 2022, with total investment of R\$ 47 million.

In 2019, we focused on developing CPFL's specific needs, importing electrical assets that will be operated by the system in the future, adjusting our satellite systems so that we are ready to communicate with the ADMS, and testing units to ensure the systems' correct functioning before coming online.

This solution will improve the quality of our distribution networks' operations. The high degree of process digitalization and automation, integrating different operating systems, creates opportunities for our specialists to expand data analysis in order to identify and propose structural improvements, while autonomous mechanisms organize the various tasks to ensure energy supply and meet customer demands.



With the **implementation of ADMS**, we will transform the way we manage and act on our networks, bringing our distribution operations to a new level of **efficiency and quality**

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With the completion of the ADMS, we will transform the way we manage and act on our networks. We will make progress on self-healing actions (automatic reconfiguration of the network in case of supply interruptions), in locating interruptions and dispatching of maintenance teams, in the identification of technical losses, and various other activities that we carry out daily to maximize operational quality and efficiency.

Together with the ADMS, we carried out several other strategic planning projects to transform our operations. These initiatives include improvements in the dispatch of teams, scheduling service orders requested by customers, and efficiency gains from the reduction of trips to handle unfounded calls, among others. We have also taken steps in structuring our analytics tools to evaluate and interpret the large volume of operational information we have in our databases, seeking to identify opportunities for generating synergies and scalability in management processes.

On the engineering front, our investments are directed towards the technological evolution of the network, with the installation of more intelligent and remote-controlled equipment. Automatic reclosers, capable of resuming operation automatically when there are improper interventions in the network, are an example of this progress. In 2019, we reached a total of 11,400 reclosers connected to our network – 16% growth in a year-over-year comparison – and we expect to more than double that number by 2027.

One of the commitments we assume in our Sustainability Plan is to invest a total of R\$ 350 million in network automation by 2024. This will allow us to achieve significant reductions in supply interruptions and in dispatching teams on maintenance calls, benefiting customers with better quality and speed, at the same time that we reduce the environmental impacts of vehicle use and fuel consumption.



Telecom Operations Center in Campinas (SP)

ChatBot: innovation and technology in operations

Our operation teams have an important ally when it comes to improving the quality, agility and value of our business. A ChatBot system was developed to automate the flow of communication of relevant deadlines and information in real time. The system will improve the management of emergency and commercial service calls awaiting execution. It also manages information on major events and shutdowns that impact productivity.

The system automatically sends and receives messages through an instant messaging application using the operation's database. One example of the tool's application is when a customer requests the reconnection of their power and the deadline to do so is close to expiring. In this case, ChatBot identifies the deadline conditions and makes the decision to send messages to the operations center and to the field teams with the information relevant to the service.

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In Rio Grande do Sul, a state in which RGE serves 381 municipalities, our plan is to strengthen distribution networks through backups that will ensure supply in the event of interruptions in locations not supported by electrical substations. This is an initiative that adapts our operations to regulatory parameters and will lead to improved service for customers.

Our investments have also allowed us to install new utility poles that make use of self-grounding, a solution created under our Research & Development program. By using new compounds in concrete, this technology allows the hardware mounted on the utility pole to conduct surges into the ground, where the energy dissipates. The innovation increases safety for the population and simplifies the conventional grounding process, which uses copper wires and presents greater risks of failure due to corrosion or vandalism. By 2019, a total of 78,011 self-grounding poles were already installed in our concession area.

One of the commitments we make in our Sustainability Plan is to invest a total of **R\$ 350 million** in network automation by 2024

Transmission towers in Campinas (SP)



Telecommunications infrastructure

To maximize the positive impacts of the automation and digitalization processes of our distribution networks, our operations need to be connected through a reliable, secure, and resilient infrastructure. Telecommunication between remote-controlled equipment and the integrated operations center is ensured in São Paulo by our own network, which boosts the quality and efficiency of our operations. In Rio Grande do Sul, a state served by RGE, we are evaluating ways to achieve the same level of reliability in network interconnections.

Expansion of our telecommunications structure in 2019

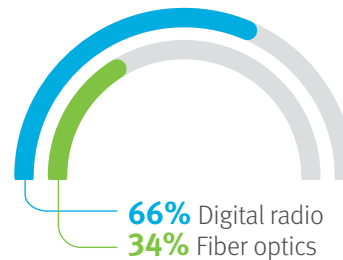
Addition of **250 kilometers** of fiber optic cables

Construction of **19 towers**

R\$ 14 million invested in 2019

Installation of **59 new radio links**

85% of substations are served by their own communication systems



The fiber optic network is present in **24 municipalities**, with more than **1,300 kilometers of optical cables**

95% of the concession area in the state of São Paulo has its own **voice communication system**

409,230 telecommands and telemeter readings using the network

Avoided emission of 1,637 tCO₂e into the atmosphere from use of vehicles*

**Considering average travel of 20 km (round trip) per operation or reading and 200 g/km of CO₂ emissions for diesel trucks, according to CO₂ emission data for motor vehicles released by INMETRO in 2019.*

136,410 hours saved in team movements**

***Considering an average time of 20 minutes (round trip) per movement and a total of 409,230 movements avoided in 2019.*

Average reduction of 25 minutes in the time it takes to restore power to the population in 28,742 outages***

****Considering time of 25 minutes (travel, identification, signaling the area, and action) multiplied by 28,742 recloser operations in 2019.*

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Smart grid is the future

One of the main positive impacts of the Internet of Things in the electricity distribution segment is the opportunity to create intelligent, automated and interconnected networks. Remote measurement of customer consumption is one possibility that is already underway in our concession area. Since 2018, CPFL Santa Cruz has been running a pilot project to install smart meters throughout the municipality of Jaguariúna (São Paulo), with a population of approximately 51,000 inhabitants. As of last year, about 20,300 new pieces of equipment had been swapped out, and by August 2020 this phase of the project will be completed, with a total of 22,700 meters installed.

Another front in this project is our evaluation of different technologies for connecting smart meters to our operation centers. In Jaguariúna, we will test four options (MESH, LoRa, LTE and PLC) to identify the best solution depending on the network's physical parameters, consumer unit's location, external interference, and other factors. Investment in the project will total R\$ 26 million.

One of the main advantages smart meters offer our customers is the possibility of monitoring energy consumption through applications that indicate the days and times when there is greater consumption. With this information, consumers can adapt their daily habits to secure more efficiency and savings. In 2019, we launched a beta version of a tool with this functionality for user tests and evaluations.

For Group A (high voltage) consumers, formed by companies with a high consumption load, remote readings have been a reality since 2016. DisCos in São Paulo state have applied this technology to customers, and in 2020 RGE will also cover its entire concession area. In Rio Grande do Sul, R\$ 32.2 million will be invested in this initiative, and as a result we will have a total

of 6,643 smart meters for Group A consumers in our concession area. In 2019, we swapped out meters for 2,320 customers, and the plan is to complete all replacements by December 2020.

Thanks to remote metering, not only will our customers' relationships to energy consumption be transformed, but so will the entire distribution networks' operation model. The opportunities and possibilities that arise from automation and digitalization of the supply-monitoring and consumption-billing processes will provide greater quality and agility in services, provision of information, loss prevention, and equipment maintenance and intervention models.

We estimate that we will invest R\$ 5.5 billion over ten years to incorporate this model across our concession area. To become a reality, this scenario – which already exists in Europe and the United States – will require regulation updates for the sector and judicious evaluations of return on capital.

Approximately 20,300 new **smart meters** have already been installed in the city of Jaguariúna, in the countryside of São Paulo

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Focus on the customer

Consumers increasingly take the lead when it comes to their relationship to companies that offer products and provide services. As a result of this change, we have placed the customer at the center of our business strategy, and we seek innovations that improve customer interactions with our company, thereby increasing satisfaction with our services.

In this sense, we have invested to improve communication channels to make requests more efficient and agile. In 2019, we created an analytics center for the commercial area to optimize responses at the call center, with cost reductions and efficiency gains. On the DisCos' website, we provide a FAQ with simple answers to frequently asked questions, and created Conta Fácil, which presents simplified graphics and information so customers can have a better understanding of their energy consumption. In three months of operation, Conta Fácil was accessed more than 72,000 times.



Customer service

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Evolution of indicators over the past four years

Customer satisfaction increases when we invest to improve responses to service requests and complaints. Our development of action plans and methodologies for continuous improvement has led to significant achievements on the company's main relationship fronts.



REDUCTIONS

93% in commercial services provided outside the regulatory period

82% in FER – an indicator that measures the number of complaints per thousand customers

69% in the number of consumer complaints

93% in servicing complaints outside the regulatory period

61% in the number of complaints filed with Ombudsman

88% in complaints regarding deadlines

2019 data compared to 2015.

We also made progress in digitalizing tools, boosting self-service options in the smartphone application, DisCos' websites, and the totems available at brick-and-mortar agencies. In addition to making the channels more agile and intuitive, we expanded the range of services that can be requested on them. These initiatives join the digital video service that we launched in 2018, in which customers ask questions and receive guidance from a human attendant on an audio and video platform.

This growth will continue in 2020 as we expand the number of cities served by video service totems. Another initiative we are working on is expanding the use of ChatBot, a new service channel offered on our website since December 2019.

In 2019 we also initiated plans to implement a model agency in the city of Campinas, São Paulo, a municipality in the CPFL Paulista concession area and home to the holding company's headquarters. The agency was designed to offer an even more welcoming and responsive experience to customers needing any kind of service. The new space will have the technological structure needed to support digital services, as well as in-person support from our employees.

2.2 million customers have registered to receive energy bills by email, which generates savings of 3 MWh at printing centers

RGE meter reader



Combating losses

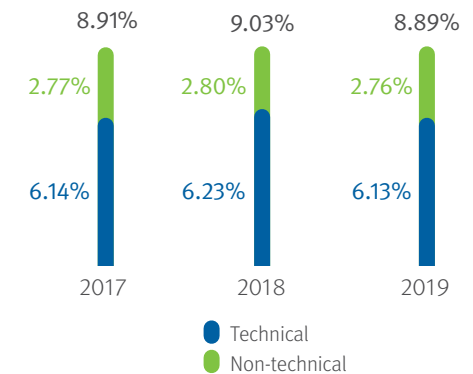
Investment in automation and digital technologies also helps combat total energy losses in our concession area. By using analytics and data-checking tools we have been able to identify frauds more quickly, improving methods for cutting-off service and regulating facilities.

In 2019, even with the country's unfavorable economic scenario and high unemployment rates – conditions that have historically impacted DisCos' losses – we managed to reduce the total index, mitigating the negative effects of the market. In the non-technical losses segment, we focused on developing and implementing new shielding technologies, which will provide greater benefits in 2020.

Our commercial activities also focus on reducing the risk of default, which generates inconveniences for our customers and can cause supply interruptions. We intensified efforts to register customers who qualify for the Social Energy Tariff, a program created by the federal

government to offer low-income families discounts of up to 65% in their energy bills. In the past year, the number of our customers receiving the benefit increased by 44%, covering a total of 366,000 families.

LOSSES IN ENERGY DISTRIBUTION



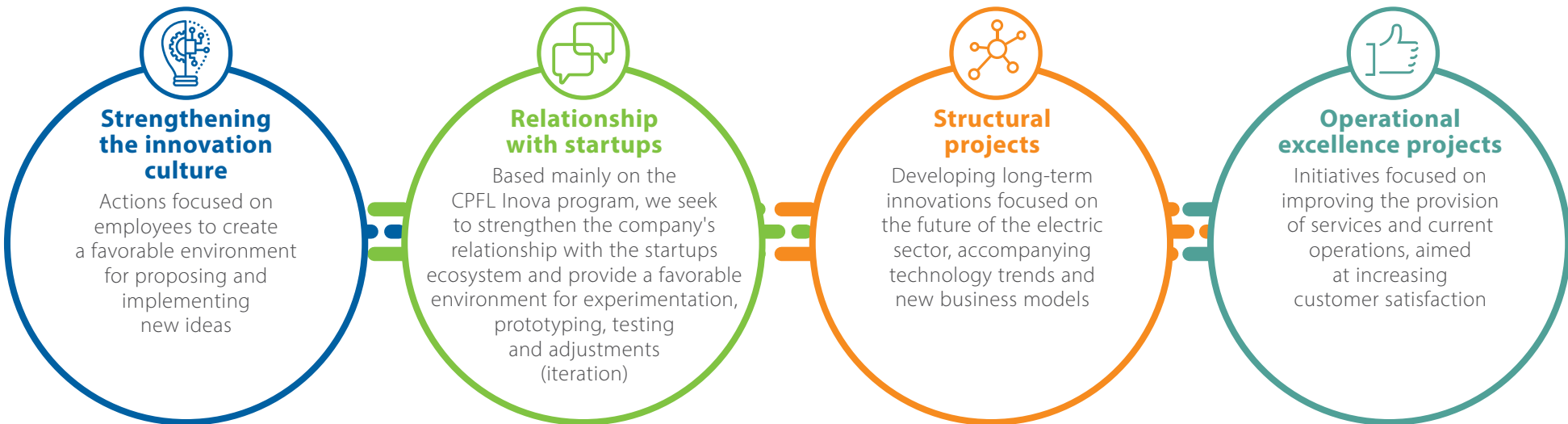
Innovation and growth

Innovation is the lever that boosts our connection to the energy sector's modernization trends, allowing us to anticipate opportunities and create solutions that increase our operational efficiency and customer satisfaction. We believe that innovation culture must be continuously strengthened among our employees through training, proposal of new ideas, and openness to experimentation.



How we develop innovation at our company

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One of our main initiatives is the Trilha de Inovação (“Innovation Trail”), a training and development program led by Universidade CPFL that offers practical tools for collaboration, experimentation, multidisciplinary and empathy, in order to transform employees in multipliers of this culture. In its first edition in 2018, the Trilha trained more than 400 employees in 232 different business areas. In 2019, we expanded the program by training another 300 employees – and the 100% approval rating of trained employees deserves mention.

At the business level, we have an internal innovation-consulting structure that supports different areas in their development of new projects and solutions through recognized and widespread methodologies such as Design Thinking. We also organize Innovation Week every year, an event that includes corporate initiatives and special lectures on the topic for employees.

Another important action directed at our professionals is INLAB, an “ideas program” that seeks to engage them in the development of innovative solutions, thereby fostering intrapreneurship and a collaborative culture at the company. The program is divided into two parts: in the first, via an online platform the employee can input ideas for the challenges that are posted on occasion; then some proposals are selected and the best ones are worked on in-person, with mentors helping prepare a pitch to be presented to the challenge committee. At each stage the employee is rewarded with awards and experiences. During the first three months of the program, 143 suggestions were entered and 6 were selected for implementation.

Our Research & Development (R&D) program, carried out with investments that follow ANEEL criteria, is another front that opens up room for innovation. In this regard, our biggest initiative is the CPFL Inova program, which helps accelerate startups with disruptive projects targeting the electricity sector. In 2019, we carried out the project’s second edition and selected 12 scale-ups for acceleration, all of them connected to issues of energy consumption, operational efficiency, digital transformation and smart cities. More than 490 companies have signed up to participate in the selection process.



Training at Universidade CPFL



In 2019, we invested approximately **R\$ 44 million** in Research and Development (R&D) programs

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During a five-month period, the selected scale-ups were mentored by company executives and guests from the Endeavor network, which promotes entrepreneurship and has connections to some of Brazil's most prominent business leaders. Based on this initial guidance, the selected startups managed to increase their revenue by 49.8% during the acceleration period and generate more jobs, with an increase in the number of employees (from 496 to 605). Overall, the second edition of CPFL Inova generated R\$ 7 million in new business with participants.

One of the biggest opportunities for innovation in our sector is in electric mobility. Advancements in electric engines for commercial and passenger vehicles, in addition to other types of transportation, will require the creation of a more robust, digitalized, and connected energy infrastructure. This vision guided our creation of the Emotive program, an R&D initiative that during a five-year period has evaluated possible business models for battery recharging and customer service. In 2020, our strategic vision will include continued work on the topic. Our Sustainability Plan includes investment of R\$ 45 million in the development of technologies for electric mobility through 2024.

Four projects to develop electric mobility solutions are set to be developed within the scope of item 22/2018 of ANEEL's Strategic Research and Development Project. **Click** on each one to learn more about the objective and stage of development.

Electric Mobility Services Platform

OBJECTIVE

Create a link between the end user and the owner of the charging infrastructure, providing interoperability

Develop a new charging station concept

OBJECTIVE

Identify the optimal solution for integration with the concept of smart cities

Electrification of 100% of CPFL Piratininga's operational fleet in the city of Indaiatuba

OBJECTIVE

Test adequacy of different vehicle models in DisCo's field operations; evaluate a critical adoption scenario; and internalize knowledge for future expansion

"Second Life": reutilization of used electric-vehicle batteries

OBJECTIVE

Reduce the risks related to the electric-vehicle resale market, increasing the potential for adopting the technology; mitigate environmental impacts related to premature disposal; and maximize battery capitalization, the most expensive component of an electric vehicle

A friendly and playful scientist with a not-so-subtle mustache arrived on the scene in 2019: Professor Energia, a character we created for a series of tutorial videos available on social networks and offline media to teach our customers how to use DisCos' digital channels to more easily and quickly request services.

The videos, published on platforms such as YouTube, teach customers how to request a duplicate copy of their electricity bill, alert us to power outages, update the customer name on the account, and various other types of functions. An innovative and fun way to provide our customers with information.

Wearing his distinctive white lab coat, Professor Energia was introduced to the public on July 19 via a teleportation machine set up at Praça Rui Barbosa, one of the busiest places in the city of Campinas, São Paulo. The blue booth provided an interactive way for customers to enter the digital world and learn about the various services that can be requested through the website or via the cell phone app.

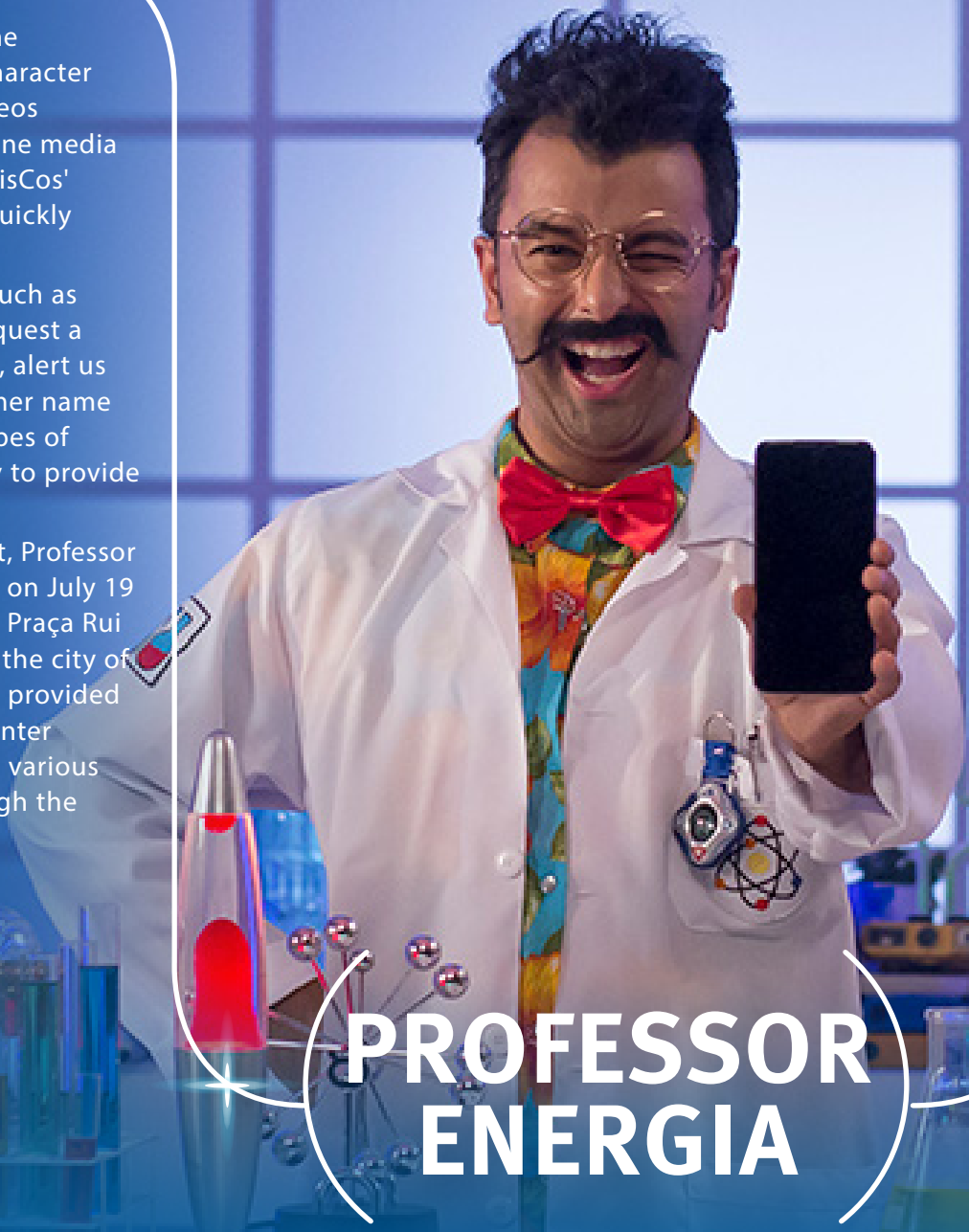
Professor Energia
videos were viewed
more than
780,000
times



**PROFESSOR
ENERGIA**

Click here

to watch the series
of Professor Energia
videos



**SOCIETY SHARED
VALUE**



Society shared value

Our business model generates positive impacts on society and on the value chain that go beyond the safe and reliable supply of renewable electricity. We have a management structure and tools that help maximize the various benefits of safety campaigns to raise people's awareness, engage with our suppliers to adopt good environmental management and compliance practices, and provide social investments.

This value generation is amplified by the educational and professional actions we carry out, helping society interact more safely and harmoniously with electricity. Information allows communities to work proactively to prevent accidents involving the network and that is why safety is also a priority issue in the relationships we establish with our customers and suppliers.

Instituto CPFL is our company's main channel for connecting to these communities, thanks to projects that reinforce our commitment to sustainable development and valuing people. In 2019, by using resources made possible by tax incentives, our private social investment totaled R\$ 39.4 million and allowed us to carry out different initiatives that promote the transformation of local communities.

In addition to Instituto CPFL projects, we positively impact communities through the Raízes Program, developed by CPFL Renováveis in those municipalities located in the generating plants' areas of influence. Started in 2013, Raízes is present in 90 cities in six different states - Ceará, Minas Gerais, Rio Grande do Sul, Rio Grande do Norte, Santa Catarina and São Paulo.



Raízes Program

CPFL nos Hospitais Program

Launched in 2019, the CPFL nos Hospitais (“CPFL in Hospitals”) Program represents the maturation of our strategy to benefit communities and make a positive impact in the locations where we operate. The project integrates energy efficiency initiatives and private social investment to drive improvements in the service provided by public health institutions, which are essential for the local population’s quality of life.

Using resources from the **Energy Efficiency Program**, the initiative provides hospitals with solar panels, reducing these institutions’ energy costs



Photovoltaic system at SOBRAPAR Hospital in Campinas (SP)

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Energy Efficiency Project in a hospital in Campinas (SP)

Using resources from the Energy Efficiency Program, between now and 2022 our four DisCos will allocate a total of R\$ 150 million to benefit around 200 hospitals by installing solar panels and replacing existing lightbulbs with more energy-efficient LED lights, along with other efficient technologies. The expectation is that these actions will allow health institutions to save approximately R\$ 18 million a year by reducing their energy bills, an amount sufficient to pay for the medical care of 75,000 additional patients a year. In the long run, represented by the 20-year lifetime of solar panels, savings from lower energy bills could help provide treatment to more than 1.5 million people. The program also provides environmental benefits from prioritizing renewable energy produced from a solar source.

In the past year, we identified an initial group of 80 hospitals to be benefited by the Program. Other public and philanthropic institutions can also participate, and these will be engaged as investments and results assessments evolve.

The second pillar of the program will be conducted by Instituto CPFL. The goal is to promote humanization and to improve conditions for services, research projects, equipment purchases, and facility repairs.

A third action front for the CPFL nos Hospitais Program will be fortified thanks to the operating model of CPFL Total, a company that allows other services and products to be paid for via energy bills. This will allow communities to donate resources to health institutions using this payment method, a practice that already happens in Rio Grande do Sul and São Paulo, benefitting 94 hospitals through average annual collections of around R\$ 3.7 million.



By 2022 our four DisCos will have allocated a total of **R\$ 150 million**, benefitting close to 200 hospitals


More actions of the Energy Efficiency Program

In 2019, we invested a total of R\$ 72.4 million in the Energy Efficiency Program, which adheres to ANEEL's regulatory guidelines. The projects we developed have saved approximately 40,000 MWh of energy, enough to serve around 17,000 residential customers for one year. This saved volume also represents emissions of 2,248 tons of CO₂, which is equivalent to the planting of 13,400 trees.

Among the projects developed in 2019, UTI Domiciliar ("Home ICUs") stands out. This program was an RGE initiative that donated LED lamps and helped install 55 photovoltaic systems serving low-income consumers who use essential life-saving electrical devices at home to care for critical patients. The reduction in total energy consumption can reach 125.9 MWh and makes it possible for people to maintain these so-called Home ICUs.

Another initiative under the Energy Efficiency Program is the CPFL nas Escolas ("CPFL in Schools") project, which raises student awareness and trains them in the conscientious use of electric energy. More than 1,300 teachers and 40,000 students at 400 educational institutions will benefit from this new phase of the initiative that will be completed in 2020.

We should also mention the efficiency project at the Santa Maria Air Base, where a Photovoltaic System for Power Generation is being installed, along with replacement of conventional fixtures with LED lighting. Altogether, there are three photovoltaic generation systems that add a total of 125 kWp of power, capable of generating 160 MWh/year. We also replaced 6,358 lamps with LED technology lamps.

 **Click here**
to watch a video about the project we carried out in Santa Maria, Rio Grande do Sul



Highlights of the Energy Efficiency Program

- 254,331** lamps replaced
- 1,370** connections regularized
- 107,274** students benefited
- 19** hospitals made more efficient
- 40,000 MWh** saved
- 2,248** tCO₂e avoided



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CPFL NOS HOSPITAIS

R\$ 375,000
invested in the project

15.8 MWh
will be generated each month
on average

Reduced emissions by
14.7 tCO₂e

The energy is
sufficient to guarantee the
monthly supply of up to
79 families*

*Average consumption of 200 kWh/month per household.

"The Hospital de Caridade São Vicente de Paulo is a highly complex medical center, with specialists in oncology, neurology, cardiology and orthopedics. Our medical services are essential for a population of almost 900,000 people in the city of Jundiaí, in the interior São Paulo, and neighboring municipalities. In 2019, we registered with the CPFL nos Hospitais Program and were one of the first health institutions to be benefitted by the project. A team of specialized technicians from CPFL Energia visited the hospital and developed a project to install 396 solar panels, making maximum use of the roof area. The panels cover almost a thousand square meters – and we didn't pay anything for them.

The assembly of the equipment was very well executed. As a health institution, we were concerned with the safety of people who were going to work at elevated heights that pose a risk of falling, but we saw that all safety standards were followed. Our hope is that the energy generated by solar panels will result in savings of around R\$ 140,000 a year in our electricity bill. This money will be invested in other priority areas to serve the population. Especially in 2020, with the arrival of the coronavirus in Brazil and the growth of confirmed cases, these financial resources will be very important for our work."

Alexandre Mezei,
*advisor to the Superintendent of the Hospital
de Caridade São Vicente de Paulo*



**NOVO HOSPITAL
SÃO VICENTE**
HOSPITAL DE CARIDADE SÃO VICENTE DE PAULO

Safety first of all

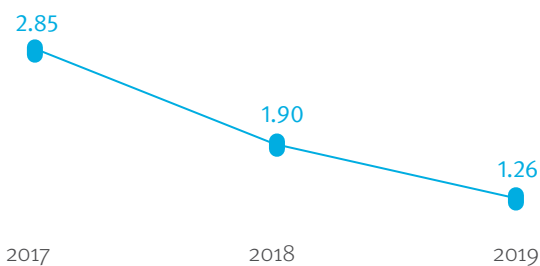
The safety of our employees, outsourced parties, and the population whenever they interact with the power grid is an absolute priority for our company. The Primeiro as Pessoas (“People First”) Program covers a series of steps we take to raise employee awareness and ensure that safety procedures are followed in all operations, with the goal of minimizing the risk of accidents and making our work environment healthier and more productive.

Another initiative worth mentioning is the Vida 100% (“100% Life”) Project, which uses a collaborative methodology to discuss and disseminate the culture of safety during interactions between leaders and their teams. In the conversation circles, the goal is to involve and engage employees, CIPA (internal accident prevention committee) members, health and safety teams, leaders, managers and executives with the objective of zeroing accidents through everyone’s proactivity and leadership, to be 100% in favor of life, as well as working towards the continuous improvement of processes, organizational climate and integration between areas. Based on these observations, the units develop an action plan and monitor its implementation.



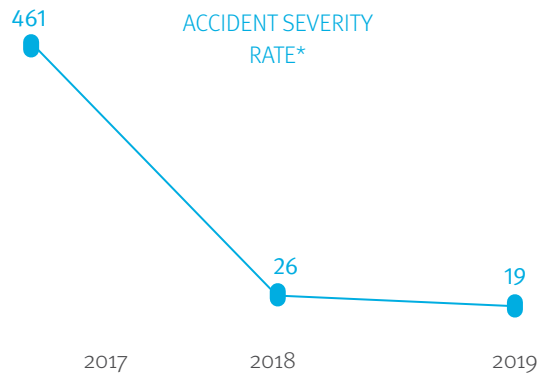
Operation in substation at Campinas (SP)

FREQUENCY RATE OF ACCIDENTS WITH LEAVE*



*Includes employees only. Calculated based on the number of accidents with leave per every 1 million man-hours of exposure to risk.

ACCIDENT SEVERITY RATE*



*Includes employees only. Calculated based on the number of leave days for accidents per every 1 million man-hours of exposure to risk.

The Vida 100% project was carried out at seven units and led to positive results in accident reduction. Our goal for 2020 is to cover all businesses with this methodology and also to share it with our service providers.

In addition, we continued campaigns and practices that reinforce the safety culture at our company. These include the Internal Workplace Accident Prevention Week (SIPAT) and the Safety Dialogues, held daily with the operational areas and weekly with the administrative areas. Combined, these efforts contributed to the 34% and 27% reduction in the frequency and severity rates of employee accidents, respectively. Altogether, there were 41 accidents involving our staff, compared to 60 the previous year.

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Public campaigns

The **Guardião da Vida** (“Guardian of Life”) Program also invests in information and awareness campaigns aimed at the general population, with the objective of preventing accidents involving the electricity grid in all 687 municipalities in our concession area. In 2019, we allocated R\$ 3.5 million to this project.

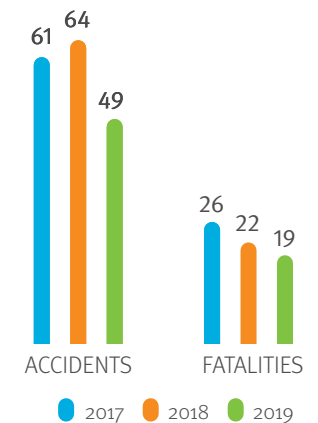
These resources allowed us to structure a communication model to provide information and awareness to the population through real testimonials from people who know about electrical risks and take preventive actions. This material’s publication was carried out via digital media and other channels, reinforcing the care that must be taken by children, when performing construction and painting tasks, and about the risk of clandestine connections, among other day-to-day situations.

The campaign also has a website (guardiaodavida.com.br) with useful information for the population. The goal is to turn every person into a Guardian of Life.

Engagement with the public also happens through quick campaigns in the municipalities where the population suffered the highest accident rates. In these campaigns we visited construction sites and building materials stores, providing important information to raise awareness among construction professionals, the group most exposed to the electricity grid and its risks.

In 2019, we reduced accidents by 23% and fatalities by 14% as a result of our actions and investments. Of these accidents, 42 were classified as mild and 7 as serious. However, we will continue to invest all the resources we have available to provide greater awareness and security.

SAFETY INDICATORS FOR THE POPULATION



Supplier management

We are committed to generating positive impacts throughout our value chain, and we therefore work to train and engage our suppliers. In all our interactions with this group we seek to disseminate and support the adoption of good practices related to management and operation, in harmony with transformations in the electricity sector and the economic, social, and environmental trends going forward.

We have developed a structured model to assess and monitor our suppliers' performance. Starting with the process of registering suppliers on our database, we evaluate companies' financial aspects, technical performance, security, legal and documentary compliance, as well as their ethical alignment with our values.

When suppliers are hired, we assess whether they are highly critical to operations or if they offer reputational risks for the company. Companies that fall under these conditions are classified as strategic and are included in our performance-qualification platform - Supply Base Management (SBM). With this tool we can monitor companies' operational performance monthly across six main criteria - technical, documentary, legal, security, financial, and ethical. Based on this analysis we come up with an evaluation grade, which directs partners to develop improvement plans and also supports future selection and hiring processes.

Logistics operation

In 2019, we began execution on a plan to transform our logistical operational design to supply distribution centers and advanced stations. These structures ensure the supply of critical materials and equipment to DisCos in the states of São Paulo and Rio Grande do Sul. The change incorporates a series of technologies and best practices in our value chain that increase productivity and provide greater security, with increased storage capacity and improved service.



Wind farms

One highlight of our supplier management strategy concerns the Gameleira Wind Complex, which is being built by CPFL Renováveis in Rio Grande do Norte. The project includes the installation of the largest wind turbines ever (in terms of size and power) in our operations. The contracting strategy – based on building solid partnerships with suppliers – allowed us to overcome logistical challenges, maximizing actions and investments in favor of sustainable development.



Innovation

In 2019, we prioritized several innovation initiatives in the supply chain, with improved management – based on sanitizing the database – and investment in data analytics, automation, and artificial intelligence, seeking not only to reduce costs but also to boost operational efficiency and flexibility in our processes, with a focus on the best customer and partner experience and on increasing the level of service. We have formed partnerships with suppliers to develop new projects, such as startups, universities, innovation, technology, and R&D institutes.



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In 2019, we evaluated a total of 256 partners on SBM. These companies, responsible for providing essential materials and services for different businesses' value chains, are classified as critical or strategic. Within this universe, we monitor the performance of 161 suppliers (63% of the total) based on social and environmental criteria, with different assessment requirements and methodologies to deal with the risks identified in each type of market. Monitoring mechanisms include annual visits to the facilities to check up on certain aspects of working conditions, respect for the environment, and social responsibility.

These risks are mapped based on a self-assessment report filled out by new suppliers during the approval phase, discussing issues related to environmental management, social responsibility, health, safety, and quality - topics covered in our Integrated Management System (IMS). Starting in 2020 the SBM will begin monitoring suppliers classified as strategic among the 1,371 suppliers that serve CPFL Renováveis' operations.



We monitor the suppliers **considered critical and strategic** to the business through self-assessment reports, document checks, and visits to these partners' facilities

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The **Mais Valor Network** is the main platform for engaging our suppliers, with meetings to exchange experiences and an annual award

In terms of work conditions for outsourced workers, we periodically check up on our partners. One highlight of this work is the Third-Party Documentation Management Cell, which verifies documents and labor records in order to ensure these contracts comply with the legislation and rules applicable to the sector. We also carry out field inspections with safety auditors to assess the situation of workers who support us in carrying out operational activities. In 2019, we evaluated the conditions of about 8,500 service providers – covered by 220 contracts signed with 97 different suppliers.

In addition to monitoring and evaluation, we offer suppliers with training opportunities. The main platform for this is the Rede de Valor (“Value Network”), which allows contracted companies to exchange experiences and best practices. We held three meetings in 2019, with the participation of 82 partners, to discuss issues such as quality, safety, sustainability, future scenarios, and new businesses. One practical outcome of these

discussions was the creation of a training program about corporate greenhouse-gas emissions (GHG) inventories for these companies.

Every year we recognize suppliers who have achieved significant advances and positive results with the CPFL Mais Valor (“More Value”) Prize. Last year, we held the tenth edition of this event, with the theme “Workforce management in the face of challenges and transformations,” with a focus on initiatives that seek to reduce the deficit of skilled labor in the electric sector.

The award-winning companies are selected by an internal committee that evaluates criteria such as job security, excellence in service, quality, deadlines, sustainability, and social responsibility. Of the 27 finalist companies, 12 were recognized in four categories - services, materials, recognition, and highlights. The winners participated in a ceremony in Campinas and received a trophy, a certificate, and a seal representing this achievement.



Ethics and integrity in the value chain

Through specific anti-corruption clauses in our contracts, we disseminate our Integrity Program to all suppliers. We also formally require our partners to adhere to the terms and conditions of our Code of Ethical Conduct or, alternatively, to ratify their compliance with similar documents specific to our suppliers – as long as they are in line with the basic principles of our corporate guidelines. Learn more about our Integrity Program on page 96.

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Instituto CPFL

Thanks to private social investment we bring our company closer to local communities and support social development through initiatives that foster knowledge, sports, and culture. These activities are directed by the Instituto CPFL, which centralizes the planning and execution of our actions, in line with our Social Investment Policy.

Key figures

121 cities

9 states

320,000 people reached

391 activities carried out

R\$ 39.4 million invested

CPFL Circuit

233 activities were carried out in 101 municipalities, reaching more than 79,000 people through sports and cultural activities

Social Transformation

20 Municipal Councils for the Rights of Children and Adolescents and the Elderly and 6 public hospitals received support, impacting 195,000 people

Café Filosófico CPFL

33 programs, with 5,300 spectators in our studios and 830,000 people watching the live transmissions on Instituto CPFL's social networks

Sports

240 athletes supported through the Vanderlei Cordeiro de Lima Institute (IVCL/Orcampi)

Volunteer Program

1,300 employees engaged

Presentation by the China Conservatory General Orchestra



Culture

Three free artistic exhibits in Campinas and Botucatu (SP), and cinema and music programming in Campinas, with a total audience of more than 31,000 people

Chinese Culture Month

18,500 people reached with the special programming of the event's 3rd edition

Social Transformation

One of the main objectives of our social development program, coordinated by Instituto CPFL, is to promote the sustainable development of communities through actions that contribute to the improvement of public policies and that encourage inclusion, social leadership and networking, training and legitimizing every actor to face social challenges.

In 2019, 20 rights councils and six public hospitals were supported, with projects targeting the most vulnerable segments of the population - children, adolescents and the elderly - directly impacting 44 municipalities and reaching 84 indirectly. Altogether, 195,000 people were benefited.

Our work focuses on strengthening the Municipal Councils for the Rights of Children and Adolescents, through networking with the different actors involved, training sessions, the development of social diagnoses, and the implementation of action plans and projects aimed at reducing the index of social vulnerability.

We also work with Municipal Councils for the Rights of the Elderly, based on the World Health Organization's (WHO) concept of active aging by promoting quality of life to senior citizens through the Cidade para Todas as Idades ("City for All Ages") project. In 2019, we worked with four municipalities, benefiting two hospitals (Barretos and Veranópolis – SP) and two long-term institutions (Montenegro – RS).

We understand that another lever for social transformation is young people's inclusion through sport. For this reason, in 2019 we reinforced our work of supporting the Vanderlei Cordeiro de Lima Institute's



(IVCL/Orcampi) training of more than 240 young athletes in the Campinas region through specialized training, psychological guidance, and medical and educational support. In addition to offering an opportunity for personal and sports development, this project creates an important socialization space to reduce these children and adolescents' social vulnerability.

Looking to the Pan American Games in Lima (2019) and the Tokyo Olympics (2020), the focus of the work during the year was on supporting high-performance athletics. The results were very good: in Peru, IVCL/Orcampi athletes won three medals, and seven of them managed to pre-qualify for the Olympic competition in Japan during the Doha Athletics World Championship.

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10 REDUCED INEQUALITIES



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Every year, the Semear Program brings volunteers from the CPFL Group together to work on actions that benefit schools, social assistance institutions, and other entities that make a difference in the life of local communities.

Coordinated by Instituto CPFL, the Semear Program organizes employees, relatives and friends into teams that work on various activities that have a positive impact. This group helps plant community gardens, build computer labs, provide art, dance, and music classes, organize theater workshops, and many other actions.

In this endeavor, protagonism is the keyword. Each team consists of up to 15 employees, who are also responsible for selecting the social organizations where they wish to volunteer. A great union to transform the social reality of the communities where our company is present.

Our employees can be:

Supportive

Participate with donations in fundraising campaigns

Volunteers

Donate their time, talents and knowledge to specific or continuous actions at the selected entities

Social protagonists

Work on social projects that can affect public policies to transform social reality

VOLUNTEERING

Semear in 2019

1,379 volunteers registered

10 fixed and 5 part-time teams were formed

15 municipalities were impacted by volunteer actions

5,500 beneficiaries, including schools, NGOs, hospitals and other entities



Click here

to learn more about the Semear Program



CPFL Circuit

SDG



CPFL Circuit is an itinerant cultural and sports project developed by Instituto CPFL to benefit and positively impact the communities in our concession area. In 2019, 230 CPFL Circuit activities were organized at 101 municipalities throughout Brazil, reaching more than 79,000 people.



One initiative within this program that has a significant social impact is Carreta Literária, a mobile library that circulates around the city, providing access to books and encouraging reading habits among young people. Six cities were directly impacted by the project, which benefited 100 schools and around 28,900 people.



Another important activity within the scope of CPFL Circuit is CineSolar, a mobile movie theater powered by solar energy. Using vans equipped with photovoltaic panels, the project brings cinema to locations that wouldn't otherwise have places to show movies, thus helping democratize access to cinema and forming an audience for this kind of art.



In addition to showing movies, we carry out activities to expand discussions around sustainability and to encourage these communities' audiovisual production. At the same time, we work to raise public awareness about the potential of renewable energy through activities such as Oficinema Solar, where we playfully show how sunlight is transformed into electrical energy. In 2019, CineSolar vans visited 78 cities, bringing movies and information about clean energy to more than 18,200 people.



CPFL Circuit also promotes sports activities, such as the Running and Walking project, which organized runs and walks in 16 cities in 2019, encouraging more than 28,400 people to engage in physical activities.



Cine Solar in Morro Reuter (RS)

CPFL Circuit also organized contemporary music concerts in six cities in the state of São Paulo, bringing together **3,600 people**

Democratizing art and culture

One relevant aspect of Instituto CPFL activities is the diffusion of art, facilitating the population's access to artistic performances and works. We offer the public access to movies through initiatives such as Cine CPFL, which shows Brazilian and foreign movies free of charge at Sala Umuarama in Instituto CPFL headquarters.

Rodin Exhibit at the Instituto CPFL Art Gallery in Campinas (SP)



Another initiative is our institutional support for the 43rd São Paulo International Film Festival and the 14th Latin American Film Festival of São Paulo, with some movies playing for free at Sala Umuarama. We held 64 film sessions, 8 debates and 2 international film exhibitions in 2019.

Music is also included in our work of artistic diffusion. Since 2013, we have been partners in the production of the Brazilian Contemporary Music Festival. We also held 10 free contemporary music concerts in 2019, which were recorded and then broadcast by Rádio Cultura FM in the state of São Paulo.

Visual arts exhibitions promoted by Instituto CPFL also seek to give the public closer access to works of art. We held two main exhibitions in 2019, which included 550 educational tours by public schools and the general public. The first, "Figura e Modernidade," brought works by the French sculptor Auguste Rodin in the collection of the Pinacoteca de São Paulo to the cities of Campinas and Botucatu. The second, "Tinta sobre Tinta," presented pieces by artists such as Flávio de Carvalho, Iberê Camargo and Tomie Ohtake from the São Paulo Museum of Modern Art (MAM-SP) collection. Altogether, these cinema, music and art events brought together more than 31,000 people.

Another initiative was the third edition of the Chinese Culture Month, with the aim of expanding cultural exchanges between Brazil and China through actions such as special debates at Café Filosófico CPFL, Cine CPFL sessions, and musical performances open to the public. About 18,500 people were reached, with 28 activities in nine cities.

SDG

4 QUALITY EDUCATION



10 REDUCED INEQUALITIES



17 PARTNERSHIPS FOR THE GOALS



Café Filosófico CPFL

One of the most relevant and publicly recognized initiatives of the Instituto CPFL in the area of culture is the Café Filosófico CPFL. Created in 2003, this project organizes a series of debates on relevant and exciting contemporary topics, hosting experts and renowned figures from Brazil and across the world.

We invite special speakers to discuss topics relevant to today's society, **engaging diverse audiences** through TV and social media broadcasts

Café Filosófico Special in Santos (SP)



In 2019, Café Filosófico CPFL discussed topics such as childhood and maturity in the contemporary world, the ethical challenges of politics, individual and social identities, and spirituality and religion, to name just a few. Featured speakers included Fernando Henrique Cardoso, Leandro Karnal, Viviane Mosé and Mario Sergio Cortella. In September, during the Chinese Culture Month at CPFL Energia, we organized two debates on the construction of modern China's image, focusing on the economic and technological transformations that have taken place in that country in recent decades.

In all, we recorded 33 shows, with a total of 5,300 spectators in the studios and more than 830,000 people watching live transmissions through Instituto CPFL's social networks. On our YouTube channel, in which we also publish "bite-size" segments of the debates and exclusive videos, we registered more than 7.5 million views. Through TV Cultura, which broadcasts recordings of these gatherings, we reached more than 12 million viewers.

Our presence on social networks is also an important tool for our activities, and we share audiovisual content produced by the Instituto CPFL on our Facebook, Twitter, Instagram and LinkedIn channels. In addition to encouraging public discussion, these initiatives strengthen the CPFL brand among different audiences across Brazil.

SDG

4 QUALITY EDUCATION



11 SUSTAINABLE CITIES AND COMMUNITIES



17 PARTNERSHIPS FOR THE GOALS



Raízes Program

Developed by CPFL Renováveis in the generating plants' areas of influence, the Raízes Program was recognized as one of the most comprehensive models for the inclusion and promotion of sustainable development in the electricity sector. Operating since 2013, Raízes has invested approximately R\$ 16 million in projects covering three thematic lines - water security, commitment to future generations, and production chains.

One highlight of the Raízes methodology is the Participatory Preliminary Diagnosis, which allows us to identify the main social needs and guide investments according to the potential to make the greatest positive impact. This process allowed CPFL Renováveis to see that the issue of access to water was one of the main challenges in the development of communities.

Based on this diagnosis, the company sought out partners to put actions in place to transform the local reality. Between 2016 and 2019, we helped install cisterns and water desalination equipment using energy supplied by photovoltaic panels, assisted in creating irrigation systems for subsistence plantations and productive development, and developed methodologies for collaborative and collective management of water supply structures at the community level, among other benefits that represent a permanent legacy for generations to come.



Raízes Program



Structured along three thematic lines, the CPFL Renováveis initiative has **allocated R\$ 16 million** since 2013 to projects that local communities helped prioritize

SDG

1 NO POVERTY



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



6 CLEAN WATER AND SANITATION



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



17 PARTNERSHIPS FOR THE GOALS





OUR ENABLERS

CPFL Energia employees

Our enablers

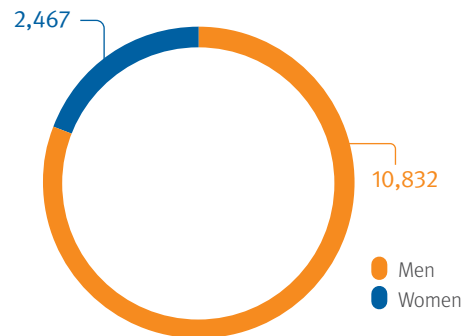
The development of our businesses and all the activities we carry out are based on three key facilitators: Employee Development and Inclusion; Ethics; and Transparency. We believe that qualified and prepared employees, a robust ethics and integrity system, and a corporate culture of inclusion and diversity are essential to achieving the economic, social, and environmental results that generate value for our shareholders and for all of society.

People development

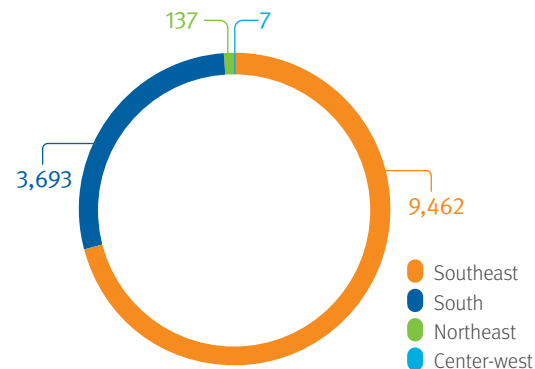
Our employees are protagonists in the construction and implementation of a more sustainable business model, generating positive impacts on society and customer satisfaction. That is why we invest in training and in strengthening a culture based on our corporate values. In 2019, we restructured our leadership-development model, in line with our vision, mission, and values and focused on essential competencies for growing our business towards the horizons established in our strategy.



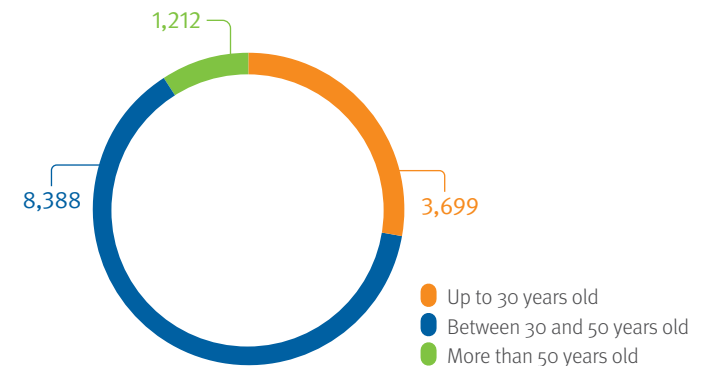
EMPLOYEES BY GENDER



EMPLOYEES BY REGION



EMPLOYEES BY AGE GROUP



SDG

4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



To complement this aim, we optimized our employee-performance analysis model, in line with the changes made regarding leadership. This assessment considers aspects of behaviors, goals, and potential, in consideration of the different functional levels and areas of expertise.

Evaluations are discussed in calibration committees that provide leaders with comments from peers, superiors and subordinates before presenting the final result to evaluated employees in individual meetings. Based on this feedback, an Individual Development Plan (PDI) is defined to address possible changes and improvements, as well as celebrate outstanding behaviors. At these meetings, goals and priorities for the coming cycle are also established.

The process of evaluating CPFL Renováveis employee performance is currently being integrated with that of parent company CPFL Energia. In 2019, the eligibility criteria and timetable adopted were already the same - beginning in December and wrapping up in March 2020. Another instance of synergy was the adoption of a similar methodology and process for coordinators, managers, superintendents and directors.

Our training sessions and performance-analysis model strengthen CPFL Energia's **culture and values**

PERCENTAGE OF EMPLOYEES THAT UNDERWENT PERFORMANCE EVALUATION

	CPFL Energia CPFL Renováveis Consolidated				
	2017	2018	2019*		
By gender					
Men	69%	76%	93%	87%	92%
Women	75%	82%	87%	87%	87%
By job level					
Leadership**	22%	64%	90%	87%	90%
Other employees	73%	73%	91%	87%	91%
Total	70%	77%	91%	87%	91%

*Quantitative data refer to the 2018/2019 cycle, as the current cycle is still in progress and will be completed in March 2020. Historical data (2017 and 2018) do not include CPFL Renováveis.

**Includes directors, managers, coordinators, supervisors and leaders.



CPFL Employee

Continuing professional education

Universidade CPFL is responsible for structuring and executing programs, courses and learning tracks aimed at training and developing our professionals. This structure grants our employees access to a wide range of training programs and incentives targeting professional development, in line with company priorities and with trends in the electricity sector.

One of the most important tools developed by Universidade CPFL is the Learning Track, organized via modules giving employees a systemic view of the company's key processes, such as project and construction development, energy management, and so on. Launched in 2018, the various Learning Tracks have already impacted our professionals' achievements

and performance: we managed to reduce our absenteeism rate to 5.5% – far below the average of 13% observed in the overall market – thanks to our high level of employee satisfaction.

In 2019, we invested approximately R\$ 18 million in continuing education initiatives, of which R\$ 1.7 million was allocated to revising and creating new programs, courses, and learning tracks. Among the innovations, we highlight the "Explore Energy" virtual training series, which presents and explains the main aspects and processes of the Brazilian electricity sector, and "Explore CPFL," which didactically lays out the company's business.

717,800 hours of training at Universidade CPFL and another **14,700 hours** at CPFL Renováveis

More than 1,100 classes in Regulatory Standards technical training

AVERAGE HOURS OF TRAINING PER EMPLOYEE*

	CPFL Energia		CPFL Renováveis	Consolidated	
	2017	2018	2019		
By gender					
Men	74.3	57.6	55.2	34.1	54.5
Women	80.2	46.1	58.9	26.3	57.8
By job level					
Leadership**	21.7	55.9	63.7	45.5	61.9
Other employees	na	54.8	55.4	30.0	54.6
Total	79.8	54.9	55.8	32.7	55.1

*Historical data (2017 and 2018) does not include CPFL Renováveis.

**Includes directors, managers, coordinators, supervisors and leaders.

Leadership development

In 2019, we kicked off the second edition of our leadership mentoring program, which seeks to accelerate skills development, strengthen leadership in career management, and create good knowledge-management practices through intellectual capital. This involves an orientation process where more senior professionals in the company act as mentors to the executives in the program. Since the initiative's creation, 113 leaders have benefited - as mentors or mentees.

We also rely on the individual coaching process, available to managers and executives who want to develop the full potential of their competencies. The process is conducted by a coach, hired from recognized and specialized consultancies, who works with "coachees" (the ones undergoing this process) and their immediate manager.

SDG

4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



Benefits and workplace environment

Seeking greater equity in benefits across the Group's companies, we have implemented group life insurance policies and access for 100% of our employees to physical activity programs in partnering gyms. In addition, we created a single private pension plan for new hires at DisCos CPFL Paulista and CPFL Piratininga, in addition to CPFL Brasil and CPFL Geração.

In terms of human resources management, we started to implement a data-analytics system that facilitates managers' monitoring of issues such as overtime and per diems, streamlining internal processes within the teams. An important highlight of 2019 in this area was the creation of CPFL Pessoas – the result of spinning off NECT – which focuses on personnel and human resources management for all companies under the holding company.

Our employees' involvement and engagement is also a constant concern. In 2019, we reinforced the use of MultiApp, a smartphone application that gives access to a range of relevant information, such as new policies, internal processes, and awards.

One engagement initiative implemented in 2019 was the CPFL Atitude Program, in which employees are invited to share stories of colleagues who acted in line with corporate values. The most representative cases from nearly 600 submissions were formally recognized by the Executive Board.



CPFL employee in Campinas (SP)

The **CPFL Atitude Program** recognizes initiatives by our employees that are aligned with our corporate values

SDG

3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



Another effort we made in the context of improving the work environment was to raise awareness about occupational health. We also carried out information campaigns on issues such as breast cancer (Pink October) and prostate cancer (Blue November), with weekly publications on internal channels, conversations with medical specialists, and publicizing videos with prevention and early diagnosis tips. Employees were asked to donate scarves and caps that the company delivered to patients undergoing cancer treatment (which can cause temporary hair loss). We also organized blood and marrow donation campaigns, with informative displays and events at our offices in Campinas (SP) and São Leopoldo (RS).

The results of this work are being felt inside and outside the organization. In 2019, we carried out a new organizational climate survey to assess engagement and satisfaction with the work environment, which indicated that 78% of employees are satisfied with the conditions provided by CPFL Energia.

We were also recognized as one of the “150 Best Companies to Work For,” a ranking carried out in Brazil by *Você S/A* magazine to identify companies that stand out in people management and good organizational climate. In the electricity sector we ranked first among the largest companies in the sector.

The benefits we offer employees follow best market practices, helping attract new talents and to fulfill all legal requirements and applicable union agreements or conventions. The diversity of businesses in which we operate, both geographically and in terms of markets, requires us to diversify benefits to attend to local realities. Globally, we offer internal staff (although not necessarily at all companies) medical and dental assistance, private pension plans, food, meal and transportation vouchers, life insurance, various benefits, physical-activity incentive programs, psychosocial assistance, and educational subsidies.



CPFL Energia was recognized in the "150 Best Companies to Work For" ranking as the leader in the energy sector



RGE employees in São Leopoldo (RS)

Inclusion

The promotion of diversity has guided our actions when managing the company's human capital, and we have increasingly intensified our efforts to ensure a more inclusive environment for our employees. In 2019, for example, we carried out a "blind recruitment" pilot project for interns. The objective was to test out tools that allow a more objective selection process, minimizing any impacts from hiring leaders' unconscious bias.



Employee at
Universidade CPFL

Strengthening actions to **promote people's inclusion** and development in the workplace is one of our priorities

We also plan to strengthen these discussions by creating working groups to implement and monitor actions for the inclusion and development of people with disabilities (PWD) and the issues of gender and culture. A project of this kind is also being developed at the Technical Training Schools, which promote women's professional training and inclusion in the Brazilian electricity sector.

In 2019, we held two internal workshops with employees to discuss ideas related to attracting PWD to our company. The events, held in the cities of Campinas, São Paulo, and São Leopoldo, Rio Grande do Sul, had 42 participants and generated almost 300 ideas related to aspects of leadership awareness, improvements in accessibility, communication, and recruitment and selection, among others.

We also carried out benchmarking studies with large companies that have been recognized for adopting good inclusion and diversity practices. We participated in events that discuss this theme in our concession areas and held meetings with external partners to increase innovations in this issue to our business model. These actions will continue in 2020, including specific training on leadership diversity, formation of affinity groups, and other initiatives.

SDG



816

people trained
in three lines:

- Electricians School
- Designers School
- Operators School

CPFL employees

Professional education for the community

The School of Operational Excellence, which is managed by Universidade CPFL, is responsible for training employees in operational methods and standards of the transmission and distribution segments. This structure extends beyond our employees and benefits communities in the regions where we operate by offering professional training courses. We offer three lines aimed at local communities: the Electricians School, the Operators School, and the Designers School. Each of these works to disseminate technical information and develop skills among people who are not employed at CPFL Energia companies, enabling them to pursue a professional career in the electricity sector.

In 2019, we organized 46 class groups at the Electricians School (77% more than in the previous year), with more than 19,000 hours of training offered. In total, 765 residents of cities in our concession areas were trained, and approximately 70% of them were hired. The Operators School, a pioneering initiative in Brazil launched in 2019, trains professionals to work at the DisCos' control centers. The first edition trained 24 students, who graduated after 592 hours of training – and 3 people have already been hired. The Designers School, meanwhile, trains technicians to create and analyze electrical distribution network projects in accordance with CPFL Energia rules and procedures. The course held in the state of São Paulo trained 27 students, providing 372 hours of coursework, and allowed 16 people to join our teams.

SDG

4
QUALITY
EDUCATION



8
DECENT WORK AND
ECONOMIC GROWTH



10
REDUCED
INEQUALITIES



Ethics and transparency

In order to generate positive impacts with our employees and business development, we base our actions on ethical and transparent conduct when building relationships with all our stakeholders. Our Integrity Program has pillars and mechanisms to ensure that compliance covers all sensitive and critical areas of operations and allows us to develop action plans to improve internal controls and anti-corruption practices.

The Integrity Program was developed in accordance with Law No. 12,846/2013 (Anticorruption Law) and with Article 42 of Decree No. 8,420/15, which regulated said legislation. Its execution is guided by our **Code of Ethical Conduct**, which formalizes the behaviors expected from our employees and suppliers, and by the **Anti-Corruption Policy**, which seeks to establish principles for controlling and fighting corruption.

These premises are disseminated to our professionals through continuous training programs (with in-person and online formats) and communication and awareness activities (events, lectures and campaigns). Training around this topic is done in person for those audiences considered critical following an assessment of compliance risks, and on an online platform that is available to all employees. All professionals and members of governance are introduced to the Code of Ethical Conduct at the time of their admission and electronically sign their commitment to follow the guidelines set out in the document. In 2019, we included ethics and integrity issues in outsourced contractors' integration training programs.



CPFL ENERGIA EMPLOYEES TRAINED IN ANTI-CORRUPTION GUIDELINES*						
	Employees trained	Percentage of total	Employees trained	Percentage of total	Employees trained	Percentage of total
	2017		2018		2019	
By job level						
Leadership**	529	64%	661	87%	683	97%
All other employees	7,467	62%	8,842	72%	9,609	79%
By region						
Southeast	6,419	72%	7,016	76%	7,230	78%
South	1,577	39%	2,487	66%	3,062	84%
Total	7,996	62%	9,503	73%	10,292	80%

* Does not include CPFL Renováveis employees. At that company, 100% of employees were trained in anti-corruption directives in 2019.

** Includes directors, managers, coordinators, supervisors and leaders.



We created the Ethics Channel so that anyone can notify us of behaviors or situations that are in conflict with the law or with our values. These alerts are treated in accordance with the flow defined by the Integrity Program, ensuring whistleblowers' anonymity and confidentiality. CPFL Renováveis has a specific channel, the Complaints Portal, managed by the same specialized company responsible for managing the holding company's platform.

Accusations can be made 24 hours a day, every day of the week. Instances are reviewed by a specialized team, which includes lawyers and psychologists who can properly direct and understand the accusations. Upon registration of an occurrence, the channel's user receives a protocol number to monitor the case until its conclusion.

Our Integrity Program obtained the **Pró-Ética** program seal for the 2018/2019 edition, which is developed by Brazil's Federal Comptroller General. The seal recognizes companies that take outstanding actions to combat corruption and fraud in their business environments



CPFL employees in Campinas (SP)

Ética Viva Program

The Ética Viva ("Living Ethics") Program at CPFL Renováveis continued in 2019, bringing together activities that seek to disseminate the culture of ethics and compliance among all employees. Among our initiatives, we highlight the annual survey of all employees to identify corporate and unique aspects of leadership in topics related to the development of ethical conduct at the company. As of August 2019, thanks to CPFL Renováveis's integration into the holding company, these initiatives were incorporated into CPFL Energia's Integrity Program.

SDG



OUR RESULTS



7.



CPFL employees in Jaguariúna (SP)

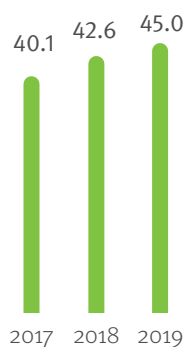
Our results

Our financial results in 2019 exceeded the record-setting performance of 2018, driven mainly by the DisCos – due to market performance, tariff revisions and readjustments that took place throughout 2018 and 2019, and lower interest rates. In conventional generation, contract readjustments and lower financial expenses led to an improvement in net income. In renewable generation, the negative impacts from lower incidence of winds were offset by lower expenses with the Generation Scaling Factor (GSF), our strategy of seasonally adjusted contracting, and reductions in the cost of debt.

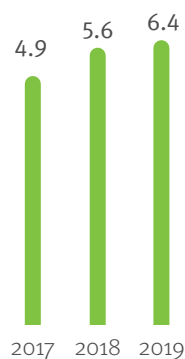
In 2019, the company's net profit **grew 26.9%** compared to the previous year



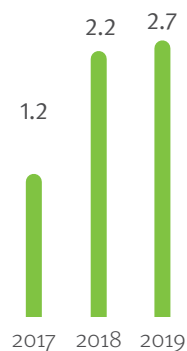
GROSS OPERATING REVENUE
(R\$ billion)



EBITDA
(R\$ billion)



NET PROFIT
(R\$ billion)



INCOME STATEMENT FOR THE FISCAL YEAR SUMMARY – CPFL ENERGIA (R\$ million)

	2017	2018	2019
Gross operating revenue	40,053	42,626	45,009
Net operating revenue	26,745	28,137	29,932
Cost of electricity	(16,902)	(17,838)	(18,371)
Operating costs and expenses	(6,822)	(6,509)	(7,198)
Result of services	3,022	3,708	4,363
Ebitda	4,864	5,637	6,394
Financial result	(1,488)	(1,103)	(726)
Profit before tax	1,847	2,940	3,986
Net profit	1,243	2,166	2,748

Main indicators

Operating revenue

↑ **5.6%**

2018 R\$ 42,626 million

2019 R\$ 45,009 million

Main factors

Tariff revisions and readjustments in Distribution, market growth and readjustments in energy sales contracts in the Generation and Renewables segments

Cost of electricity

↑ **3.0%**

2018 R\$ 17,838 million

2019 R\$ 18,371 million

Main factors

Increase in the amount of energy purchased, effects of exchange-rate variation on the price of energy from Itaipu, and increase in sectorial charges

Operating costs and expenses

↑ **9.2%**

2018 R\$ 6,590 million

2019 R\$ 7,198 million

Main factors

The most significant increase occurred in infrastructure building costs, which has a similar counterpart in operating revenue. In addition, there were increases due to higher PDD accounting, and increased network maintenance, personnel, and other expenses

EBITDA

↑ **13.4%**

2018 R\$ 5,637 million

2019 R\$ 6,394 million

Main factors

Growth driven by Distribution, thanks mainly to the market expansion and the increase in tariffs, partially offset by PMSO and PDD. Renewable Generation remained stable despite wind farms' poor performance in 2019

Net profit

↑ **26.9%**

2018 R\$ 2,166 million

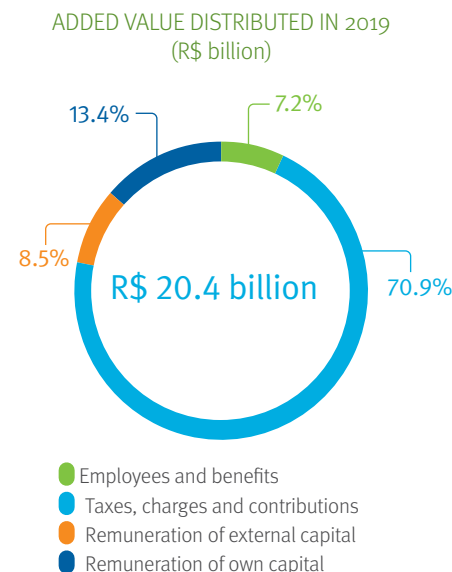
2019 R\$ 2,748 million

Main factors

Higher EBITDA on an annual comparison and reduction in financial expenses, mainly due to lower interest rates and lower debt levels

Distribution of Added Value (DVA)

Our added value totaled R\$ 20.4 billion, an increase of 7.8% from 2018, mainly due to higher revenues and the added value received from transfers. Of this total, 70.9% went to taxes, charges and contributions, the most significant portion of DVA in the electricity sector due to the taxation structure. The main changes in the annual comparison were an 11.3% decrease in remuneration of external capital and the 26.9% increase in remuneration of own capital.



VALUE ADDED STATEMENT – MAIN LINES (R\$ million)

	2017	2018	2019
Revenue	40,688	42,760	45,092
Inputs acquired from third parties	(23,120)	(23,379)	(24,304)
Gross added value	17,568	19,381	20,789
Retentions	(1,534)	(1,602)	(1,688)
Added value received by transfer	1,279	1,183	1,331
Net added value to be distributed	17,314	18,962	20,432
Employees and benefits	1,397	1,391	1,475
Taxes, charges and contributions	12,182	13,453	14,477
Remuneration of external capital	2,491	1,952	1,731
Remuneration of own capital	1,243	2,166	2,748

Debt

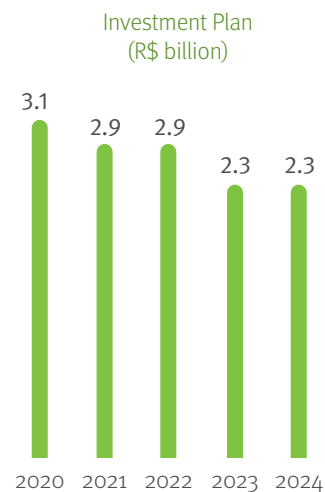
We ended 2019 with net debt of R\$ 16.4 billion, 8.4% lower than in December 2018. In the criteria established under the company's financial covenants, which considers the proportional consolidation of generation assets, net debt reached R\$ 16.8 billion, an increase of 3.5% from 2018, mainly influenced by CPFL Energia's greater stake in CPFL Renováveis after acquiring the portion that was held by State Grid.

Despite higher debt levels, our leverage, as measured by adjusted net debt over adjusted Ebitda, declined from 3.05x in December 2018 to 2.52x in December 2019.

Investments

In 2019, we invested R\$ 2.25 billion in our operations, 9.3% more than the previous year. This growth was mainly directed towards expanding, reinforcing and improving the distribution system, which accounted for 90% of the total.

Over the next five years we expect investments of approximately R\$ 13.5 billion, 86% of which will go towards DisCos. We will also invest in the construction of two renewable generation projects (Gameleira wind farm and the Lucia Cherobim SHPP) and three transmission projects (Maracanaú, Sul I and Sul II).



Capital markets

As of December 30, 2019, CPFL Energia shares were traded on the São Paulo stock exchange (B3) and the New York Stock Exchange (NYSE). In 2019, these securities appreciated 23.3% and 17.8% on their respective exchanges, and ended the period priced at R\$ 35.55 and US\$ 17.46. Average daily trading volume also increased in the annual comparison, especially due to the Re-IPO, which increased the number of shares available for trading.

After the company announced in late 2019 its intention to delist from the NYSE, trading in the North American market was suspended on January 28, 2020. This decision was motivated by: (i) the increased volume of Brazilian shares traded on B3 S.A. – Bolsa, Brasil, Balcão in Brazil by foreign investors, due to the internationalization of Brazilian financial and capital markets, in addition to more similar disclosure standards in Brazil and US markets in terms of financial reports; and (ii) a downward trend in recent years in the trading volume of the company's American Depositary Shares (ADS) on the NYSE.

Dividends

For 2020, the Board of Directors proposed a payout of R\$ 2.075 billion based on 2019 earnings, which represents dividends of R\$ 1.80 per common share, or approximately 80% of adjusted net income.

Our dividend policy stipulates the distribution of at least 50% of our adjusted net income in the form of dividends.



To learn more

[Click here](#) to consult CPFL Energia's Financial Statements for more information on our 2019 financial performance

TO LEARN
MORE



To learn more

The preparation of this Annual Report strengthens our transparency and accountability to all our stakeholders. This year, the publication began to more fully reflect the impacts and results of CPFL Renováveis, whose corporate activities were integrated into CPFL Energia in 2019. In addition, we improved the document's structure to reflect the material topics identified with our stakeholders in the Sustainability Plan, designed and approved by our leadership last year.

The Report maintains all the best practices that we had already adopted in previous years. Covering the period from January 1 to December 31, 2019, the report complies with the GRI Standards, a standard defined by the Global Reporting Initiative and the most widely adopted by companies worldwide when developing this type of publication. In addition, we considered integrated reporting guidelines proposed by the International Integrated Reporting Council (IIRC), and highlight throughout the content our main contributions to the United Nations' Sustainable Development Goals (SDGs), defined in the UN's 2030 Agenda.


As in the previous year, we prioritized information according to our materiality matrix, last updated in 2018 following a broad engagement study in partnership with the School of Economics, Business Administration and Accounting at the University of São Paulo in Ribeirão Preto (FEA-RP/USP). This process included extensive analysis of corporate documents, six focus groups with our main stakeholders (leaders and employees, suppliers, customers, and the community), interviews with executives from

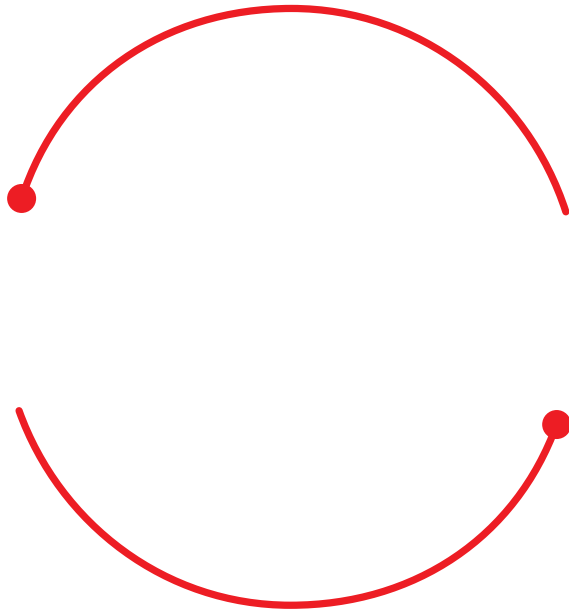
industry associations, and an online survey totaling more than 500 participants. Based on this process, we identified 11 material topics, which determine the content of this Report and cover our stakeholders' main expectations and demands.

In 2019, we carried out a critical analysis of our materiality in light of the issues identified in CPFL Renováveis' 2018 independent report. By cross-referencing the reports we identified synergies between matrices, and ensured that all aspects previously prioritized by CPFL Renováveis were covered by the 11 CPFL Energia topics.

Our Annual Report complies with the **GRI Standards**, an international standard for reporting sustainability management

Our material topics

 **Click on each topic** to better understand which aspects were prioritized in the materiality process, which SDGs they are related to, and where you can read about them in the Report



To learn more

Click here and consult the 2018 Annual Report for more information on the materiality matrix review process. If you have any questions, suggestions, or concerns about this publication, please contact us by e-mail at sustentabilidade@cpfl.com.br

Stakeholder engagement

By building solid and lasting relationships based on dialogue, transparency and trust, we engage the different stakeholders that interact with the company to generate and share value with the whole of society. We have **Rules for Stakeholder Engagement** that guides the management model we have adopted to monitor these value relationships.

Working this way, we have developed instruments to monitor the impacts generated by corporate actions, define strategies, identify opportunities, prevent risks, and protect and generate financial and reputational value for the company.

Our objectives

Generate value for the company and society by building solid and lasting relationships, based on dialogue, transparency and trust

Develop specific forms of engagement for each priority stakeholder

Improve processes and effective communication based on insights gained from interaction with stakeholders

Plan our engagement based on the Principles of Engagement

Proactively promote engagement in order to identify opportunities, prevent risks, and protect value

Guide strategic decision-making

Our stakeholders are identified and prioritized based on an assessment of how much they are impacted by the company and the degree of influence they have on the business. Another criteria is the frequency of routine interactions across the various areas of the company and the relevance of relationship processes in decision making. Based on this weighting of factors we compose our Stakeholder Map, formed by the different types of audiences and their different levels of impact and influence.

Engaging with all these parties is carried out through different communication channels, such as websites, social networks, call centers, e-mail, chats, regular face-to-face events and meetings, monitoring via telephone calls, workshops, opinion polls, and other channels.

In 2018, we conducted a consultation process and a study to identify and update the most relevant topics for our performance from the perspective of our stakeholders, as well as to understand their perception of how we generate sustainable value. The project was carried out in partnership with FEA-USP of Ribeirão Preto. The study was divided into two phases: the qualitative and face-to-face phase, involving focus groups and interviews; and the second, quantitative phase, carried out through an online questionnaire. Employees, the board of executive officers, customers, suppliers and industry associations all participated in the study.

Our goal is to carry out this type of engagement - both in person and online - every two years. The next stakeholder consultation is scheduled for 2020.

Supplement to GRI disclosures

102-3 | Location of headquarters

Our headquarters is located on Engenheiro Miguel Noel Nascentes Burnier Highway, km 2.5, in Campinas, São Paulo.

102-8 | Information on employees and other workers

We have no seasonal variation in our operation's workforce. Significant outsourced activities are related to the maintenance of the distribution network, facilities, and inventory logistics. The number of employees grew 2.5% on an annual comparison, due to the consolidation of CPFL Renováveis teams. Disregarding this effect, the workforce remained stable (reduction of 0.9%). Of the total number of employees, 42 professionals allocated to the Southeast (37 men and 5 women) have fixed-term employment contracts.

NUMBER OF EMPLOYEES BY TYPE OF EMPLOYMENT AND GENDER*

	Men	Women	Total	Men	Women	Total	Men	Women	Total
	2017			2018			2019		
Full-time	10,324	2,407	12,731	10,408	2,497	12,905	10,812	2,427	13,239
Part-time	59	72	131	35	36	71	20	40	60
Total	10,383	2,479	12,862	10,443	2,533	12,976	10,832	2,467	13,299

*Includes CLT employees of companies 100% controlled by CPFL Energia and CPFL Renováveis as of Dec. 31. We consider part-time those employees who work up to 179.99 hours per month. Once they reach 180 hours a month, we consider them full-time employees. This information is controlled by the SAP (CPFL Energia) and ADP Expert (CPFL Renováveis) system.

102-12 | External initiatives

Our company is a signatory to the following commitments to promote sustainable development

- Global Compact Brazil Network (United Nations – UN)
 - We participate in the Brazilian Committee and the Energy and Climate and SDG Working Groups
 - Our Sustainability Director is currently chairman of the Board of Directors of the Global Compact Brazil Network
- Open Letter on Carbon Pricing (Business Climate Initiative – IEC)
- CEO Guide to the SDGs (Sustainable Development Goals) (World Business Council for Sustainable Development – WBCSD)
- Support letter for the Task Force on Climate-related Financial Disclosures – TCFD (Financial Stability Board – FSB)
- RGE, UNICEF, and You Initiative - Friends of the Child (United Nations Children's Fund – UNICEF)
- Brazilian Business Commitment to Water Security (Brazilian Business Council for Sustainable Development – CEBDS)
 - We participate in the Climate Working Group
- São Paulo Environmental Agreement – initiative to reduce greenhouse gas emissions and encourage sustainability actions (Government of São Paulo and CETESB)
- Program to Combat Child Labor (Labor Courts)
- Initiatives of the Center for Sustainability Studies (Fundação Getulio Vargas – FGVces)
 - Business for Climate Platform (EPC)
 - Local Development (ID Local)
 - Brazil GHG Protocol Program | Public Emissions Registry
 - Emission Trading Scheme Simulation

102-13 | Membership of associations

Our company participates in industry associations and organizations with the aim of helping strengthen the electricity sector and the capacity to generate value at the institutional level and in the context of sustainability. The main ones are:

Associação Brasileira de Distribuidores de Energia Elétrica (Brazilian Association of Electricity Distributors – Abradee)

The entity helped discuss ANEEL Resolution No. 482, which deals with a tariff discount for micro and mini generators. Also included on the agenda were the topics of electricity distributor regulations, remuneration on investments, and other tariff subsidies. This involvement benefited the preparation of joint proposals sent to the executive branch and regulatory bodies. We participate in the entity's board.

Associação Brasileira da Infraestrutura e Indústrias de Base (Brazilian Association of Infrastructure and Basic Industries – Abdib)

Evaluates privatization programs (PPIs) and public-private partnerships (PPPs). Our involvement benefited from the elaboration of joint proposals sent to the executive branch and regulatory bodies, collaborating technically for the best practices in these processes. We participate in the Board of Directors and the Advisory Board.

Associação Brasileira dos Comercializadores de Energia (Brazilian Association of Energy Traders – Abraceel)

Discussed topics including guarantees for the market's financial sustainability, sustainably opening the free market, and hydrological risk (GSF). Our participation generated benefits in the preparation of joint proposals sent to the executive branch, regulatory bodies and the Electrical Energy Trading Chamber. We are on the Association's Board.

Associação Brasileira de Energia Solar Fotovoltaica (Brazilian Photovoltaic Solar Energy Association – ABSolar)

Promotes and publicizes developments in the photovoltaic solar-energy generation sector in Brazil, involving agents from the entire production chain. We participate in the Environment Working Group (GTMA), with discussions on environmental licensing and reverse logistics processes.

Acende Brasil Institute

The institute is focused on technical studies and works to contribute to the Brazilian electric sector's modernization. Our participation provides broad benefits, such as access to information and research data and the dissemination of strategic positions for society. We are on the institution's Board.

Associação Brasileira dos Produtores Independentes de Energia Elétrica (Brazilian Association of Independent Power Producers – Apine)

Apine deals with issues such as dam safety, hydrological risk (GSF), generation concession contracts, and market expansion. Our involvement brings benefits in the preparation of joint proposals sent to the executive and legislative branches and regulatory bodies. We are members of the Board.

Federação das Indústrias do Estado de São Paulo (Federation of Industries of the State of São Paulo – Fiesp)

One of our executives is a member of the organization's Infrastructure Board, which is the most representative in the sector. Our presence allows for very close contact with the market to understand our customers' demands.

Associação Brasileira de Energia Eólica (Brazilian Wind Energy Association – Abeeólica)

The entity evaluates mechanisms to improve environmental licensing processes, subsidies for renewable generation, rules for auctions, and other aspects relevant to the development of wind power in generation. We are on the Board.

Grupo de Trabalho Agentes do Rio Tocantins (Rio Tocantins Agents Working Group)

Forum to analyze and promote actions that mitigate the impacts of low water availability for the generation of energy at Tocantins River hydroelectric plants. The group proposes public policies, actions to increase water availability and water quality, integration of generating agents, and identification of synergies between environmental programs to optimize resources and efficiency.

102-24 | Nominating and selecting the highest governance body

The process of selecting board members seeks out professionals who are aligned with CPFL Energia's principles and values. Members are selected from senior professionals with diverse training and who collectively have proven experience in the electricity sector or in their respective areas of activity.

The company follows the rules established by Law No. 6,404/76, Novo Mercado Regulations, and the Brazilian Securities and Exchange Commission's (CVM) Instructions on the appointment of members of the Board of Directors. Furthermore, discussions about potential new board appointments take into account the availability of their time, since the Board of Directors meets at least 12 times a year, as established in our Bylaws.

In this same sense, when choosing members of the Advisory Committees to the Board of Directors, the Chairman of the Board of Directors relies on assistance from the human resources and performance management department, and possible candidates are indicated in regard to their specific knowledge.

102-27 | Collective knowledge of highest governance body

In the context of the Strategic Plan's annual elaboration, we organized conferences with outside experts to assist with our analysis of scenarios and to reflect upon fundamental themes for our business's future.

In 2019, we held three meetings, which help continuously improve the knowledge of executives involved in this process:

- **Market trends:** scope and complexity of the sectorial regulatory agenda, providing more clarity to market movements and opportunities;
- **Macroeconomic:** advances and challenges for the Brazilian economy, presenting the main indicators and forecasts for the country in the coming years;
- **Competitive:** strategic vision of the positioning and recent movements by the main players in the sector.

Another mechanism for improving our senior leadership is training that is held every two years at Universidade CPFL and in partnership with the Brazilian Institute of Corporate Governance (IBGC). In 2019, no such training was carried out, since the counselors had received training the previous year. In 2020, the planning of these actions will be completed after assessing our development and training needs.

102-35 and 102-36 | Remuneration policies; and Process for determining remuneration

Members of the Board of Directors and the Fiscal Council are remunerated according to market parameters. Of the 9 members of the Board of Directors, 3 are remunerated for their executive functions and 2 independent members also receive fixed monthly payment. Of the 4 external members, only 1 is paid in the same way. No member of the Board of Directors receives any additional compensation for his or her duties as a member of an advisory committee. In the Fiscal Council, two directors have waived their remuneration - fully and partially. CPFL Renováveis follows the same parameters, and only 1 independent member of the Board of Directors receives remuneration according to market parameters. In the Fiscal Council, all members completely waived remuneration.

Executives on the Statutory Board receive fixed monthly compensation, benefits, and short and long-term incentives. Direct and indirect benefits, such as medical and dental assistance, life insurance, food vouchers, etc., are in line with market practices. Short-term incentives seek to direct executive performance to achieve our business strategy, while long-term incentives aim to create vision and commitment, aligning interests to create sustainable value.

The global remuneration of these groups is established at the General Shareholders' Meeting, with proposals based on market research and prior assessment by the Human Resources Management Committee that advises the Board of Directors. For employees, salary surveys are also significant inputs, by way of internal processes at the People and Performance Management Department.

102-41 | Collective bargaining agreements

In our workforce, 99.75% of employees are covered by collective bargaining agreements or conventions with unions. The exception to this is the 32 executives, who have a statutory contract and whose employment relations rules are established in a private company management contract.

102-48 | Restatements of information

Possible restatements of previously published information are indicated, when pertinent, in the respective sections.

102-54 | Claims of reporting in accordance with the GRI Standards

This report has been prepared in accordance with the GRI Standards: Core option.

201-3 | Defined benefit plan obligations and other retirement plans

We currently have 15 pension plans allocated to seven financial managers (including banks and closed social security entities), of which four are Defined Benefit and Variable Contribution (BD and CV), four are Defined Contribution and seven are VGBL/PGBL plans. Only the first group can represent any long-term financial liabilities, since in the others there is no risk as the benefit amount is limited to the reserve accumulated over the contribution period. BD and CV plans are subject to the conditions of macroeconomic scenarios, such as changes in interest rates and increases in average life expectancy. To mitigate this exposure, we rely on our own teams and on hired companies to monitor sponsored plans. In addition, the entities that manage these plans are subject to PREVIC regulation, which establishes mandatory annual reporting, including, among other aspects, actuarial analyses of the plans. Using this management approach, we monitor the risks related to the plans' financial liabilities, and currently our projections indicate a balance between assets and liabilities.

About 85% of employees adhere to these benefits at the CPFL Energia companies where they are offered. The contribution of each employee varies depending on the company where they are employed and their salary. The company's counterpart contributions are included in the annual budget.

205-1 | Operations assessed for risks related to corruption

All of our operations (100%) are periodically assessed for corruption risks. At CPFL Energia, this is done by means of the following tools:

- Risk Assessment: Annual process in which the Audit, Risk and Compliance Department reviews the Executive Board's perception of risks to which the CPFL Group is exposed. This process guides the Audit, Risk and Compliance Department's planning and work;
- Fraud Risk Analysis (FRA): Methodology applied on demand to assess a specific process or area, detailing the associated fraud risks and proposing actions and controls to mitigate them based on provisions of Law No. 12,846/13;
- Sensitive Stakeholder Assessment: Evaluation of CPFL Group processes regarding sensitivity to the risk of corruption, with the purpose of mapping the need for training of employees allocated to sensitive positions within these processes.
- Anti-Corruption Policy and Internal Regulations: Set of internal policies and standards that establish the guidelines and conduct to be observed within CPFL Group operations from the perspective of the Integrity Program.

At CPFL Renováveis, the Ethics Questionnaire is carried out annually within the scope of the Ética Viva Program. At both companies the internal audit processes cover risks related to compliance.

205-2 | Communication and training about anti-corruption policies and procedures

The CPFL Group has two major avenues for disseminating Integrity Program guidelines: communication and training. In terms of

communication, there are several institutional initiatives related to anti-corruption. Through a partnership with the Corporate Communication area we have developed a strategic plan for structured communications around the topic, allowing us to organize and carry out events, conferences, and campaigns.

In terms of employee training, there are two modalities: in-person and online. The first is held annually, and the audience defined through a risk assessment, with those employees occupying positions of greater exposure to integrity risks required to receive training in person. In addition, online training is available to and mandatory for all company employees.

In 2019, CPFL Renováveis carried out three training sessions that covered 100% of employees in the company's main locations: São Paulo, Campinas, João Câmara, Jundiaí and Fortaleza.

In addition, we implemented the Monthly Integrity Conversation (CMI) in 2019, which reinforces topics related to the Integrity Program for all company employees.

205-3 | Confirmed incidents of corruption and actions taken

In 2019, no corruption cases were registered (in the context of Anticorruption Law No. 12,486/13 or under article 42 of Decree No. 8,420/15) related to CPFL Energia or CPFL Renováveis operations.

302-1 | Energy consumption within the organization

In 2019, we acquired 9,563,121 GJ of electricity. No other types of energy were purchased from third parties. The energy generated from fuel consumption is shown in the table.

ENERGY GENERATED FROM FUELS (Gj)			
	2017	2018	2019
Renewable sources			
Sugarcane bagasse	21,114,969	21,173,765	38,547,440
Ethanol (assuming 27% blend in gasoline)	51,622	47,256	58,112
Biodiesel (10% of diesel)	24,654	21,026	21,665
Subtotal	21,191,244	21,242,047	38,627,217
Non-renewable sources			
Diesel	323,189	221,644	215,080
Gasoline	35,041	28,968	32,131
LPG	176	446	-
Fuel oil	5,994,307	4,276,440	2,048,137
Subtotal	6,488,736	4,688,501	2,295,524
Total	27,679,980	25,930,548	40,922,741

303-1 | Water withdrawal by source

At our DisCos, service companies and corporate offices, 100% of water consumption comes from public or private water supply systems at each location. In 2019, we consumed about 179,100 cubic meters in these activities. At CPFL Geração, the main source of water consumption is for human use - that is, use in bathrooms, pantries, and sinks. The water used for this purpose is either collected directly from artesian wells or purchased from suppliers using tanker trucks. At CPFL Renováveis, water is also used for industrial purposes at biomass plants and in some SHPPs, with the objective of cooling of the system and/or feeding the boiler. In this case, CPFL Renováveis captures the water itself, by means of a groundwater abstraction grant, or it is captured by the ethanol or ethanol/sugar plant to which the biomass plant is linked. On occasion, water consumption may also take place during construction on new projects. In 2019, no water was consumed in the construction of the Gameleiras Wind Complex, which started in November. Work on the Cherobim SHPP, meanwhile, had not started.

WATER CAPTURED IN 2019 (thousand m ³)*		
	CPFL Renováveis	CPFL Geração
Surface water	3,998.8	19.1
Groundwater	878.1	40.9
Public or private supply	0.2	2.9
Total	4,877.1	62.9

*This indicator is being reported for the first time and, therefore, does not include a historical series.

304-1 | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

Unit ^{1 and 2}	Unit size (hectares)	Location in relation to conservation areas (UC)
Rio do Peixe II SHPP	126	Adjacent to Carlos Botelho State Park
São José HGP	865	Next to UC (less than 10 km)
Lavrinhas HGP	51	Next to UC (less than 10 km)
Turvinho HGP	14	Next to UC (less than 10 km)
Santa Alice HGP	1	Next to UC (less than 10 km)
São Sebastião HGP	8	Next to UC (less than 10 km)
Pinheirinho HGP	44	Next to UC (less than 10 km)
Barra Grande HPP	12,580	Next to UC (less than 10 km)
Campos Novos HPP	5,050	Next to UC (less than 10 km)
Monte Claro HPP	449	Next to UC (less than 10 km)
14 de Julho HPP	797	Next to UC (less than 10 km)
Castro Alves HPP	1,021	Next to UC (less than 10 km)
Foz do Chapecó HPP	13,461	Next to UC (less than 10 km)
Luís Eduardo Magalhães HPP	5,668	Adjacent to Serra do Lajeado State Park and Lajeado Environmental Protection Area (APA)
Macaco Branco SHPP	7	Close to Campinas APA
Boa Vista 2 SHPP	261	Adjacent to Nova Baden State Park
Jaguari SHPP	118	Adjacent to Campinas APA and Piracicaba Juquerí-Mirim Area II APA
Ludesa SHPP	1,002	Close to (9 km) Mata Preta Ecological Station
Ninho da Água SHPP	24	Inside Serra da Mantiqueira APA
Novo Horizonte SHPP	82	Adjacent to Rio Turvo State Park
Salto Grande SHPP	20	Adjacent to Campinas APA
Santana SHPP	178	Adjacent to Mata do Jacaré Ecological Station
São Gonçalo SHPP	231	Close to (5 km) Piracicaba APA
Socorro SHPP	6	Close to (10 km) Piracicaba Juquerí-Mirim Area II APA
Tanquinho PV	42	Close to (0.5 km) Campinas APA
Baía Formosa Biomass	0	Close to (3 km) Mata Estrela Private Natural Heritage Reserve and close to (5km) Piquiri – Una APA
Ester Biomass	0	Close to (8 km) Matão de Cosmópolis area of relevant ecological interest
Ipê Biomass	0	Close to (7 km) Aguapeí State Park
Biopedra Biomass	0	Close to (5 km) Guarani Municipal Ecological Station

¹ Operating units not included in this table are more than 10 km away from a conservation unit.

² It was not possible to present data from Serra da Mesa HPP this year. We will obtain the information for the next report.

304-4 | IUCN Red List species and national conservation list species with habitats in areas affected by operations

Unit*	Number of species identified	Degree of risk	Reference list
Foz do Chapecó HPP	21	Vulnerable and endangered	National (Ibama) State (Rio Grande do Sul)
Alto Irani SHPP	2	Almost threatened	National (Ibama)
Arvoredo SHPP	2	Almost threatened	National (Ibama)
Boa Vista 2 SHPP	4	Almost threatened and vulnerable	International (IUCN)
Figueirópolis SHPP	7	Almost threatened, vulnerable and threatened	National (Ibama) International (IUCN)
Lençóis SHPP	1	Almost threatened	State (São Paulo)
Ludesa SHPP	2	Vulnerable	State (Santa Catarina)
Plano Alto SHPP	1	Almost threatened	National (Ibama)
Salto Góes SHPP	1	Vulnerable	State (Santa Catarina)
Santa Luzia SHPP	1	Vulnerable	State (Santa Catarina)
Bloco Sul Wind Farm	3	Vulnerable	National (Ibama)
Pedra Cheirosa Complex	3	Almost threatened and endangered	State (Ceará)
Icaraízinho Wind Farm	3	Almost threatened, vulnerable and critically endangered	State (Ceará)
Paracuru Wind Farm	1	In danger	State (Ceará)
Aracati Complex (Enacel, Canoa Quebrada and Bons Ventos)	3	Almost threatened and vulnerable	State (Ceará)

*Operating units not included in this table did not identify endangered species in 2019.

305-1, 305-2 and 305-3 | Direct (Scope 1) GHG emissions; Energy indirect (Scope 2) GHG emissions; and Other indirect (Scope 3) GHG emissions

GHG EMISSIONS INVENTORY (thousand tCO ₂ e)			
	2017	2018	2019
Scope emissions			
Scope 1	759.9	695.1	425.4
Scope 2	423.3	347.3	359.3
Scope 3	8.9	159.3	32.8
Biogenic emissions and removals linked to Scope 1			
Emissions	2,770.5	2,801.9	5,034.6
Removals	32.2	63.9	0.0

305-4 | GHG emissions intensity

GHG EMISSION INTENSITY INDICATORS*			
	2017	2018	2019
By generated energy (Scope 1 tCO ₂ e/GWh)	87.2	63.4	32.5
By distributed energy (Scope 2 tCO ₂ e/GWh)	6.5	5.2	5.2
By net operating revenue (Scope 1 + Scope 2 tCO ₂ e/R\$ million)	44.2	37.0	26.2

*Data restated for 2017 and 2018 due to the change in the calculation methodology

306-1 | Water discharge by quality and destination

The only operation that has a high volume of effluents is Epasa, which in 2019 totaled 17,200 cubic meters. This volume is 36% lower than in the previous period, since generation is proportional to operational activity, which was reduced due to the lower need for dispatches from the National System Operator (ONS). In the past year, Epasa generated only 15% of its capacity. CPFL Energia has a 53.34% stake in this unit.

306-3 | Significant spills

In 2019, no significant leaks were recorded at any CPFL Energia or CPFL Renováveis units. Taking as a reference the definition of environmental emergencies established in Environmental Management System (EMS) procedures, GED 12672, GED 2292 and in the corporate environmental risk rule specific to the topic, we had environmental occurrences involving brief spills, normally associated to theft of equipment, which were properly addressed. Due to the governance of the subject in question, these occurrences were considered insignificant because they did not surpass the value of R\$ 500,000, the limit between low and moderate risks, or because they were thus classified by the Environment team due to their low environmental impacts, in compliance with EMS regulations.

306-4 | Transport of hazardous waste

100% of the waste generated is transported and disposed of. In 2019 there was no import/export, nor international transport.

306-2 | Waste by type and disposal method

CPFL ENERGIA'S HAZARDOUS WASTES, BY METHOD OF DISPOSAL (t)*

	2017	2018	2019
Hazardous			
Reuse	290.1	284.0	186.8
Recycling	12.8	14.2	49.7
Recovery/Coprocessing	254.1	463.0	231.8
Incineration	15.3	113.3	9.8
Others	0.0	0.0	70.7
Total	572.3	874.5	548.8
Not hazardous			
Recovery/Coprocessing**	0.0	0.0	37.2
Landfill***	187.4	159.0	165.4
Total	187.4	159.0	202.6

*Only includes operations 100% controlled by CPFL Energia (DisCos, CPFL Soluções, transmitters, and CPFL Centrais Geradoras).

**Includes uncontaminated PPE and CPE as of 2019. In previous years, the total volume was sent to landfill (2018 = 58.55 tons and 2017 = 6 tons).

***Includes class II waste that is generated at headquarters in Campinas, where the largest volume of employees is located. For the other units, the waste is collected directly by the local governments or their partners.

CPFL RENOVÁVEIS WASTE, BY TYPE AND METHOD OF DISPOSAL (T) IN 2019*

Hazardous	
Recycling	507.6
Incineration	60.2
Industrial landfill	92.6
Total	660.4
Not hazardous	
Landfill	153.3
Recycling	3,271.1
Total	3,424.4

*In 2019 there was no waste from construction work. The construction of the Gameleiras Wind Complex started only in November, but the contractor had at that moment only been engaged. Construction on Cherobim SHPP has not started.

CPFL SERVIÇOS MATERIALS SENT TO THE REVERSE CHAIN IN 2019 (t)*

Steel	698.8
Aluminum	2,383.0
Rubber	14.3
Bronze	14.0
Ceramics	1,024.5
Copper	536.0
Iron	2,027.6
Mineral oil	152.7
Plastic	80.0
Porcelain	33.3
Glass	3.0
Others	766.2
Total	7,733.4

*There are also other materials that are sold by piece, and so conversion to tons is not possible.

307-1 | Non-compliance with environmental laws and regulations

We did not receive any significant fines in the period. We consider significant penalties as those equivalent to at least 1% of the maximum amount established by Article 61 of Federal Decree No. 6,514/2008, that is, fines of more than R\$ 500,000.

401-1 | New employee hires and employee turnover

HIRES IN 2019

	CPFL Energia		CPFL Renováveis		Consolidated	
	Number	Rate	Number	Rate	Number	Rate
By gender						
Men	1,634	15.6%	135	37.3%	1,769	16.3%
Women	479	20.1%	52	61.9%	531	21.5%
By age group						
Up to 30 years	1,135	31.6%	71	67.0%	1,206	32.6%
Between 30 and 50 years	942	11.7%	111	35.7%	1,053	12.6%
Above 50 years	36	3.0%	5	17.2%	41	3.4%
By region						
Center-west	0	0.0%	4	66.7%	4	57.1%
Northeast	0	0.0%	56	40.9%	56	40.9%
Southeast	1,801	19.5%	126	47.0%	1,927	20.4%
South	312	8.5%	1	2.9%	313	8.5%
Consolidated	2,113	16.4%	187	41.9%	2,300	17.3%

*Rate calculated using the number of hires in each category relative to the headcount of the respective category on 12/31.

DISMISSALS IN 2019

	CPFL Energia		CPFL Renováveis		Consolidated	
	Number	Turnover rate*	Number	Turnover rate*	Number	Turnover rate*
By gender						
Men	1,610	15.5%	94	31.6%	1,704	16.0%
Women	634	23.4%	96	88.1%	730	25.6%
By age group						
Up to 30 years	789	26.8%	56	59.9%	845	27.7%
Between 30 and 50 years	1,137	12.9%	124	37.8%	1,261	13.8%
Above 50 years	318	15.0%	10	25.9%	328	15.2%
By region						
Center-west	0	0.0%	0	33.3%	0	28.6%
Northeast	1	0.0%	12	24.8%	13	25.2%
Southeast	1,810	19.6%	176	56.3%	1,986	20.7%
South	433	10.2%	2	4.3%	435	10.1%
Consolidated	2,244	16.9%	190	42.3%	2,433	17.8%

*Rate calculated using the number of hires and dismissals / 2 in each category relative to the headcount of the respective category on 12/31.

401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees

Among the total number of CPFL Group employees, 99.7% are professionals hired under the CLT regime and for an indefinite period. The remaining hires (42 people) have the same benefits offered to the majority of the workforce.

403-1 | Workers representation in formal joint management-worker health and safety committees

We have three formally established health and safety committees, which guarantee the representation of 100% of employees in these forums for discussion and planning actions to create a safer working environment.

- Executive Health and Safety Committee (CSS): composed of senior leadership members, its role is deliberating and defining strategic directions and actions.
- Operational Safety Committee (COS): consisting of a multidisciplinary team, its purpose is to reinforce accident prevention during the execution of operational activities, identifying and promoting solutions with utmost agility.
- Internal Accident Prevention Commissions - (CIPAs): in 2019, our employees had 1,101 participants in 113 CIPAs, whose meetings addressed proposals and suggestions for improvements on health and safety issues.

403-2 | Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities

In 2019, we did not register any fatal accidents with our employees, which reflects an improvement in safety indicators. However, four fatal events occurred involving third parties: two at RGE, one at CPFL Serviços and one at CPFL Piratininga. The rates for outsourced workers are not shown, since the information is not available as it depends on the contracted companies. We also do not disclose our absenteeism rate.

NUMBER OF ACCIDENTS WITH LEAVE*

	2017	2018	2019
By gender			
Men	84	56	40
Women	5	4	1
By region			
Northeast	0	0	1
Southeast	64	51	30
South	25	9	10
Total	89	60	41

*Only takes employees into account. No accidents were registered in the Center-west region.

**Data from 2019 now includes figures for CPFL Renováveis.

NUMBER OF DAYS LOST*

	2017	2018	2019
By gender			
Men	14,382	807	620
Women	34	20	3
By region			
Northeast	0	0	15
Southeast	7,611	747	511
South	6,805	80	97
Total	14,416	827	623

*Only takes employees into account. No accidents were registered in the Center-west region.

**Data from 2019 now includes the figures for CPFL Renováveis.

403-3 | Workers with high incidence or high risk of diseases related to their occupation

As in previous years, we have not identified a high risk or incidence of occupational illnesses in our operations.

403-4 | Health and safety topics covered in formal agreements with trade unions

All union agreements to which we have committed address health and safety topics related to the performance of CIPAs, the issuance of Occupational Health Certificates (ASO), safety inspections of contractors, properly reporting Communication of Work Accident (CATs), and holding meetings on the subject with union entities (in the case of CPFL Paulista, CPFL Piratininga, CPFL Brasil and CPFL Geração).

404-2 | Programs for upgrading employee skills and transition assistance programs

Following CPFL Renováveis's integration into the CPFL Group holding company, the administrative areas previously located in the city of São Paulo were transferred to the municipality of Campinas, about 100 kilometers away. The company developed an outplacement program for employees who did not make the transition to the new office. For the other employees there was no specific program, although there is also no required leave due to retirement.

406-1 | Incidents of discrimination and corrective actions taken

In 2019, we registered one case of gender discrimination, which was investigated and considered valid by the Ethics and Business Conduct Committee. We were timely in dealing with the case and properly applying disciplinary measures. In addition, the unit manager talked to the victim, reinforcing CPFL's objection to any form of prejudice, discrimination, and harassment, in accordance with guideline No. 27 of our Code of Ethical Conduct. No cases of this kind were registered via CPFL Renováveis' Complaints Portal.

413-1 | Operations with local community engagement, impact assessments, and development programs

In line with their respective Sustainability and Social Investment Policies, the plants in which we have a stake have allocated resources to support local communities' initiatives to promote culture, education, sports, health, and job and income generation. At Baesa, Ceran and Enercan, investments totaled R\$ 5.6 million to support social projects in 2019, a decline of 11.8% from the previous period, with 94% of resources coming from tax incentives. The collection of projects is carried out on a publicly accessible online platform, and the selection is carried out by an internal committee formed by employees from different areas of the companies. In Foz do Chapecó, R\$ 4.0 million was allocated, 14.3% more than in 2018, with all resources coming from tax incentives.

413-2 | Operations with significant actual and potential negative impacts on local communities

Our operations had no significant negative impacts on local communities during the operation phase. Even so, our plants maintain communication channels to hear demands from the community by phone, e-mail and, in the case of Baesa and Enercan, a Population Service Center.

418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data

We did not register any substantiated complaint about breach of privacy or loss of customer data through our Ombudsman channel and the Ethics Committee.

419-1 | Non-compliance with laws and regulations in the social and economic area

With regard to non-compliance with laws and regulations in the social and economic areas - in 2019, or in previous years that were paid out in 2019 - no penalties were levied by ANEEL on CPFL Energia Group's DisCos. However, it is important to report, in regard to non-compliance with laws and regulations in the technical and commercial areas - in 2019, or in previous years that were paid out in 2019 - that CPFL Energia Group's DisCos were charged monetary fines by ANEEL which totaled R\$ 15,390,256.47 (corrected as of the payment date).

It is worth mentioning that we have dedicated regulatory teams at each business area of the company, with professionals focused on monitoring and complying with the obligations established in the concession contracts and authorizing acts of its electricity generation, transmission and distribution projects. These professionals are responsible for ensuring and influencing the fulfillment of demands emanating from regulatory bodies (Brazilian Electricity Regulatory Agency and Associated Agencies) and the granting authority (MME), complying with the necessary procedural deadlines and processes, and monitoring the evolution of the regulatory framework to mitigate risks of penalties and identify new opportunities for the CPFL Energia Group.

EU1 | Installed capacity, broken down by primary energy source and by regulatory regime

The main explanation for variations is related to the bigger stake in CPFL Renováveis, which went from 51.56% to 99.94%.

TOTAL INSTALLED CAPACITY BY SOURCE (MW)*

	2017	2018	2019
HPP (Hydroelectric Power Plant)	1,991.0	1,991.0	1,990.3
SHPP (Small Hydroelectric Power Plant) and HGP (Hydroelectric Generating Plant)	242.4	257.9	452.8
Solar	0.6	0.6	1.1
Wind	674.6	674.6	1,307.8
Thermal	182.3	182.3	182.3
Biomass	190.8	190.8	369.8
Total	3,281.7	3,297.2	4,304.1

*Includes the installed capacity of CPFL Geração and CPFL Renováveis projects proportional to the stake held by CPFL Energia.

EU2 | Net energy output broken down by primary energy source and by regulatory regime

NET ENERGY PRODUCTION BY SOURCE (GWh)*

	2017	2018	2019
HPP (Hydroelectric Power Plant)	4,499.7	6,959.3	6,397.8
SHPP (Small Hydroelectric Power Plant) and HGP (Hydroelectric Generating Plant)	712.3	789.3	1,404.0
Solar	0.8	0.8	1.6
Wind	2,304.6	2,165.5	4,006.5
Thermal	661.0	480.8	224.3
Biomass	532.6	561.9	1,063.7
Total	8,710.9	10,957.5	13,097.8

*Includes the net energy production of CPFL Geração and CPFL Renováveis projects proportional to the stake held by CPFL Energia.

EU3 | Number of residential, industrial, institutional and commercial customer accounts

ENERGY DELIVERED BY DISCOS (GWh)

	2017	2018	2019
CPFL Paulista	29,960.3	30,567.5	31,368.6
CPFL Piratininga	13,729.5	14,140.4	14,057.7
CPFL Santa Cruz	2,769.0	2,876.0	3,060.5
RGE	19,112.3	19,629.1	19,567.8
Total	65,571.1	67,213.0	68,054.6

EU4 | Length of above and underground transmission and distribution lines by regulatory regime

In addition to the 342,200 km of primary and secondary distribution lines and transmission lines managed by the DisCos, in 2019 we had 984.2 km of aerial transmission networks at CPFL Renováveis. Of this total, 967.9 km had a voltage greater than 69 kV (and the remaining 16.3 km had voltage of less than 69 kV).

EXTENSION OF CPFL RENOVÁVEIS TRANSMISSION LINES (km)

	2019
<i>By type</i>	
Aerial	984.2
Total	984.2
<i>By tension</i>	
Less than 69 kV	16.3
69 kV and greater	967.9
Total	984.2

EXTENSION OF DISCOS' TRANSMISSION LINES BY VOLTAGE (km)

	2018	2019
Less than 69 kV	1,415.7	1,468.7
69 kV and greater	11,123.8	11,387.4
Total	12,539.5	12,856.1

EXTENSION OF THE DISTRIBUTION NETWORK BY TYPE (km)

	2018	2019
Urban	129,178.6	131,793.0
Rural	193,654.9	196,342.3
Underground	1,145.6	1,234.6
Total	323,979.1	329,370.0

EU6 | Management approach to ensure short and long-term electricity availability and reliability

At the DisCos, Electric System Expansion Planning is carried out annually, with a cycle of diagnosis and proposition of solutions over ten-year horizon. This plan provides the structural projects that will guarantee support for market growth and the reliability of electrical systems. Based on market forecasts per substation or power transformer, diagnostics of the electrical system are carried out in order to identify the need for reinforcements or extensions, which are dealt with through the works proposals that are part of the Substations and High-Voltage Distribution Lines Works Plan.

The periodic maintenance of assets is scheduled via a five-year investment plan, seeking to improve the quality of the energy supply, ensure the safety of employees and the general population, and guarantee the facilities' useful life. This way we can ensure the increased efficiency and robustness of the system, providing greater energy availability to consumers. This plan is executed annually, with support from specialized contractors and the monitoring of key indicators.

At CPFL Renováveis, the maintenance management system for generating plants is called Engeman. This system registers all inspection and improvement plans, including details of the technical, human and financial resources required for their execution. The scheduled interventions are evaluated and approved by the technical teams and executed at the most opportune time, that is, when they will have the least possible impact on energy generation. Field teams also use this system to register anomalies and unscheduled maintenance. Using this data, corporate teams can better evaluate and forecast future investments. We also have the Operational Risk Management System (GRO), which presents, on an online platform, the risks to

which the assets are exposed, with their respective probability and impact. The GRO consolidates CPFL Renováveis's operational risk matrix, guiding mitigation actions. In 2019, CPFL Renováveis allocated R\$ 256 million to measures that contribute to assets' reliability and availability, of which R\$ 209 million was in Opex (operational) and R\$ 47 million in Capex (investment).

EU21 | Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans

We have Emergency Response Plans (PASE) that establish response actions in case of critical and emergency situations that may occur at the company's business units.

These PASEs include procedures necessary to mitigate/minimize consequences in the event of an unexpected or unwanted event that puts the physical integrity of employees at risk. One of the plan's activities include drills to assess the effectiveness of emergency procedures and the possibility of improving processes. The procedures carried out in 2019 are shown in the table.

PASE PROCEDURES PERFORMED IN 2019

PASE	Frequency	Execution
Fire fighting	Semester	February and August
Sudden illness	Semester	March and September
Traffic accident	Yearly	April
Fall from a height	Yearly	May
Drop in conductor	Yearly	June
Rescue at heights	Yearly	July
Attack by poisonous animal	Yearly	October
Dam collapse	Yearly	November
Confined space	Yearly	December
Helipad emergency	Yearly	November

EU25 | Number of injuries and fatalities to the public involving company assets including legal judgments, settlements and pending legal cases of diseases

In 2019, we concluded 93 legal cases involving the health and safety of the population in the distribution segment, with a financial impact of R\$ 2.9 million. At the end of the period, we had 377 ongoing cases. In unregulated markets, one case was concluded with no significant financial impact, and another three remained open at the end of the year.

EU8 | Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development

INVESTMENT IN R&D BY DISCOS (R\$ thousand)*

	2017	2018	2019
Alternative sources of electricity generation	9,511	8,013	683
Safety	2,308	2,173	1,547
Energy efficiency	2,190	4,978	6,204
Electric power systems planning	6,478	3,647	2,588
Operation of electric power systems	2,553	3,962	2,300
Supervision, control and protection of electrical energy systems	2,365	968	2,885
Quality and reliability of electricity services	88	704	2,866
Measurement, billing and combating commercial losses	161	3,639	8,256
Other	1,667	4,269	2,196
Management programs**	1,336	1,609	1,781
Total	28,657	33,963	31,306

*The values consider the stake held by CPFL Energia.

**Category that includes values related to the hourly dedication of team members, prospecting activities, publication of concluded projects, and other activities inherent to the R&D program.

INVESTMENT IN R&D BY GENERATORS AND TRANSMITTERS (R\$ thousand)*

	2017	2018	2019
Alternative sources of electricity generation	4,827	2,843	133
Thermoelectric generation	6,200	1,142	395
Management of basins and reservoirs	287	1,402	3,398
Environment	3,337	2,623	1,737
Safety	0	1,364	2,135
Energy efficiency	4,201	1,647	1,989
Electric power systems planning	261	678	1,411
Operation of electric power systems	1,356	1,237	478
Supervision, control and protection of electrical energy systems	780	497	556
Other	553	107	0
Management programs**	27	476	641
Total	21,829	14,016	12,871

*The values consider the stake held by CPFL Energia's. 2018 data restated.

**Category that includes values related to the hourly dedication of team members, prospecting activities, publication of concluded projects, and other activities inherent to the R&D program.

GRI content index

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¹ The management approach refers to all the GRI topics and Sector Supplement listed within the material topic "Human resources management".

² The management approach refers to all the GRI topics and Sector Supplement listed within the material topic "Health, safety and quality of life".

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³ The management approach refers to all the GRI topics listed within the material topic "Corporate governance and ethical conduct".

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⁴ The management approach refers to all the GRI topics and Sector Supplement listed within the material topic "Relationship with customer".

⁵ The management approach refers to all the GRI topics and Sector Supplement listed within the material topic "Operational excellence and financial performance".

⁶ The management approach refers to all the GRI topics listed within the material topic "Energy efficiency and efficient resource use".

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GRI Electric utilities sector supplement 2013	EU13 Biodiversity of offset habitats compared to the biodiversity of the affected areas	52	-	8	15

⁷ The management approach refers to all the GRI topics listed within the material topic "Sustainable management of suppliers".

⁸ The management approach refers to all the GRI topics and Sector Supplement listed within the material topic "Conservation of ecosystems and biodiversity".

General disclosures	Disclosure	Page	Omissions	Global Compact	SDG
Material topic Climate Change					
GRI 103 Management approach 2016 ⁹	103-1 Explanation of the material topic and its Boundary	46, 47, 48, 49, 50 and 104	-	-	-
	103-2 The management approach and its components	46, 47, 48, 49 and 50	-	-	-
	103-3 Evaluation of the management approach	46, 47, 48, 49 and 50	-	-	-
GRI 201 Economic performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	48 and 49	7		13
GRI 305 Emissions 2016	305-1 Direct (Scope 1) GHG emissions	47 and 113	7 and 8		13
	305-2 Energy indirect (Scope 2) GHG emissions	47 and 113	7 and 8		13
	305-3 Other indirect (Scope 3) GHG emissions	47 and 113	7 and 8		13
	305-4 GHG emissions intensity	113	8		13

⁹ The management approach refers to all the GRI topics listed within the material topic "Climate change."



VERIFICATION STATEMENT OF 2019 ANNUAL REPORT OF CPFL ENERGIA

RINA BRASIL SERVIÇOS TÉCNICOS LTDA, on basis of the assessment carried out by its technical personnel, declares that the Annual Report, for the year 2019, named

CPFL – 2019 Annual Report

drawn up by the organisation

CPFL Energia


Complies with the requirements provided by the Global Reporting Initiative Guidelines, for the “Core” approach

drawn up by the organisation

CPFL Energia

Verification of 2019 annual report has been performed in accordance with the methods described in the RINA document “Rules for the verification of sustainability reports” available from the RINA site www.rina.org.

Date: 25/03/2020



RINA Natal Vasconcelos
Representante Legal
RINA Brasil

Natal Ferreira Vasconcelos

DIRECTOR RINA BRASIL

Form: SR STM-STD (02-2018)

14/03/2018

Aerial view of Santos (SP)



Credits and corporate information

CPFL Energia S.A.

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GENERAL DIRECTION

Legal and Institutional Relations Vice-Presidency
Environment and Sustainability Department
Communication and Institutional Relations Department

GATHERING OF INFORMATION

Employees of CPFL Energia Group (subsidiaries and affiliates)

CONTENT, CONSULTING, DESIGN AND INFOGRAPHICS

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PHOTOGRAPHY

CPFL Energia Collection

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