



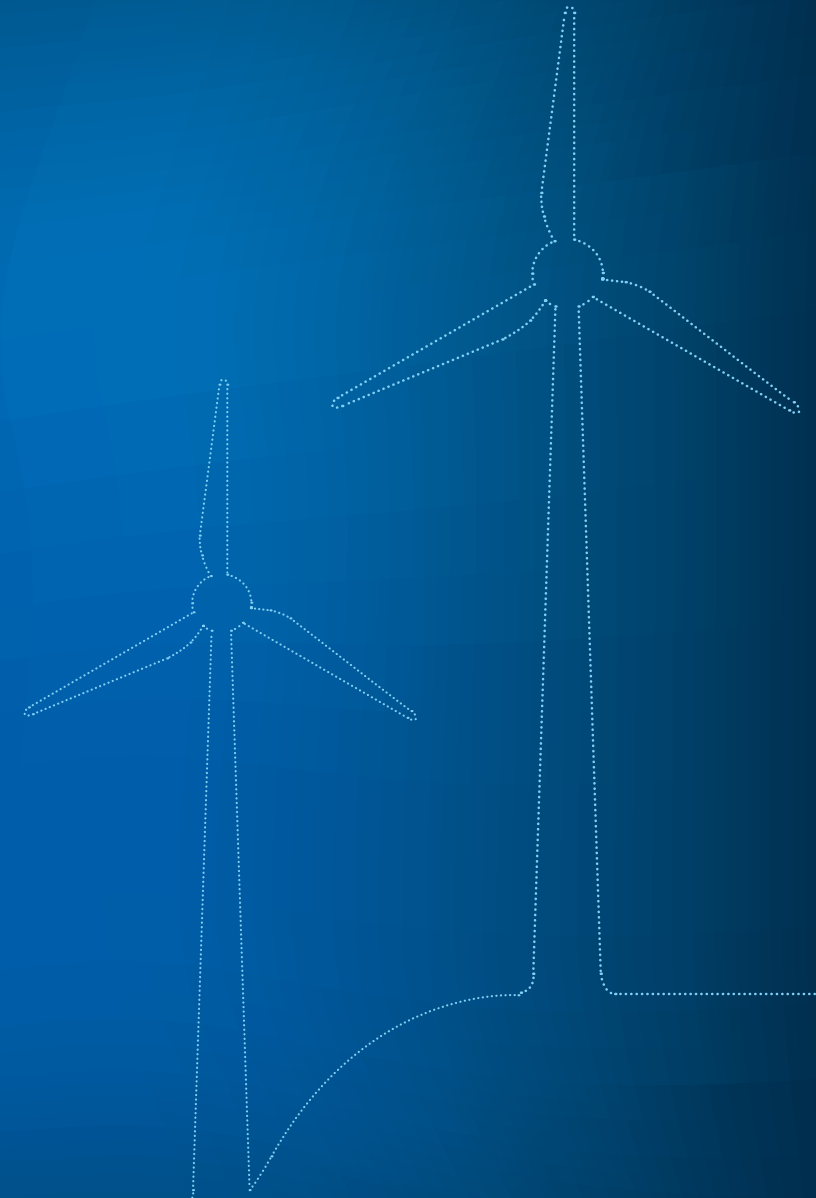
2019 INTEGRATED REPORT

65 YEARS OF COPEL. PURE ENERGY.



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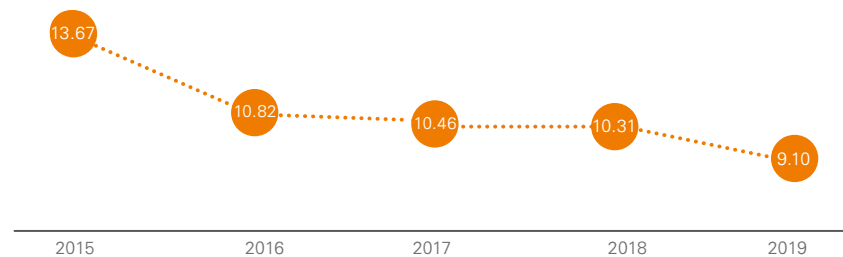
2019 Executive Summary

1.1 Sector context, Copel and business models

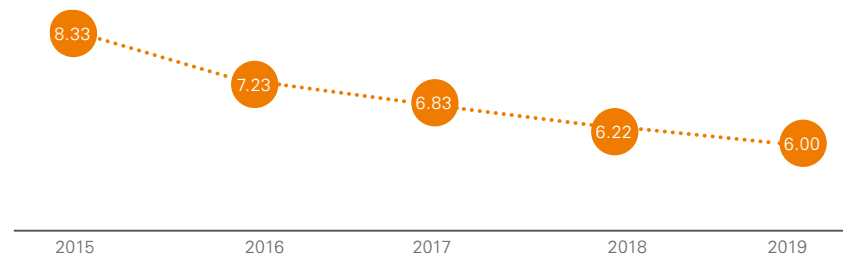
Pages 20 to 48

The year of 2019 was marked by macro-economic challenges and sectorial and regulatory advances. Copel celebrated 65 years of successful history in energy generation, transmission and distribution. Its subsidiaries' business models show how the Company generates value and supplies with quality Paraná and other states of the country. Indicators of Equivalent Duration of Interruption per consumer unit due to interruption originated within the distribution system (DECi) and Equivalent Frequency of Interruption per consumer unit due to interruption originated within the distribution system (FECi) showed a new drop. Novelties like Copel Smart Grid and Paraná Trifásico (Three-phase Program) will contribute to the Company's operational efficiency.

DECi Evolution (DECi measured in hours and hours' centesimal)



FECi Evolution (interruptions)



1.2 Corporate governance

Pages 49 to 61

Copel presents the best corporate governance among stated-owned companies and is the only company to obtain maximum score in B3's *Programa Destaque em Governança das Estatais* (State-owned Enterprise Governance Program).

Its Integrity Program is widely disseminated across the Company through in-person or distance training initiatives.

Copel adopts a risk management model based on risk appetite parameters, guided by the best market practices and the Policy for Integrated Management of Corporate Risks and Bylaws.

100%

of Copel operations were subject to risk assessments associated with corruption in 2019. Corruption cases were not identified in the Company.

5

channels for denunciations, complaints, among others, with guaranteed secrecy and independent analysis.

1.3 Sustainability management

Pages 62 to 70

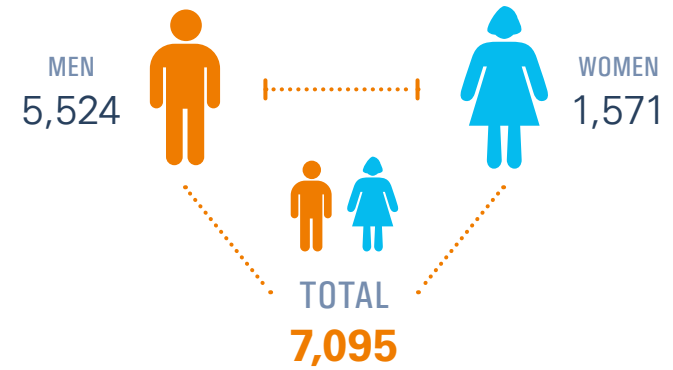
Copel endorses the main UN initiatives regarding socio-environmental and economic responsibility, is a signatory of the Global Compact, and is committed to the Sustainable Development Goals (SDGs). The Company promotes a series of initiatives to fulfill the 2030 Agenda – UN initiative to reach SDGs in the next ten years. Human Rights are one of the main themes addressed by Copel in the scope of sustainability. Currently, the first version of the Company’s Human Rights Policy is underway for publication. The Company also promotes campaigns and training on the subject.



1.4 Human capital

Pages 72 to 87

Copel’s People Management Policy makes clear that employees are the most valuable assets of the Company because their qualification, dedication and engagement are fundamental for the business’ success. Their knowledge and continuous development are the pillars for excellence. The Corporate Education Policy establishes the guidelines for the promotion of qualification actions, which include from basic training to graduate courses and research. Copel’s Diversity Program foments the search for equal rights, opportunities, and acknowledgment to all people, with attention to vulnerable groups, subject to discrimination. For Occupational Health and Safety, the guidelines come from the Occupational Health and Safety Policy, according to which everybody is responsible for the safety, health and well-being, and the understanding that accidents can be avoided.



	OWN EMPLOYEES	OUTSOURCED EMPLOYEES
Number of fatalities (deaths)	0	1
Number of work-related injuries with severe consequences	0	1
Number of recordable work-related injuries	42	108

1.5 Intellectual Capital

Pages 88 to 91

Research & Development (R&D) is fundamental to the Company and is included in the Business Plan, Strategic Planning and management practices. Innovation is a competitive advantage. Among the innovative projects that stand out, we have the research on the operation of electric vehicles or plug-in hybrids, battery- or fuel cell- powered, and that of energy generation through biogas, and the Network of Solar Energy Research Stations.

R\$ 62 million
invested in R&D in 2019

Total of **74** projects

23 strategic projects (with themes defined by Aneel)

5 patent requests filed at INPI

1.6 Capital stock and relationship capital

Pages 92 to 102

The Sustainability Policy establishes a transparent, regular and structured dialogue with stakeholders, considering their demands, priorities and expectations. Several communication channels are available to Copel customers, including the App, the virtual consumer service center, the call center and the Ombudsman. This audience's satisfaction is a material theme for the Company.

Another priority is the access to energy for everyone. Due to that, Copel maintains Tarifa Social de Energia Elétrica, Luz Fraterna, Tarifa de Irrigação Noturna, Tarifa Rural Noturna and +Clic Rural Programs (Electricity Social Tariff, Night Irrigation Tariff, Night Rural Tariff), which benefit thousands of people. Jointly with the state government, Copel launched the Ilumina Paraná project in 2019, an initiative for the modernization of street lighting systems in several municipalities. Communities surrounding the Company's operations are the focus of volunteering actions and corporate activities that promote social responsibility. Copel also invests in infrastructure for these communities, including reform and construction of essential facilities like schools, and causes relevant impacts, like direct and indirect jobs.

Clients

3,665,426 calls recorded by the distributor's call center

100,284 complaints

41,768 complaints considered well-founded

Access to energy

Over R\$ 200 million

Invested in programs for the promotion of access to electricity

Communities

3,014 hours of volunteering

Suppliers

2,126 suppliers hired by Copel in 2019

R\$ 299.5 billion in amounts paid

1.7 Natural capital

Pages 103 to 110

Climate change is a very relevant theme to Copel, since it is associated both to financial risk and to the opportunity to expand its businesses. The environmentally responsible guidelines of the Company, its wholly-owned subsidiaries and controlled companies are defined in the Sustainability Policy, which promotes environmental management based on the analysis of performance and efficiency. Copel operation activities, in addition to depending on natural resources, impact on the environment according to the resource employed and the type of business. Thus, while conducting prospecting studies and implementing new businesses, impacts are described in environmental studies and their results ground the development of actions for mitigation, preservation and recovery of the environment.

	2018	2019	VARIATION
Greenhouse gas emissions (tCO ₂ e)	388,312.45	235,429.76	-39%
Total energy consumption	296,264.55	259,320.59	-12%
Water consumption in all Copel and its wholly-owned subsidiaries' offices (m ³)	131,201	161,000	23%
Tons of waste generated	63,284	46,424.28	-27%
Correctly disposed of waste	100%	100%	-

Note: There were no significant reports of atmospheric emissions due to the non-operation of the Figueira Thermoelectric Plant (coal) in 2019.

1.8 Manufactured capital

Pages 111 to 119

43 owned plants

- 23** hydroelectric
- 29** wind farms
- 2** thermoelectric

11 partially-owned plants

7,157.5 MW total installed capacity

3,018.4 MW assured energy

7,441 km transmission lines

16,174 MVA of transformation potential in transmission substations

Investments in undertakings that will add **391** km to transmission lines and **3,600** MVA of transformation capacity to its portfolio and partnerships

4 transmission substations in the works

Extension of distribution lines

Voltage level

13.8 kV 106,956 km

34.5 kV 85,735 km

69.0 kV 756 km

138.0 kV 6,507 km

Total 199,954 km

374 distribution substations

R\$ 17.25 million in investments in infrastructure, equipment and telecommunication installation services

Total of **34.2 thousand** km of fiber optic network, **12 thousand** km of backbone network and **24 thousand** km of access network.

99.91% service availability in 2019.

1.9 Financial capital

Pages 120 to 124

R\$ 16,244.2 million Net Operating Income, **8.8%** higher than 2018

R\$ 4,284.50 million Ebitda, **36%** higher than 2018

26.4% Ebitda Margin (Ebitda/NOI)

R\$ 2,062.9 million net profit, **41.4%** higher than 2018

2. Acknowledgments

AWARDS AND CERTIFICATIONS	CERTIFIER
Abradee Award – Assessment by the client 2019	
Abradee Award – Best company in the South of Brazil 2019	Associação Brasileira de Distribuidores de Energia Elétrica (Abradee)
Abradee Award – 2nd position Management Quality 2019	
Cier Award – Best Distributor (silver category)	Comisión de Integración Energética Regional (Cier)
Paraná Climate Seal ‘Gold’	Paraná State Government
Citizen Company Certification – information provided in the social report	Conselho Regional de Contabilidade do Rio de Janeiro, Sistema Firjan e Fecomércio
500 top of the south Award – Largest company in Paraná and Highest net income in the energy sector	Amanhã Magazine
Sesi SDG Award – Acknowledgement of practices in favor of the sustainable development goals – industry category	
Sesi SDG Seal - Internet Without Bullying project	Serviço Social da Indústria (Sesi)
Sesi SDG Seal - Cultivar Energia Program	
Sesi SDG Honorable Mention – Zero carbon	
2nd position – Aneel South Quality Award (former IASC) – Concessionaries above 400 thousand consumer units	Agência Nacional de Energia Elétrica (Aneel)
Aneel Ombudsmand Award – Second position	
Best socio-environmental practices – 1st position	Benchmarking Brasil
Best Fleet Management in the country	Instituto Parar
Abraconee Award - Best Dissemination of Accounting Statements in 2018 – 3rd position in Company category	Associação Brasileira dos Contadores do Setor de Energia Elétrica (Abraconee)
State-owned Enterprise Governance certification	
ISE – Corporate Sustainability Index	Brasil, Bolsa, Balcão (B3)
Pró-Ética Award 2018-2019 – corporate integrity	Controladoria-Geral da União (CGU) and Instituto Ethos
Ibero-American Quality Award – finalist	Fundação Ibero-americana de Gestão da Qualidade (Fundibeq)
Women on Board Seal – for women presence in the Administration Board	United Nations (UN)
Global Compact SDG Award – Internet without Bullying – Copel Telecomunicações	Global Compact



ABOUT THE REPORT

The 2019 Integrated Report of Companhia Paranaense de Energia – Copel, offers a detailed overview of the Company’s performance in the period from January 1st to December 31st, 2019. The document gathers financial information as required by the current legislation, presents the business model of its wholly-owned subsidiaries and the performance in human, intellectual, social and relationship capital, natural capital, and manufactured and financial capitals. [GRI 102-50](#)

The accounting data presented in this report refer to companies where Copel holds shares. Non-accounting data comprise Copel (Holding Company) and its wholly-owned subsidiaries Copel Geração e Transmissão S.A., Copel Distribuição S.A., Copel Telecomunicações S.A. and Copel Comercialização S.A., indicating, where applicable, some inclusion or exclusion.

Copel’s Integrated Report was organized in two parts; the first part presents the Company’s businesses and the second part addresses the performance of capitals with a detailed approach to relevant themes of the business and their capacity to create value.

Doubts, suggestions or explanations about the 2019 Integrated Report content can be forwarded to relato.integrado@copel.com. [GRI 102-53](#)

Other Copel reports can be accessed online:

- Administration and Financial Statements Report
- 20F Report
- Copel Geração e Transmissão Socio-environmental Responsibility and Economic-Financial Report
- Copel Distribuição Socio-environmental Responsibility and Economic-Financial Report
- Copel Materiality Report

PREMISES ADOPTED TO PREPARE THE 2019 INTEGRATED REPORT

- The principles of the Global Reporting Initiative (GRI) – Standards: Core option and the G4 Electric Utilities Sector Disclosures; [GRI 102-54](#)
- Indicators specifically requested by Aneel in its Accounting Manual of the Electricity Sector; [GRI 102-54](#)
- Guidelines of the International Financial Reporting Standards (IFRS), considered in the information on financial statements and Progress Communication relative to the commitments made with the Global Compact;
- Law No. 13,303 (State-owned companies Law), of June 30, 2016, which establishes, in its article 8, item IX, the annual disclosure of an integrated or sustainability report;
- Principles for Responsible Executive Education (PRME), a global platform of the United Nations (UN) for voluntary engagement, which influences the performance of UniCopel, the corporate education department of Copel.

3.1. Relevant and strategic themes

GRI 102-44, 102-46

In 2019, Copel revisited the materiality matrix developed for 2018 (check the process in the 2018 Integrated Report) in order to prioritize the most relevant themes for the Company and its subsidiaries. The focus was on the reduction in the number of themes considered material, in line with the average amount adopted by the market. The analysis was also based on the updating of the nomenclature, according to the most recurrent usage in sustainability reports. Thus, a comparison of Copel materiality matrix to those of the other market players is facilitated. [GRI 102-49](#)

Initially, the materiality review process consisted of a benchmarking study that enabled the identification of material themes reported by the most relevant companies in the sector, both in domestic and foreign markets, in addition to adequacy to the different sustainability methodologies available. An online survey was also conducted with the Company's top executives. The tabulated data allowed the identification of the most recurring themes and the most often used nomenclature.

Comparing to the previous materiality matrix, a new theme was identified: "Customer Satisfaction". Additionally, the following improvements were made: [GRI 102-49](#)

- "Risk management" and "Operational efficiency" were divided to better address the distinct forms of management and their subthemes;
- "People management" replaces "Human capital management", and "Communities and social investment" replaces "Social responsibility", for being more recurrent in the market;
- "Engagement with stakeholders" did not remain in the matrix; however, the theme is addressed in the report for being intrinsic to GRI standards and transversal to all themes.

"Research, development and technological advances", "Non-renewable resources", "Diversity", "Human Rights" and "Climate change" did not score as material themes in isolation; however, they are considered important and are addressed in the Report. The exclusion reflects the already described prioritization process, which aimed at making the matrix lean and the Report more concise. "Research, development and technological advances" will be addressed in "Intellectual capital" and is part of the search for better operational efficiency. "Diversity" will be approached in "People management", and issues related to human rights are transversal

to "People management", "Occupational Health and Safety", and "Communities and social investment".



Copel Headquarters Building, in Curitiba
Credit: Daniela Catisti

Material themes for Copel GRI 102-44, 102-46, 102-47	Material aspects GRI Standards	Limits within	Limits outside
Corporate governance	Anti-corruption (205-1, 205-2 and 205-3);		
	Public policy (415-1)		
Operational efficiency	Availability and reliability (EU6)		
	Planned capacity against energy demand projected in the long term (EU10)		
	System efficiency (EU11)		
	Transmission and generation losses (EU12)		
	Energy supply interruptions (EU28)		
	Average interruption duration (EU29) Plant average availability factor discriminated per energy source and regulatory system (EU30)		
Occupational Health and Safety	Occupational Health and Safety (403-1 to 403-10)		
	Health and safety of contractors and subcontractors (EU16)		
	Workers subject to training in safety (EU18)		
Economic-financial performance	Economic and financial performance (201-1, 201-3, 201-4)		
People management	Employment (401-1, 401-2, 401-3)		
	Labor relations (402-1)		
	Training and education (404-1, 404-2, 404-3)		
	Diversity (405-1, 405-2)		
	Non-discrimination (406-1)		
	Freedom of association (407-1)		
	Availability of specialized labor (EU14) Percent of employees qualified for retirement in the next 5 and 10 years (EU15)		
Environmental management	Financial implications and risks due to climate change (201-2)		
	Energy (302-1, 302-2 and 302-4)		

Material themes for Copel GRI 102-44, 102-46, 102-47	Material aspects GRI Standards	Limits within	Limits outside
Environmental management	Water and effluents (303-1, 303-2, 303-4, 303-5)		
	GHG emissions (305-1, 305-2, 305-3, 305-4, 3-5-5, 305-6, 305-7)		
	Effluents and waste (306-1, 306-2 and 306-5)		
	Suppliers environmental assessment (308-2)		
Risk management	Anticompetitive behavior (206-1)		
Regulatory environment	Environmental compliance (307-1)		
	Social and economic compliance (419-1)		
Customer satisfaction	There are no GRI indicators associated with this theme, which will be addressed using information monitored by Copel.		
Communities and social investment	Presence in the market (202)		
	Indirect economic impacts (203-1, 203-2)		
	Market practices (204-1)		
	Child labor (408-1)		
	Forced or analogous to slave labor (409-1)		
	Assessment of human rights (412-1)		
	Local communities (413-1)		
	Inclusion of Stakeholders (EU19)		
Expropriations (EU22)			

Note: 1. GRI does not present disclosures (performance measurement) specific for “Corporate governance” and “Risk management” because it considers them as general standard content of a sustainability report. Not all these disclosures are mandatory in reports in the “Core” option, however, Copel decided to answer them to address these themes completely and transparently. For corporate governance, 102-18 to 102-39 were included and for risk management, 102-15 was included.

Legend

DIRECT IMPACT
 INDIRECT IMPACT
 NO IMPACT
 GRI 102-40





**MESSAGE FROM
THE CEO**



Message from the CEO

GRI 102-14

Created in 1954, Copel celebrated its 65th anniversary in 2019, directing its investments and human resources to the Company's DNA: generating, transmitting and distributing energy widely and safely to 4.7 million consumer units in the State of Paraná.

One of the early pioneers in the industry, Copel was the first company in the Brazilian electricity sector listed on the New York Stock Exchange in 1997. Since then, following the example of large state-owned and private sector companies, it has improved its processes and increased investor trust.

We reached a historical milestone in the last fiscal year: we exceeded R\$ 2 billion in consolidated net profit. Our Ebitda also presented a growth of R\$1,141.3 million against 2018, and such a result is a product of our increased efficiency and productivity.

If 2018 stood out as the year Copel completed of a long cycle of investments in our generation and transmission ventures, 2019 was the year we tested our planning, technology and workforce. By overcoming regional barriers, we concluded, in Rio Grande do Norte state, Bento Miguel Wind Farm Complex, with 132.3 MW of installed capacity, and finished the last wind generator of Cutia Wind Farm Complex, with 180.6 MW, totaling 312.9 MW. In Mato Grosso state, the implantation of the Colíder Power Plant was completed, with 300 MW of installed capacity. With three generating units, the plant is now fit to produce enough energy to meet the consumption of approximately 1 million people.

We are currently the sixth-largest wind energy generator in Brazil and the second largest in Rio Grande do Norte state. However, as we operate in an increasingly competitive segment, we keep on making way for new acquisitions. In 2019, we won the New Energy Auction (A-6) (*Leilão de Energia Nova*) for construction of Jandaíra Wind Farm

Complex, also in Rio Grande do Norte, with 90.1 MW of installed capacity and investments of around R\$400 million. We also concluded the process for the acquisition of SPC Uirapuru Transmissora de Energia, a project located between Londrina and Ivaiporã, which plays a relevant role in the interconnection of electric systems in the South and Southeast of Brazil, covering 120 km of 500 kV transmission lines across ten municipalities in the state of Paraná.

In our state, we inaugurated the last large hydroelectric development of Iguaçu River, Baixo Iguaçu Hydroelectric Plant, with 350 MW of installed capacity. Established by means of a consortium formed by Copel and the Neoenergia Group, the plant, which had investments of around R\$2.3 billion, can supply electric energy to a municipality with approximately 1 million inhabitants.

In the transmission segment, the following substations were concluded: Andirá Leste, Medianeira Norte and Curitiba Centro, all operating at 230 kV, in addition to a 38 km-long 230 kV transmission line – Baixo Iguaçu – Realeza, , and the Uberaba – Curitiba Centro underground line.

We would also like to highlight the inauguration of the first biogas thermal generation unit in Brazil, which, with R\$17 million in investments and installed at the margins of Itaipu reservoir, uses waste from local pig farming to generate energy.

In 2019, investments in the distribution system amounted to R\$800 million, with R\$158.4 million destined to the expansion of six substations and implantation of six more. We add to these numbers the conclusion of five new 69 kV and 138 kV high-voltage lines. On the whole, these undertakings mean an addition of approximately 278.18 MVA to the distribution system and 18.41 km of 69 kV and 138 kV transmission lines.

While keeping the focus on our core business, we turn our attention to an extremely important activity in our state: agricultural production. Since 2015, with the implementation of the Mais Clic Rural program, Copel has expanded the electrical grid in rural areas with an emphasis on agricultural and livestock activities of important production processes. In 2019, the implantation of new technologies continued, which resulted in a reduction of 35% in rural area DEC (average interruption duration index) since the beginning of the program. It is also worth mentioning the launching of the Paraná Trifásico (Three-phase Paraná) program, which will invest R\$2.1 billion in upgrading the networks that serve our rural area to three phase, transforming them into fully reliable smart grids.

Smart Copel complex, a new integrated center of operations and services installed in Curitiba, uses the most advanced technologies to meet the needs of the future electric system. The center enables the monitoring of intelligent meters across Paraná, electric vehicle charging stations, distributed generation systems, sensors, automatic reclosers, among other technologies emerging in the state.

Copel Energia is one of the most important focuses of attention by the Company. The mission of the wholly-owned subsidiary is to take on clients that opt for the free energy modality. About to celebrate its fourth anniversary, Copel Energia reached the expressive number of 1,3 aGW of energy sold in 2019, achieving the 11th position in the energy sales ranking of traders for the

year. The increase in our end-customer base went from 284 in December 2018 to 384, in December 2019, distributed across 14 Brazilian states. This is an expressive number that places us closer to fulfilling our goal of being among the main players of the segment.

We went ahead with our cost reduction plan, with the termination of office space leases in Curitiba, totaling 5,000 m² of usable area. The subsidiaries, on the other hand, did not

appoint any new chief assistant officers, adviser positions were cut by half and the position of assistant to senior manager was extinct throughout the Company. We will keep an eye out for other medium and long-term initiatives required to achieve the Company's goals.

Initiatives to improve efficiency and reduce costs added to good governance and compliance practices constitute the supporting pillars of Copel's businesses.



Smart Copel, Curitiba.
Credit: Guilherme Pupo.

Sustainable companies add value to their businesses and obtain conditions to better face any economic, social and environmental risks. Our sustainability strategies are in line with our strategic benchmarking, best market practices and commitments made.

As a product of our efforts, we were acknowledged, in 2019, as the company with the best governance among state-owned companies, according to B3's State-owned Enterprise Governance program. We are still among the most valuable companies in Paraná and the top 3 in Brazil's Southern Region. We were also acknowledged as the second-best distributor in Latin America, an award granted by the *Comisión de Integración Energética Regional* (Cier), and the best in Brazil in the customer's perception, as verified by the Brazilian Association of Electricity Distributors - Abradee. Our Audit received the international certification in Quality Assessment and Copel Distribuição ombudsman received, for the second year in a row, the Aneel Ombudsman Prize.

Seeking to become a benchmark in sustainability, we keep our commitment to the UN Global Compact principles and goals. Copel improved its performance in sustainability and ensured, for yet another year, its presence in B3's Sustainability Index (ISE) portfolio. This Integrated Report offers detailed information on this performance.

Honoring our commitment to advancing the Sustainable Development Goals, the Internet without Bullying project, created by Copel Telecom in partnership with Abrace Programas Preventivos, received the award for best sustainable practice in the large companies category, while the *Cultivar Energia* (Cultivating Energy) program, supported by Copel Geração e Transmissão, received the Benchmarking Brasil award.

We would like to emphasize that Copel Telecomunicações, with 100% optical fiber technology, renders a highly demanded and praised service, but also requires intensive investments to face competition. Given this setback, during 2019 we reviewed our operations, market, investments and return, always seeking to maintain the quality already consolidated by the Copel Group, while deepening studies on the potential disposal of Copel Telecomunicações S.A. control, in collaboration with external financial and legal advice.

All our achievements in 2019 occurred thanks to the invaluable support of our employees. Considering that one of the main competitive advantages of companies is a highly qualified staff, Copel's strategy is to encourage and promote the continuous education of employees, aiming at the development of their skills and career evolution. For this, the Company will keep on providing the

tools to create high-performance teams and consolidate the Company's culture of safety, health and quality of life.

At the beginning of 2020, the world was taken by surprise by coronavirus pandemic. Therefore, Copel will face an unprecedented challenge this year. An invisible enemy, common to all nations, has imposed severe restrictions on people and economic activity. Reconciling health protection measures with productive activity is our most urgent goal. We are at the forefront, striving to fulfill our responsibility to over 11 million Paraná residents, and we will not fail in our mission.

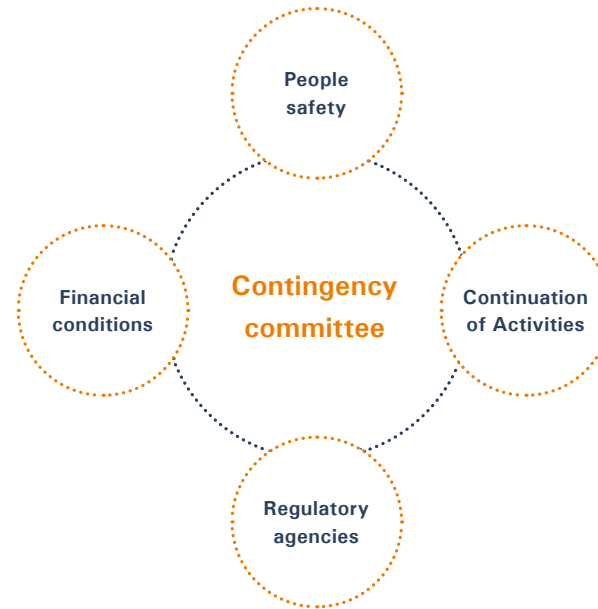
Daniel Pimentel Slaviero
CEO of Copel

COVID-19 Pandemics

The World Health Organization decreed the world pandemic on March 11, 2020, due to the new coronavirus. Copel immediately started a task force to implant prevention and contingency measures, according to guidance from the Ministry of Health, ANEEL (National Electrical Energy Agency) and other authorities.

The objective was to keep electricity supply to over 11 million Paraná residents while protecting employees, consumers, suppliers and partners. Safety and health are essential values to the Company, due to the nature of the service rendered and the seriousness with which Copel treats the theme in all its activities.

The establishment of a Contingency Committee is outstanding, and its objective is to monitor and mitigate impacts and consequences to the main activities of the Company, since new risks may arise that can impact them. Moreover, the Committee has constantly monitored established contracts, energy market liquidity and the short-term price, as well as negotiations with the grantor for implementation of guidelines to ensure the maintenance of the economic and financial sustainability of the whole chain of energy generation, transmission, trading and distribution.



Material themes

(higher impact so far)

- Corporate governance
- Operational efficiency
- Occupational Health and Safety
- Economic and financial performance
- People management
- Risk management
- Regulatory environment
- Customer satisfaction

Main events:

03/11 – Declaration of world pandemic by the WHO.

03/12 – Establishment of the Contingency committee.

03/16 – Embracing the practice of home office – first for employees in the risk group – and reduction of working hours. Then, expanding it to 4,000 collaborators.

03/17 – Campaign for utilization of virtual service.

03/20 – Acquisition of the first lot of IPEs for COVID-19 for professionals in the front line.

03/22 – Edition of MP 927 by the Federal Government which provides for labor measures to face the state of calamity.

03/23 – Suspension of in-person services, transferring all services to digital format, and reinforcement of the campaign for remote payment of bills.

03/24 – Expansion of the ‘Luz Fraterna’ program, taking the consumption limit from 120 kWh to 150 kWh per month. Electricity bills of 217.5 thousand families will be financed by Paraná Government for 90 days.

03/24 – ANEEL Resolution No. 878 establishes measures that include the prohibition of electricity supply suspension due to lack of payment of specific service categories, including (i) essential services and activities, (ii) users of equipment with limited autonomy, (iii) low-income residences and (iv) locations without operational collection stations.

04/01 – Edition of MP 936 by the Federal Government, instituting the Emergency Program for Maintenance of Job and Income, which provides for complementary labor measures.

04/07 – ANEEL authorizes anticipation of the transfer of R\$ 2 billion available in the reserve fund to distributors and 7,166 agents from the free market.

04/08 – Edition of MP 950 by the Federal Government, ensuring resources to expand exemption of up to 220 kWh/month to consumers that are beneficiary of the Social Electricity Tariff (TSEE), from April 1st to June 30th, 2020.

04/13 – Volunteer campaign through EletriCidadania program.

04/15 – Start of the annual vaccination campaign against H1N1.

04/23 – The state government enacted Law No. 20,187 / 2020 which forbids the cut of energy for (i) low-income families, (ii) customers with 60 years of age or more, or those diagnosed with coronavirus (COVID-19) or other severe or infectious diseases and disabled persons; (iii) informal workers; and (iv) businessmen classified as micro and small companies or individual micro-entrepreneurs.


As of the second quarter of 2020, there will possibly be a fall in the volume of energy sold and increase in consumers' default, combined with the reduction in collection and stoppage of several commercial and industrial activities due to social isolation, which may adversely affect the financial and economic results of our activities.

Copel will keep the update of its actions and impacts of the COVID-19 crisis in its several publications.


Copel will not stop

The 65 years of Copel's history has illuminated generations with the energy of its more than 7 thousand Copel workers. At home, streets and in the field, the Company will continue to supply energy for over 11 million Paraná residents, so that all essential services can keep on operating. The task-force that is being created in all departments, involving all teams – from those working from home to those at the front line, on the streets, plants, substations and operation centers – will ensure quality in energy supply.

Focus on online service channels

 0800 51 00 116

 www.copel.com
[AEN website](#)
[Online service channels](#)

 Copel Mobile App
(Google Play and Apple Store)



**SECTOR CONTEXT
AND COPEL**

The country's GDP (Gross Domestic Product) in 2019 increased by 1.1%, according to the IBGE (Brazilian Geography and Statistic Institute). Despite the advances, the Brazilian economy recovery is still slow – this was the weakest performance in three years. Positive expectations for the period – retake of investment, unemployment fall, improvement of public accounts and approval of reforms, like that of social security – did not concretize or took too long to occur.

As efforts to reverse the picture, the federal government released part of FGTS accounts balance in order to leverage families' consumption, and the Central Bank Monetary Policy Committee, considering the trend to keep inflation within the goal, reduced Selic rate four times in a row, and establishing a new historical milestone, 4.5% a year, making funds more accessible for investments and consumption. The job market, however, did not react as expected, remaining with two-digit unemployment rates, and increasing informality.

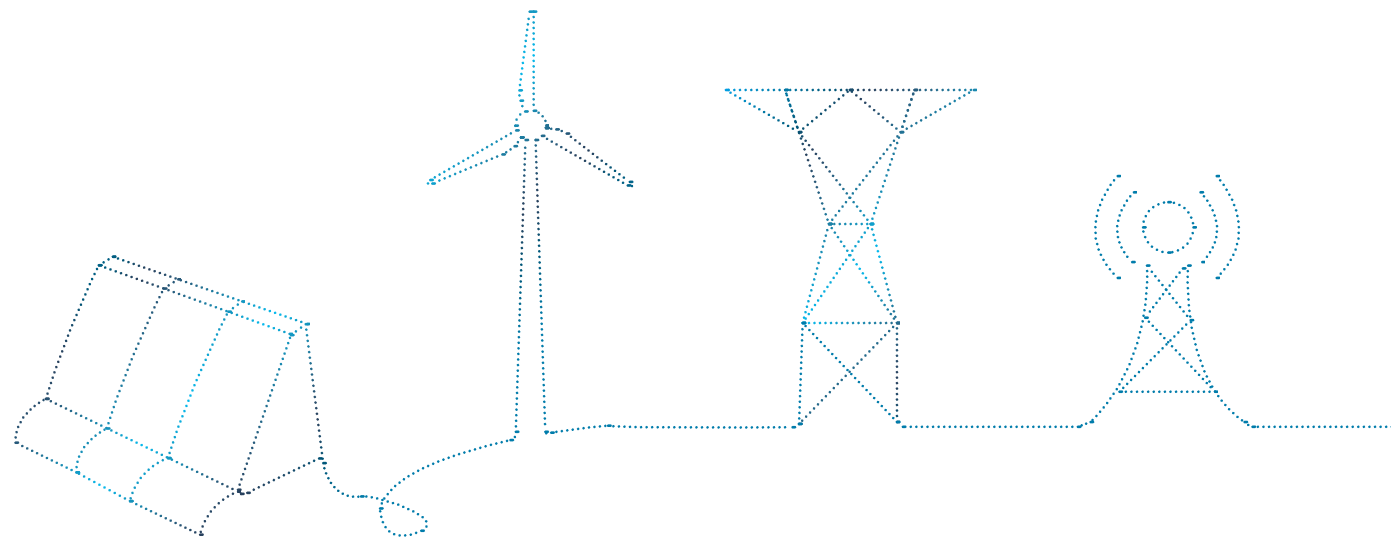
In Paraná, the economy behaved more favorably, with the solid recovery of the industry, as verified by the IBGE monthly industrial survey (physical production indicators). The state was one of those that expanded most in 2019, chiefly due to the vehicle, machine, equipment and food sectors. The retake of the agricultural crop also impacted associated sectors, like industry and commerce. Paraná was consolidated as the fourth federation unit to create more formal jobs during the year, according to data from

the General Register of Employees and Unemployed (CAGED), from the Ministry of Labor, due to the good results in civil construction, commerce and services.

5.1 Generation

According to Aneel, the goal of adding 5.8 thousand MW to the installed capacity of the matrix Brazilian electricity was surpassed in 2019 - the total addition was 7.2 thousand MW. The start of the operations on the Belo Monte Hydroelectric Plant contributed to this scenario, in addition to wind power plants, whose total capacities amount to 170 thousand MW. Brazil became the eighth country worldwide in installed wind capacity, surpassing Canada. The source already occupies the second position in the Brazilian energy mix, with over 15 GW installed.

The Ministry of Mines and Energy promoted, in the year, five energy auctions, two of them of New Energy (A-4 and A-6), two of Existing Energy (A-1 and A-2), and the Auction to supply Boa Vista and connected localities (isolated systems). In total, 3.7 thousand MW of installed capacity was contracted, which will require approximately R\$ 14.7 billion in new investments for the next five years. A large part of the additional capacity will be allocated in the free market, because, since the demand for energy in the regulated environment grew little in the last years, generators have attempted to make feasible their projects in this market, which is in expansion since 2016.



With regard to thermal plants, the government launched a program do stimulate the natural gas market, according to the National Energy Policy Council Resolution No. 16, of June 24, 2019, to generate utilization of a portion of the Pre-salt gas. For the first half of 2020, there are two auctions scheduled for replacement of old plants with new and more efficient plants, of A-6 type (new energy).

The sector expected for 2019 the inclusion of Bill No. 10.985, which would establish new conditions for renegotiation of the hydrological risk of energy generation undertakings – the Generation Scaling Factor (GSF). The GSF corresponds to the relation between the volume of energy generated by plants that integrate the Energy Reallocation Mechanism (MRE) and their total assured energy. In case the electric volume generated is lower than the assured energy, the hydroelectric plants must pay the difference. The Bill, however, was not confirmed.

5.2 Transmission

The year of 2019 was marked by important regulatory advances, like the regulation of transmission quality based on the definition of availability and operational capacity of installations in direct current and the indication of requirements for remote operation of transmission installations. It was also published, on February 28, the Homologatory resolution No. 2.514, regarding the review of the price bank. However, the

tariff change of renewed contracts, holders of assets belonging to the Existing System Basic Network (RBSE), was once again delayed for analysis of assessment reports, delivered to the Brazilian Electricity Regulatory Agency (Aneel) by transmitters on July 19.

On December 19, Aneel held the Transmission Auction No. 02/2019, which had the 12 lots sold. The concessions are turned to the construction of around 2.5 thousand km of energy transmission lines and substations, with the capacity to transform 7.8 thousand MVA distributed across the five regions of the country. The event saw a record general discount of 60.3% and planned investments of around R\$ 4.18 billion in 33 projects, with the expectation of generating 8.8 thousand jobs and a construction period of between 36 and 60 months. The reduction in the Permitted Annual Remuneration (RAP) of assets confirms the desire of entrepreneurs in the sector to invest in transmission.

For 2020, Aneel's agenda for the segment includes the improvement and consolidation of the standard that addresses reinforcements and improvements; classification of transmission installations; consolidation of general conditions for access to the transmission system; improvement and consolidation of the connection to transmission installations; improvement of the norm on the hiring of the use of the transmission system; and simplified financial settlement of charges.



The concessions are turned to the construction of around 2.5 thousand km of energy transmission lines and substations, with the capacity to transform 7.8 thousand MVA distributed across the five regions of the country.

5.3 Commercialization

The year of 2019 was marked by the leveraged traders' crisis, but also by advances in the free market. There was an expectation that prices would fall to the minimum level of the Differences Settlement Price (PLD) at the beginning of the year, but it did not occur due to the drastic reduction in rainfall. Instead, prices soared, exposing the fragility of companies that assumed risks higher than their financial strength could support. The situation lasted until May, when there was financial liquidation of March operations. There was a relative retake of the sector normality, which, little by little, recovered the volumes of energy traded and liquidity. As a consequence, the companies refined the credit analysis of counterparties, making the market sounder and more sustainable.

In terms of progress, these stand out:

- MME ordinance No. 465, of December 16, 2019, which reduced the minimum load required to buy energy in the free market, from 2.5 MW to 2 MW, came into force in January of the following year. On January 1st, 2021, this limit will be 1.5 MW;
- the evolution of Bills No. 232 and No. 1.917, which are being processed in the National Congress;
- the preparation of a new methodology for the definition of maximum and minimum PLD limits, according to resolution No. 858 of October 1st, 2019;
- Aneel revision of resolution No. 482, which establishes general conditions for access of micro-generation and mini-generation and technology advances applied to the electricity sector;
- Implantation of hourly price by the Operator of the National Electricity System (ONS).

In this context, 2019 was a year of consolidation of part of the measures adopted for structuring the segment and 2020 will be the year of preparation for the next steps of energy trading in the country.

5.4 Distribution

On January 1st, 2019, Decree No. 9,642/2018 came into force with which the government determined a gradual reduction of tariff subsidies paid by the Energy Development Account (CDE) at 20% a year. The regulatory rate for capital remuneration is essential to ensure the availability of resources to distributors for them to invest and appropriately render their service and should reflect the risk/return relation inherent in the business.

To define it, Aneel uses Capital Asset Pricing Model (CAPM) and Weighted Average Capital Cost (WACC) methodologies. The methodological review implies changes in the model in force until then, associated with the following variables:

- risk-free rate: proposes to use the average return of the Treasury Bills indexed to inflation (IPCA), replacing the North-American government bonds and country risk;
- cost of debt capital: proposes to use the average profitability of debentures issued by transmission and distribution companies linked to CDI + average issue cost;
- regulatory capital structure: proposes to use as third parties' capital proportion the percent resulting from the relation of the Net Debt to the EBITDA equivalent to 2.5 times; and
- risk premium for the distribution activity: variable to be considered in the cost of equity of the distribution segment, calculated by means of the difference in the cost of debt between the distribution and transmission segments.

The application of these changes, combined with the current economic scenario, indicate a fall in capital remuneration rate against the WACC in force. Before approving the new calculation methodology, Aneel will have to assess all contributions sent by agents in Public Consultation, which can result in further changes in the propositions presented.

5.5 Regulatory environment

GRI 103-1, 103-2, 103-3

The electricity sector is regulated by the following bodies: the Ministry of Mines and Energy (MME), the National Energy Policy Council (CNPE), the Electricity Sector Monitoring Committee (CMSE) and the Brazilian Electricity Regulatory Agency (Aneel). The MME is responsible for defining the sector's policies, which will rule the use of natural resources and other sources of electricity generation and the foment of the development and adoption of new technologies.

Aneel is responsible for establishing rules for electricity generation, transmission, distribution and trading segments, in addition to other tariffs that provide favorable conditions to the market development, ensuring balance among agents to the benefit of the society. The agency manages concession grants, permission and authorization of undertakings and electricity services, by a delegation from the Federal Government. It enables bidding procedures for the hiring of public services concessionaires and authorized companies for production, transmission and distribution. It also defines quality standards for services, and technical and economic indicators, being responsible for inspecting their fulfillment.

Normative acts associated with the electricity sector may directly impact Copel, both in strategic and operational activities. In 2019, around 6 thousand of these acts were

published. Due to the large volume, the regulatory area uses management tools and a data bank to map risks and identify affected areas and processes. It also identifies opportunities for business and legislation, promoting more competitiveness for Copel against the sectorial agents. Monitoring activities occur on a daily basis.

The regulatory area is allocated at Copel (Holding Company) and provides advice to wholly-owned subsidiaries and equity interests, in addition to mediating and conducting documents and official letters with regulatory bodies to ensure the fulfillment of the terms established by them.

5.5.1. Modernization of the electricity sector

In April 2019, the MME constituted specific Work Group to address the electricity sector modernization, whose products were the preparation of a general diagnosis and a report with proposals for improvement of the sector legislation. To put these proposals into practice, the MME instituted, through Ordinance No. 403, of October 29, 2019, the "Committee for Implementation of the Electricity Sector Modernization".

The body acts on the following fronts: pricing; supply criterion; transition measures; ballast and energy separation; systematic

of auctions; debureaucratization and improvement of processes; governance; insertion of new technologies; market opening; rationalization of charges and subsidies; transmission and distribution sustainability; energy reallocation mechanism; hiring process and electricity-gas integration.

Among the measures suggested, the opening of the free market already occurred, providing continuation to the process of reduction of load limits for hiring electricity through Ordinance No. 465/2019. Review of the general criterion for supply applicable to offer expansion studies and planning of the National Interconnected System (SIN) operation and calculation of assured energy of a generation undertaking were also approved.

Measures that require changes in the legislation in force were presented by the MME to congressmen and senators for assessment of amendments to Bills No. 1917/2015 and 232/2016, which provide for the electricity sector commercial model, portability of energy bills and electricity generation concessions.

The Copel regulatory area, supported by the wholly-owned subsidiaries technical areas, is participating in debates promoted by the MME by means of sectorial associations. This makes it possible for Copel to be actively involved in the modernization movement.

The Company is particularly interested in the free energy market, formally called Free Contracting Environment (ACL), where consumers freely negotiate with energy traders and generators. Copel Comercialização was created to operate in the free energy market, with a focus on Copel customers' retention and expansion of this base, considering the potential growth of this market. Only 31% of the whole electricity load of the National Interconnected System (SIN) is currently in ACL.

The subsidiary's competitive advantage is that it is part of an economic group holder of one energy distributor and one energy generator, which distinguishes it from a large part of traders. Another competitive advantage is the constitution of a technical body with different and complementary knowledge.

5.5.2 Participation in associations

GRI 102-13

The representation in the associations of the electricity sector and the performance of Copel's regulatory area, together with its technical areas, enable the Company to actively participate in the regulation of the sector, according to the interests of its stakeholders and society as a whole.

This participation takes place at the scope of the subsidiaries, through representatives with expertise in their business activities. To know the entities in which Copel GeT and Copel DIS participate and at what level, access to Socio-environmental and Economic-Financial Reports. The associations accessed by Copel COM and Copel CTE are reported in the GRI index of this report (page 126). Copel (Holding Company) participates in entities aimed at promoting sustainability, as well as makes several commitments in this regard. These actions can be seen on page 65.



Compact Electrical Grid
Credit: Marcelo Rothen

5.6 Operational efficiency

GRI 103-1, 103-2, 103-3

Ensuring operational efficiency is one of Copel's main commitments. For the Company, failures in this aspect constitute an important risk for businesses. In case the Company does not reach the minimum level in plants with dispatch centralized by the Operator of the National Electricity System (ONS), it can suffer income and assured energy losses.

Goals are defined with technical criteria and are demanding, but Copel has fulfilled them every year, particularly due to its planning. In terms of generation, availability is around 93%. Concerning transmission, the availability indicator records, currently, performance superior to 99%. The ONS currently issues performance report where organizations' position against the sector average is indicated about generation and transmission efficiency. In the last three years, Copel efficiency was above this average. [GRI EU30](#)

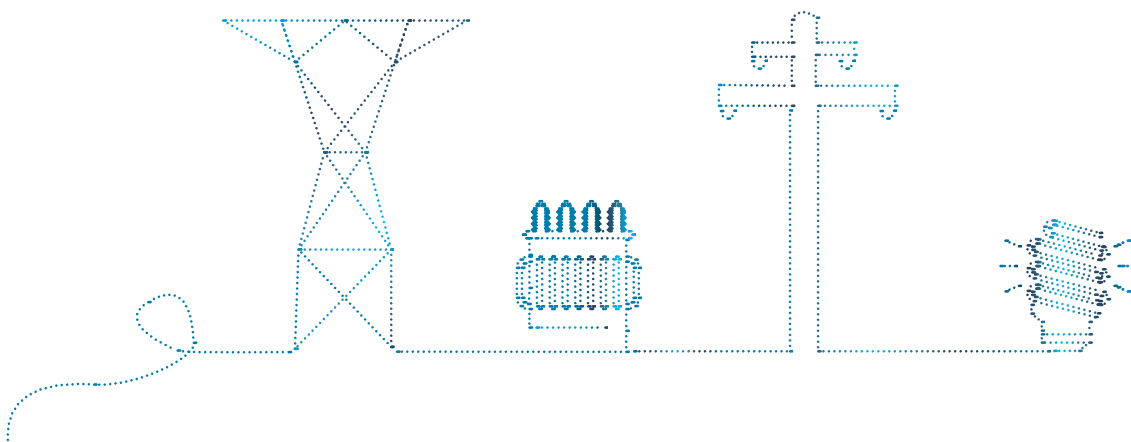
The Company must also meet Aneel expectations, like the ideal average cost of maintenance (percent of maintenance cost against total operational cost of the central in the previous year). This value must be informed in the Regulatory Self-assessment and Operational Performance Declaration (Dardo), as required by the agency.

The main risk for Copel operational efficiency is the lack of availability of a generating unit due to failures in equipment, which may cause loss of the generation function, that is, the capacity to produce energy in the plant. Occurrences of this nature impact the availability goals and failure rate of the power plants. To avoid this problem, Copel continuously monitors the performance of its equipment. Availability and failure rate projections are made yearly, based, respectively, on stop schedules for maintenance and histories of performance

of plants' generating units. Copel also keeps an operational reserve for equipment that presents more difficulty for immediate replacement. Additionally, the Company executes a biweekly program for analysis of occurrences, which enables the definition of means to avoid their repetition in other plants. This process involves maintenance and operation teams, and also maintenance engineering teams. Besides, the preventive maintenance plan is strictly followed, with monthly follow-up.

The technical management area, which verifies performance metrics, and Energy Generation and Energy Transmission Superintendencies are responsible for managing operational efficiency. Operational areas inform and act to correct failures. Plants, transmission lines and substations are served by their own maintenance teams. The Maintenance Engineering, installed in Curitiba, is responsible for the support of more complex issues that extrapolate the competences of field teams.

An operation management software was internally developed by the Copel IT area. The operation and maintenance processes of all electricity generating plants and energy transmission infrastructure have ISO 9001 (Quality Management Systems) certification.



Moreover, three or four times a year, those responsible for operational efficiency management meet with partners' operational areas to identify eventual deviations in common procedures. The maintenance team developed a manual of generation management that must be used by these plants. All generation maintenance activities are included in the document. A similar manual is being drafted for transmission in order to unify the different documents available on this theme.

For distribution processes, Copel adopts the Management Excellence Model (MEG) from the National Quality Foundation, and follows their performance in operational efficiency with Critical Analysis Meetings (RACs). For indicators that do not meet the criteria defined and agreed upon as goals, action plans are prepared according to methodology 'Relatório de 3 Gerações' (Three-generation Report), where aspects that caused the failure in reaching each indicator are identified and suggestions are made to recover results.

Electricity availability is ensured through a process called Distribution Networks Operation, which involves the planning of networks in the medium and long term, in addition to short term actions. Distribution systems are broken down per voltage class: average voltage (13.8 kV and 34.5 kV) and high voltage (69 kV, 88 kV and 138 kV). For the average voltage system, the planning

uses consumption, market growth demand and substations' measurement data. For the high voltage system, the planning uses the same data, plus those provided by ONS and by the Energy Research Company (EPE), with whom Copel develops several studies. Networks are simulated considering the vegetative growth of a given region and, based on the results, systemic works are planned to supply consumers' energy demand). Results of distribution-specific indicators have presented improvements every year (see Energy supply quality and energy losses on page 28). [GRI EU6](#), [EU28](#), [EU29](#)

Energy trading management, in its turn, is conducted by follow-up of indicators of processes, and action plans defined in performance analysis meetings, held every month, according to MEG methodology. Every quarter, strategic analysis meetings are held when the assessment of Copel COM management contract indicators occurs.

Finally, internal telecommunication processes are constantly reviewed, and those considered critical to the business undergo an internal audit every year. Likewise, there are periodic critical analysis meetings based on MEG, to identify eventual deviations and propose preventive and corrective actions. Services quality standard is regulated by performance indicators practiced in the market and followed by the National Telecommunications Agency (Anatel).



Substation
Credit: Marcelo Rothen

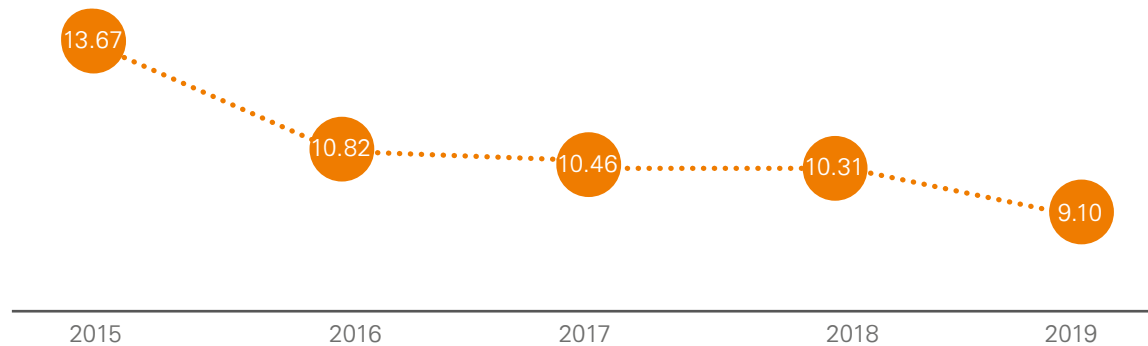
Electricity availability is ensured through a process called Distribution Networks Operation, which involves the planning of networks in the medium and long term, in addition to short term actions.

5.6.1. Supply quality and energy losses

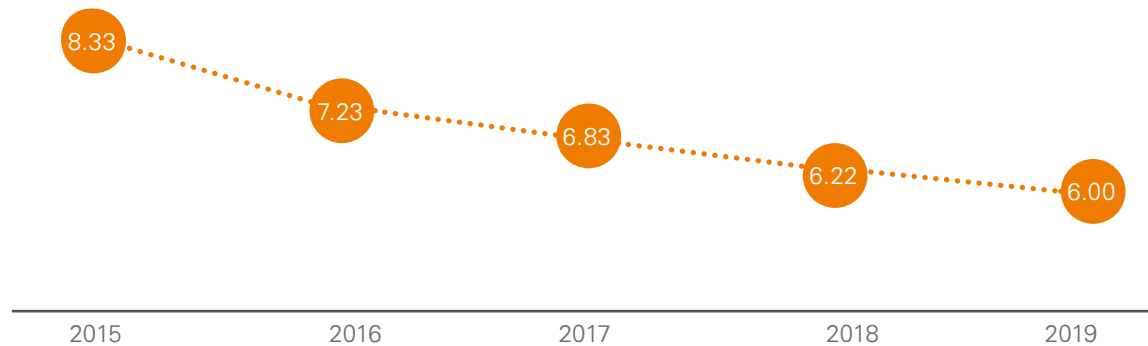
GRI 103-3, EU6

The results of the Equivalent Interruption Duration per Consumer Unit indicators due to the interruption of internal origin to the distribution system (DECi) and the Equivalent Interruption Frequency per Consumer Unit due to the interruption of internal origin to the distribution system (FECi) have been showing improvements since 2014, due both to the investments in works carried out throughout the distribution system and to the increase in maintenance and preventive inspections to improve performance. [GRI EU28, EU29](#)

DECi Evolution (DECi measured in hours and hours' centesimal)



FECi Evolution (interruptions)



Energy losses are inherent in the energy transformation, transmission and distribution process nature. In 2019, global distribution losses – technical, non-technical and from the basic network – represented 8.4% of the energy injected in the distributor system. This percent is lower against that of 2018. Technical losses, on this same base, recorded 6%, while non-technical losses recorded 1% in 2019. [GRI EU12](#)

Evolution of losses in transmission and distribution [\[GRI EU12\]](#)

TYPES OF LOSSES		2017	2018	2019
Transmission	Global losses (%)	1.40	2.47	2.62
	Technical losses (%)	1.40	2.47	2.62
Distribution	Global losses (%)	9.20	9.70	8.40
	Technical losses (%)	6.10	5.90	6.00
	Non-technical losses (%)	1.70	2.40	1.00

5.6.2. Conscious use of electricity

GRI EU7

Copel is committed to encourage the conscious use of energy and inform its consumers about that. Every year, campaigns are made to promote awareness on the theme. There are also public calls for energy efficiency projects, where industrial and residential consumers (including condominiums), commerce and services, public authorities, public and rural services (including street lighting) can participate.

The Company develops the Energy Efficiency Program (PEE), responsible for promoting efficiency in the final use of electricity. In 2019, R\$ 1.2 million was invested in the three main energy efficiency projects executed by Copel: two linked to PEE and one to R&D. Among them, the project with Paraná Federal University is outstanding, and was responsible for an important approximation of the academic milieu, due to the feasibility of implantation of energy efficiency actions in the community. GRI EU7

The main PEE highlight is the project 'Copel in the Community' turned to low-income consumers, that is, the beneficiaries of the Social Electricity Tariff - TSEE. The project includes lectures on safe and efficient consumption, energy diagnoses and replacement of equipment.

5.6.3. Advances in operational efficiency

GRI EU23

Copel Smart Grid Project

Project for implantation of the intelligent electrical grid in order to improve the telemetry system and thus improve services' quality and capacity of electricity distribution. It is in progress in 102 Paraná municipalities, where 900 thousand conventional meters undergo the process of replacement for intelligent equipment, 220 thousand in the rural area. The meters have cutting and reconnection functions as well as supply quality sensors, in addition to permitting consumption follow-up in real-time. Automation of high voltage networks is one of the main tools used to reduce the time and frequency of interruptions in energy supply. The total investment in the project will be R\$ 650 million in three years, with the conclusion expected for 2020.

+Clic Rural Program

Copel invested, in 2019, R\$ 94.3 million in new technologies and automation and communication systems, substations and works for improvement and reinforcement of the grid to improve electricity supply in Paraná rural area. The investments were made through +Clic Rural program for modernization of the grid in rural areas.

The measures, aimed at serving the four sectors most sensitive to the quality of energy

supply in the state - pig farmers, tobacco farmers, poultry and dairy farmers - benefited over 600,000 consumer units.

Approximately 11.3 thousand single-phase reclosers were installed since the beginning of the Program, with an investment of 383 million reais. The installation of the equipment resulted in 31% improvement in the Company's Rural DEC.



Three-phase grid installation in the rural area, Prudentópolis - PR.

Paraná Trifásico (Three-phase Program)

It is an initiative intended to implant 25 thousand km of three-phase grids in the state rural area, in order to renew assets, improve supply quality and provide more safety to employees and the population. Feeders will also be interconnected – which was not possible with single-phase – making possible redundancy in feeding and improvement in quality indices (DEC/FEC).

New technology is being used in the project, with protected cables that bring more safety and reduce the number of disconnections. Investments totaled R\$ 2.1 billion in six years of the project, to be concluded in 2025.

Full reliability

Copel will invest, until 2022, R\$ 300 million to implant new technologies for operation of the distribution system and improve its reliability. Improvements in the communication with teams in the field will occur, in addition to automation of special equipment; implantation of substations or switch stations in all municipalities, among others.

5.7 Energy planning and demand increase

The Energy Research Company (EPE), an organization linked to the Ministry of Mines and Energy (MME), conducts studies and projections of the energy mix and defines the Brazilian energy expansion and the integrated programming of resources, presented in the Energy Expansion Decennial Plan (PDE).

To safely meet the demand provided by PDE 2027, implantation of approximately 61 thousand MW in new centralized generation undertakings will be necessary. For Copel, such need represents opportunities for development, feasibility and implantation of new projects. The opportunities were identified – along with their risks – by the Business Development Board, and form Copel target portfolio and business expansion.

Almost the whole expansion of generation undertakings is made feasible through auctions conducted by MME and by the Brazilian Electricity Regulatory Agency (Aneel), according to the previously defined sources to be hired, maximum prices and safety conditions of electricity supply. For distribution, electricity hiring is made via auctions promoted by Aneel, through MME delegation. Thus, Copel does not have control of the energy origin and price. Strategic planning is limited to the projection and management of volumes that should be hired.

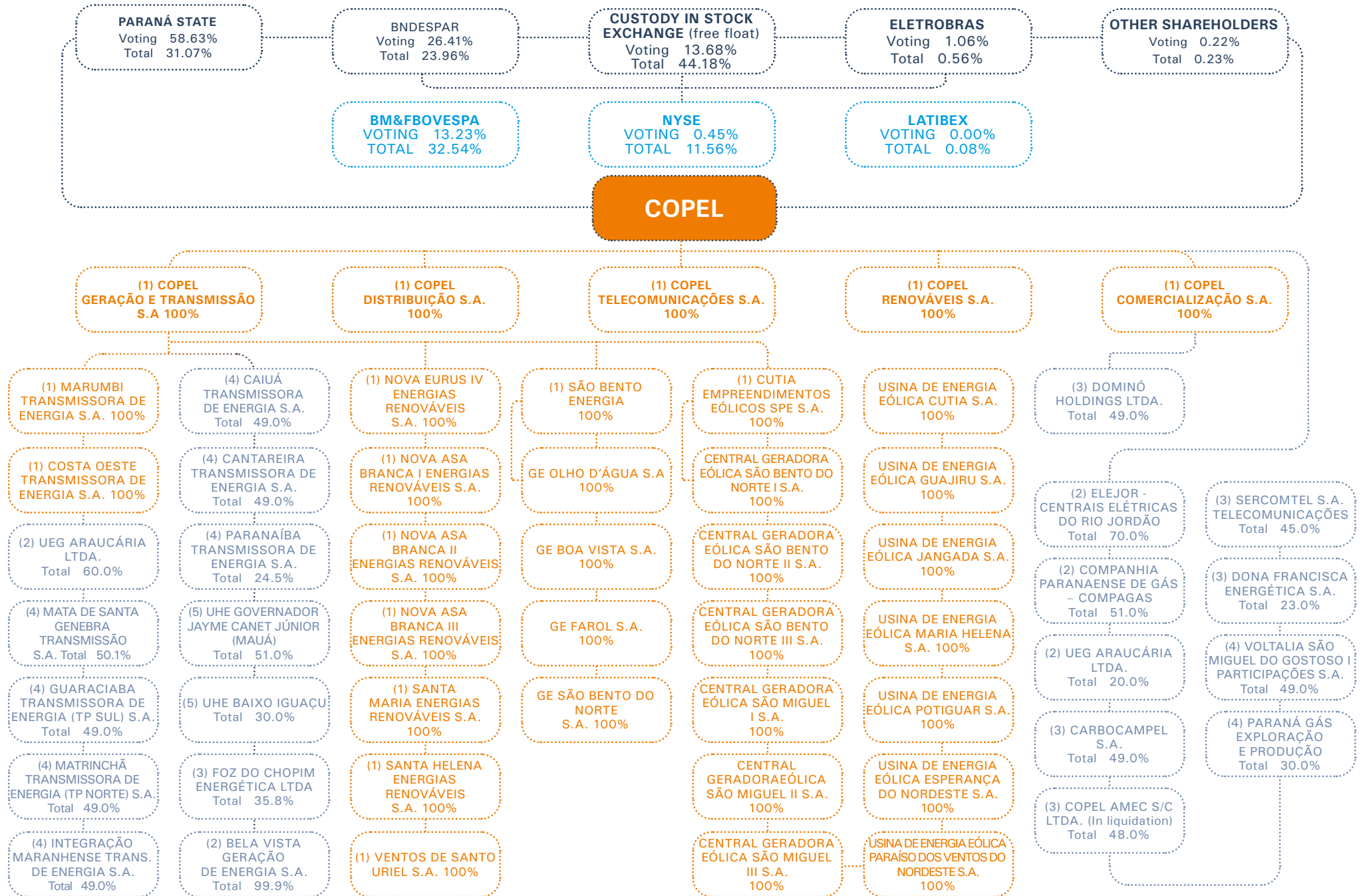


Rural region in the North of Paraná
Credit: José Ricardo Devara



**ABOUT COPEL
AND BUSINESS MODELS**

6.1 Organization chart – Equity interest



(1) WHOLLY-OWNED SUBSIDIARY (2) CONTROLLED (3) AFFILIATED (4) JOINTLY CONTROLLED (5) CONSORTIUMS

OBS: UEG ARAUCÁRIA LTDA. CONTROLLED HOLDS 19.31% AT GEX TIETÊ II EMPREENDIMENTOS PARTICIPAÇÕES S.A

6.2 A Companhia Paranaense de Energia

GRI 102-2, 102-6, 102-5, 102-7

Copel celebrated its 65th anniversary in 2019. Created on October 26, 1954, and headquartered in Curitiba (PR), it has operations in ten Brazilian states (see map) involving energy generation, transmission, distribution and trading activities, in addition to telecommunications and natural gas. The Company's electricity system comprises owned power plants, transmission lines, substations, electricity lines and grids of the distribution system and a modern optical telecommunications system integrating all Paraná cities.

In the energy segment, the main customers are consumers from the regulated market (residences, industry and commerce) and consumers from the free market (industry and commerce), conducted and inspected by Aneel. Copel Telecomunicações operates chiefly with corporate solutions in the 399 Paraná municipalities, also serving customers in retail in 84 Paraná municipalities and 1 in Santa Catarina.

Copel operates as a mixed-capital company, controlled by the Paraná state. Currently, COPEL's shares are traded in B3 and New York and Madrid Stock Exchanges.

COPEL OPERATIONS MAP

GRI 102-4, 102-6



MT



PR



RS



GO



MA



RN



BA



MG



SP



SC



TRANSMISSION LINE



SUBSTATION



DISTRIBUTION LINE



HYDROELECTRIC PLANT



WIND FARM



OPTICAL FIBER RING

COPEL TELECOMUNICAÇÃO OPERATIONS MAP

GRI 102-6



6.3 Business Model [GRI 102-2](#)

6.3.1 Copel Distribuição

THE CAPITALS BELOW ARE REPRESENTED BY COLORS TO IDENTIFY, IN THE PROCESS OF VALUE CREATION, WHICH OF THEM RELATE TO THE VALUE GENERATED AND FOR WHICH STAKEHOLDERS.



STAKEHOLDERS ARE REPRESENTED BY ICONS TO IDENTIFY WHICH OF THEM ARE IMPACTED BY VALUE CREATION.



» Financial efficiency
» Economic sustainability

» Investment in people

» Investments in contracts and acquisitions

» Social Investment

» Quality in energy supply (DEC/FEC)

» Corporate governance

» New technologies and improvement of processes and operations

» R\$ 1,165 MILLION IN EBITDA
» R\$ 7,385 MILLION IN DISTRIBUTION ASSETS
» R\$ 10,401 MILLION IN NET INCOME IN 2019

» 634 THOUSAND TRAINING HOURS
» R\$ 780.2 MILLION IN SALARIES AND BENEFITS

» R\$ 1,020 MILLION IN CONTRACTED VOLUME*

» 1,753 HOURS OF VOLUNTEERS
» 78,692 BENEFITED WITH LECTURES AT SCHOOLS
» DIFFERENT SOCIAL INITIATIVES
» 88 MILLION INVESTED

» 1st POSITION IN SATISFACTION WITH PERCEIVED QUALITY INDEX
» 2nd POSITION IN ANEEL CUSTOMER SATISFACTION INDEX

» ETHICS AND INTEGRITY IN BUSINESS

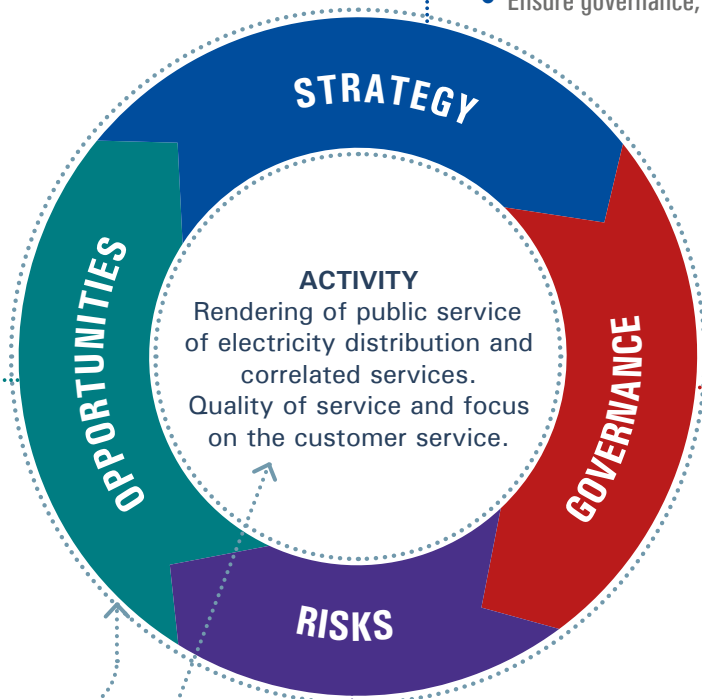
» 45 RESEARCH PROJECTS
» 02 PATENTS PUBLISHED
» 04 PATENTS REQUESTED



Mission
To provide energy and solutions for a sustainable development.

Vision
Being a benchmark in our operations and generation of value in a sustainable way.

*Refer to the nominal value of new contracts, started in 2019.



Copel DIS main objectives (Strategic Planning 2020 – 2024)

- Ensure corporate sustainability;
- Prepare the company and customers for digital transformation;
- Renew and expand assets;
- Promote meritocracy culture and develop a high-performance team;
- Consolidate safety, health and life quality culture;
- Ensure technical rigor in project management;
- Consolidate innovation culture;
- Promote qualitative leap of supply to rural areas;
- Ensure governance, risk management and compliance.

• Implantation of disruptive technologies

Innovating is fundamental to improve efficiency and is included in Copel DIS Strategic Map as an essential driver to maintain the concession.

Best corporate governance among state-owned companies according to [B]³.

Main risks to the business

- Loss of concession;
- Regulatory instability;
- Severe climate adversities;
- Unavailability or undue operation of operational technology systems.

Competitive advantage: service quality and attention to the customer

Note:
Copel DIS does not require natural resources for the execution of its business activities.

6.3.2 Copel Geração e Transmissão

THE CAPITALS BELOW ARE REPRESENTED BY COLORS TO IDENTIFY, IN THE PROCESS OF VALUE GENERATION, WHICH OF THEM RELATE TO THE VALUE GENERATED AND FOR WHICH STAKEHOLDERS.



STAKEHOLDERS ARE REPRESENTED BY ICONS TO IDENTIFY WHICH OF THEM ARE IMPACTED BY VALUE CREATION.



» Growing profitability in the last years
» Financial efficiency

» Valorization and investment in people

» Clean energy
» Cheaper energy

» Operational efficiency

» Social programs and investments

» Certification program and suppliers' development program

» Ethics and integrity in business

» **46% PROFIT COMPARED TO 2018**
» **R\$ 2,606.35 MILLION IN EBITDA**

» **R\$ 307,082 THOUSAND PAID IN SALARIES AND R\$ 78,461 THOUSAND PAID IN BENEFITS**
» **75.6 THOUSAND TRAINING HOURS**
» **R\$ 2,099 THOUSAND IN INVESTMENT IN TRAINING**

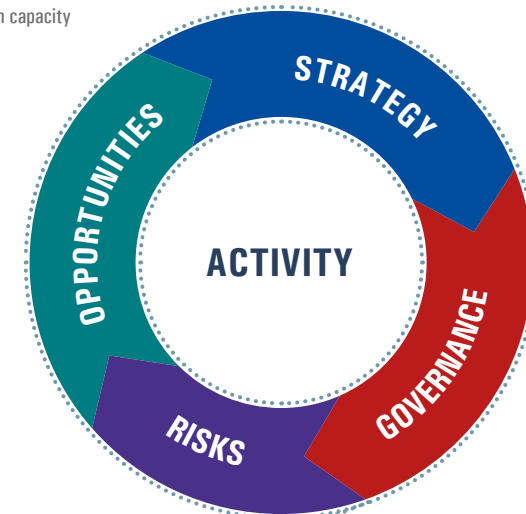
» **96% OF THE POWER PLANTS USE RENEWABLE SOURCES**
» **54% OF THE PLANTS USE ALTERNATIVE SOURCES**

» **94% AVAILABILITY OF POWER PLANTS**
» **OVER 99% AVAILABILITY OF TRANSMISSION LINES**

» **8.46 VOLUNTEERING HOURS, ON AVERAGE**
» **R\$ 1,593,073.98 IN FUNDS INVESTED IN EDUCATION AND SOCIAL ACTIONS**

» **95.4% ISF – SUPPLIER SATISFACTION INDEX**

» **COMPLIANCE WITH STANDARDS**
» **COMPLIANCE WITH GENERATION AND TRANSMISSION PARAMETERS**
» **FULFILLMENT OF CONCESSION CONTRACTS**



Mission
To provide energy and solutions for a sustainable development.

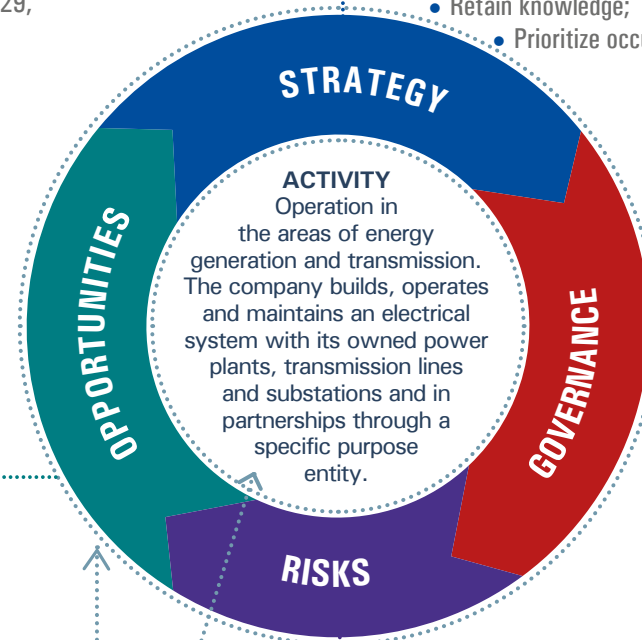
Vision
Being a benchmark in our operations and generation of value in a sustainable way.

Note:
1. We are considering owned plants and shareholdings.

- Need to generate through controllable sources, like thermal, due to higher use of wind and solar sources;
- Opportunities for electricity generation with biomass;
- Federal Government plan for generation expansion with new grants that would need investments of R\$ 239 billion reais until 2029, according to the Decennial Energy Plan (PDE) 2029;
- Six transmission auctions already scheduled by the Ministry of Mines and Energy, two each year until 2022;
- High volume of transmission authorizations due to the end of equipment service life;
- Federal Government plan for transmission expansion with new grants and authorizations that would need investments of R\$ 39 billion until 2029, according to PDE 2029.

Through innovation, Copel GeT seeks new sources, alternative sources and business models, following the country's energy transition movement.

Competitive advantage: Excellence in generation and transmission asset management.



- Increase participation in generation and transmission market sustainably and profitably;
- Invest in innovation, seek best practices and research new technologies;
- Renew and modernize assets aiming at the long term;
- Maximize energy trading profitability;
- Optimize the concession resources;
- Maintain concessions and authorizations;
- Continuously train and qualify employees;
- Retain knowledge;
- Prioritize occupational safety.

Employee qualification along with innovation programs and business strategies make the model adaptable to market and sector context changes.

Best corporate governance among state-owned companies, according to [B]³.

Main risks for business:

- Loss of concessions;
- Hydrological Risk;
- Regulatory change in progress;(electricity sector modernization);
- Drop in profitability of businesses in operation;
- Drop in projects' profitability (new businesses);
- Failures in dams;
- Unavailability or undue operation of the technologies' system (cybersecurity).

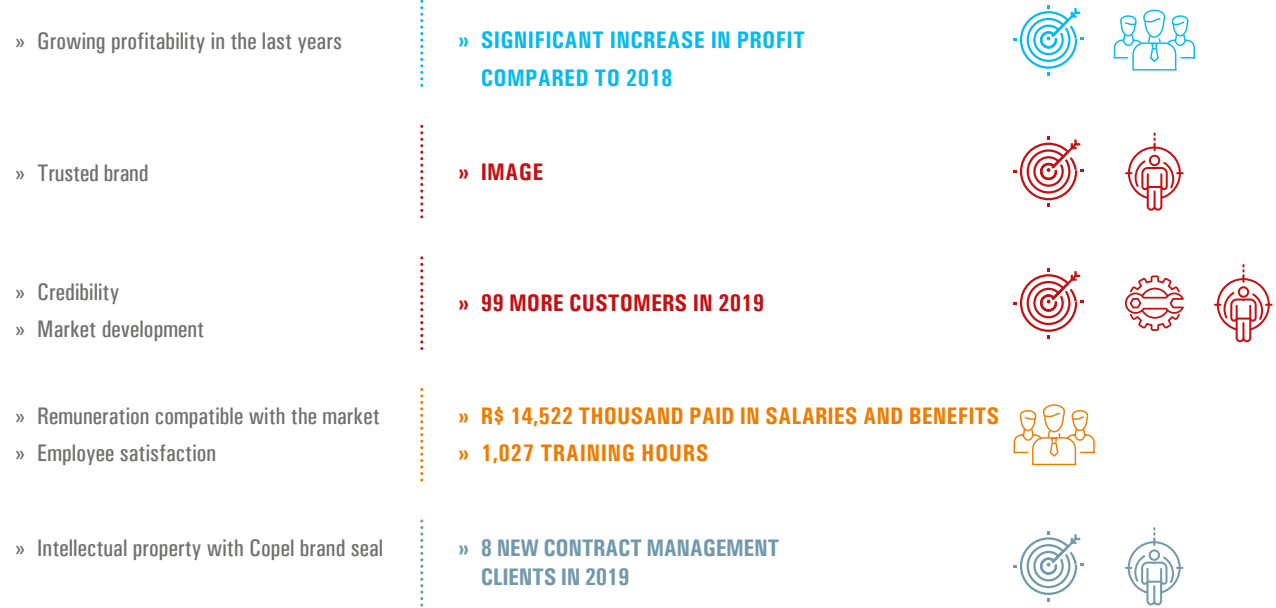
For all main risks, there are monitoring KPIs and mitigation plans.

6.3.3 Copel Comercialização

THE CAPITALS BELOW ARE REPRESENTED BY COLORS TO IDENTIFY, IN THE PROCESS OF VALUE CREATION, WHICH OF THEM RELATE TO THE VALUE GENERATED AND FOR WHICH STAKEHOLDERS.



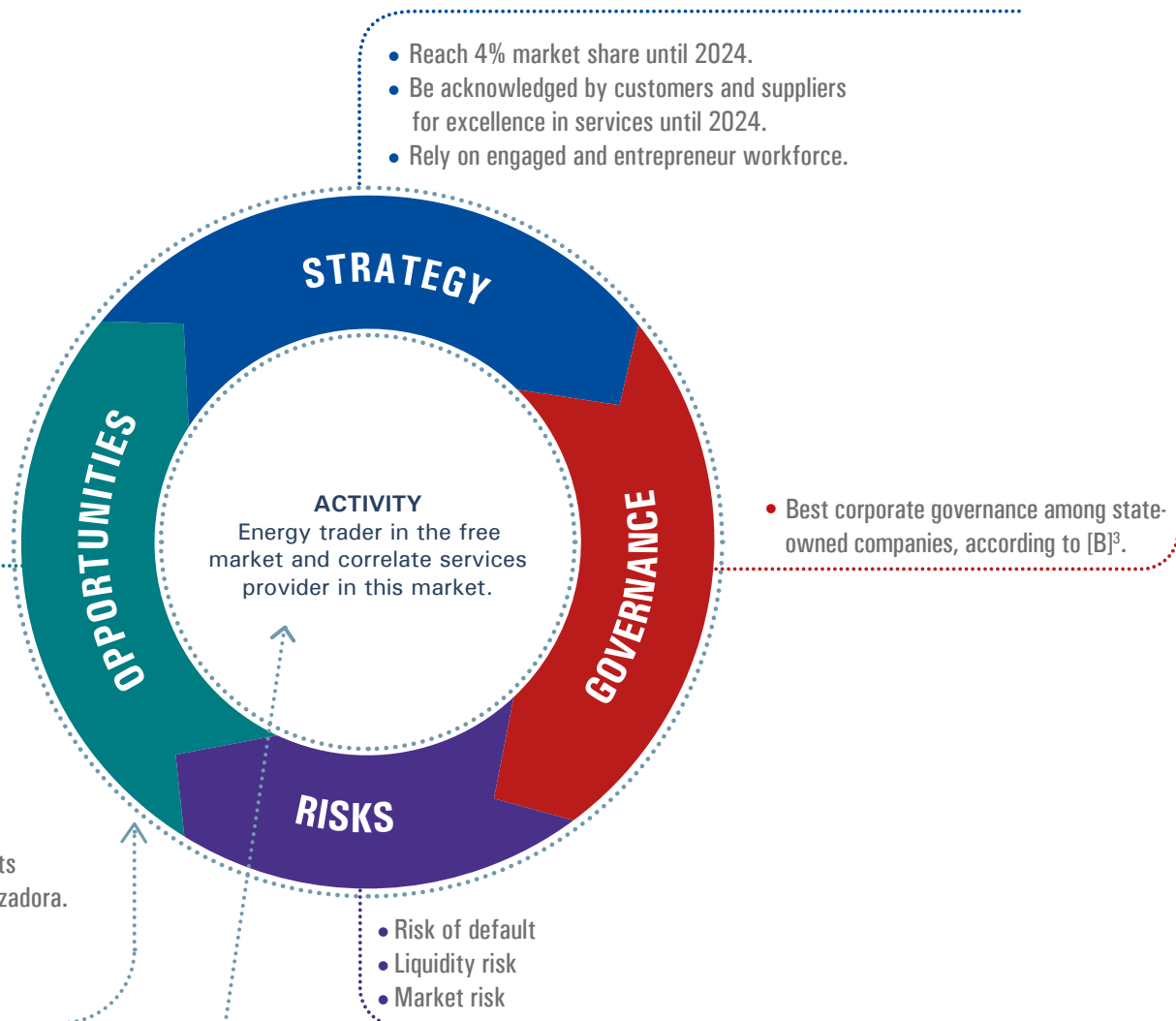
STAKEHOLDERS ARE REPRESENTED BY ICONS TO IDENTIFY WHICH OF THEM ARE IMPACTED BY VALUE CREATION.



Mission
To provide energy and solutions for a sustainable development.

Vision
Being a benchmark in our operations and generation of value in a sustainable way.

Note: Copel COM does not require natural resources to execute its activities. Since its activity is strictly administrative, it does not demand manufactured capital, either.



Competitive advantage: trader with Copel seal, which translates into robustness and reliability with its own generation portfolio and deep knowledge of Paraná customers.

Business model: adaptable according to a wider vision of opportunities that this new environment provides and will provide.

6.3.4 Copel Telecomunicações

THE CAPITALS BELOW ARE REPRESENTED BY COLORS TO IDENTIFY, IN THE PROCESS OF VALUE CREATION, WHICH OF THEM RELATE TO THE VALUE GENERATED AND FOR WHICH STAKEHOLDERS.



STAKEHOLDERS ARE REPRESENTED BY ICONS TO IDENTIFY WHICH OF THEM ARE IMPACTED BY VALUE CREATION.



- » Excellence in service rendering
 - » **GUARANTEE OF INSTANTANEOUS SPEED HIRED: 98.638%**
 - » **GUARANTEE OF AVERAGE SPEED HIRED: 97.10%**
 - » **AVAILABILITY RATE: 99.912**
 - » **RATE OF SERVICE IN UP TO 20 SECONDS: 89.436**
 - » **SUBSCRIBER RESPONSE RATE: 99.903**
- » Indirect impact on Paraná state development
 - » **86.49% LOCAL SUPPLIERS (PARANÁ)**
 - » **R\$ 238,237,410.34 MILLION IN CONTRACTED VOLUME**
- » Service sharing in favor of the community and concern with environmental impacts
 - » **HIGH-QUALITY DATA LINK MADE AVAILABLE TO ALL STATE SCHOOLS**
 - » **DATA INFRASTRUCTURE AND INTERNET AVAILABILITY IN EVENTS**
 - » **ZERO CARBON**
 - » **RECYCLING OF 100% OF THE OPERATION WASTE**
- » Satisfaction and belongingness, and opportunity for professional development
 - » **15,331 TRAINING HOURS**
 - » **TRAINING APPLICABILITY: 87.50**
 - » **EMPLOYEE SATISFACTION LEVEL (GREAT PLACE TO WORK): 52**

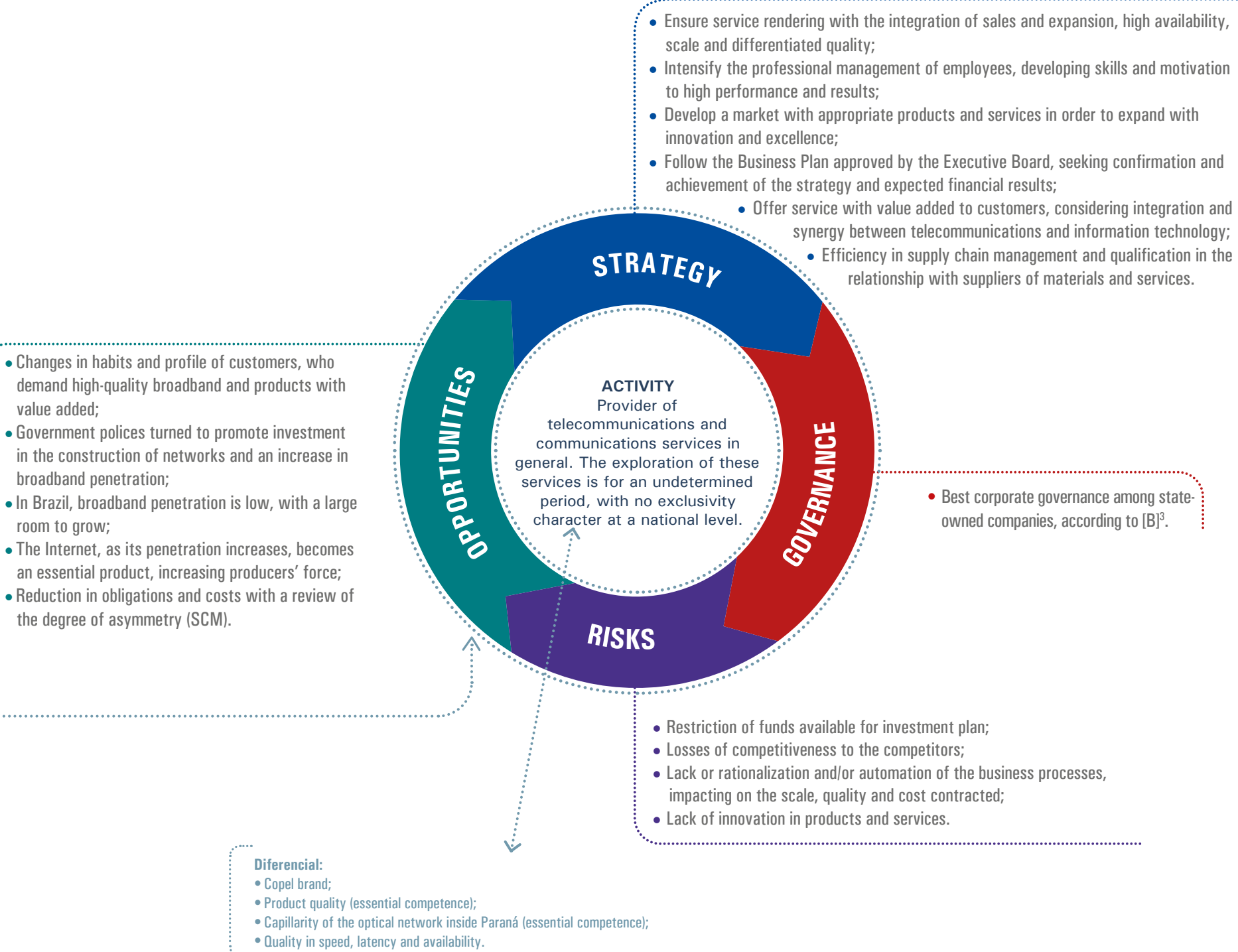


Mission
To provide energy and solutions for a sustainable development.

Vision
Being a benchmark in our operations and generation of value in a sustainable way.

Notes:

- Copel Telecom does not demand natural resources for the execution of its business activities.
- Copel Telecom does not have its own mission and follows Copel's purpose of providing solutions with sustainability.
- Copel Telecom's activity is basically administrative, which makes, therefore, its negative impacts on society, environment and economy are indirect. The potential direct impacts are translated in the risks to which the company is subject.



6.4 Strategic benchmark

Copel actions and management decisions are guided by guidelines established in its Mission, Vision and Values, as presented next.

Mission



To provide energy and solutions for a sustainable development.

Vision



Being a benchmark in our operations and generation of value in a sustainable way.

Values

[GRI 102-16](#)



- **Ethics:** Result of a collective agreement that defines individual behaviors in accordance with a common objective.
- **Respect for people:** Consideration for others.
- **Dedication:** Ability to be intensely and completely involved in the work contributing to achieving the organizational objectives.
- **Transparency:** Accountability of the Company's decisions and achievements to inform its positive or negative aspects to all stakeholders.
- **Safety and Health:** A sound working environment where workers and managers collaborate to use a process of continuous improvement in the protection and promotion of the safety, health and well-being of all.
- **Responsibility:** Conduct the life of the Company sustainably, respecting the rights of all stakeholders, including future generations, and the commitment to sustain all life.
- **Innovation:** Application of ideas in processes, products or services in order to improve something existing or build something different and better.

6.5 65 years of history

1950'S DECADE

- On October 26, 1954, decree 14.947 creates the Companhia Paranaense de Energia Elétrica – Copel, signed by governor Bento Munhoz da Rocha Netto. In 1979 the word “Elétrica” was removed from its name;
- Inauguration of the first headquarters, in Edifício José Loureiro, at XV de Novembro street. Hiring of the first employees, engineers Walfrido Strobel and Herbert Leyser;
- Centralization of the Paraná Electrification Plan execution;
- Beginning of the supply of Maringá, at the time with little more than 1,700 energy connections and 15,000 inhabitants. Soon after, Apucarana, Campo Mourão, Mandaguacu, Pirapó and Cambira were also served by Copel;
- Inauguration of the Guaricana Plant, with 15 MW of power (today 36 MW). Until then, Curitiba was supplied by a set of diesel power plants. The plant was incorporated by Copel, along with Companhia Força e Luz do Paraná, in 1973;
- Installation of the diesel power plant Populares, to supply the port city Paranaguá, previously supplied by oil generators. In the following six years, Copel built a distribution network and the Marumbi plant;
- Creation of the Hydraulic and Hydrology Research Study Center – later called CEHPAR (Prof. Parigot de Souza Hydraulic and Hydrology Study Center), in partnership with Paraná Federal University.

1960'S DECADE

- Start of construction of the first hydroelectric plant, Chopim I. Located in Pato Branco municipality, with a 270 m long and 7m high dam, the plant started operations in 1963, initially with 1.1 MW of power (today 2.2 MW);
- Start of operations of the Mourão plant in the Campo Mourão municipality, with installed power little above 8MW;
- Inauguration of the Figueira Thermal plant (20 MW), in Norte Pioneiro, which interconnects Paraná's North and Central regions;
- The state's South region receives the Salto Grande do Iguaçu hydroelectric plant (15.6 MW);
- In 1967, Copel starts to produce, daily, 1 million KWh. The Company had only eight plants including hydroelectric, thermal and diesel generation;
- Nominated by Visão magazine as the largest company in Paraná. The Company gains one thousand industrial consumers.

1970'S DECADE

- Creation of the Telecommunications Division, which rendered radio services. During the 1980s, the Company developed its own telecommunications system, composed of microwave channels. In the 1990s, digital switchboards were implanted;
- Julio de Mesquita Filho Plant (Foz do Chopim), with 44 MW, supplies the needs of the Southwest and West regions;
- Inauguration of the Governador Pedro Viriato Parigot de Souza Hydroelectric Plant (UHG GPS), the largest in the south of Brazil. With a 370 m in length and 64 m high dam, GPS broke two records at the time: higher monthly average advance in underground excavation in works of the kind and largest concreting volume inside tunnels;
- Creation of the Copel logo by designer Jorge Menezes. From the choice of colors to the tracing of lines, the idea was to make everything refer to the Company's main product;
- Creation of its own laboratory specialized in physical chemistry to test materials used by the Company in all sectors, in addition to conducting its own research of new materials;
- Start of the campaign for the efficient use of electricity stimulated by the world crisis caused by the rise in oil prices. That became a constant theme in Copel communication with consumers;

1970'S DECADE

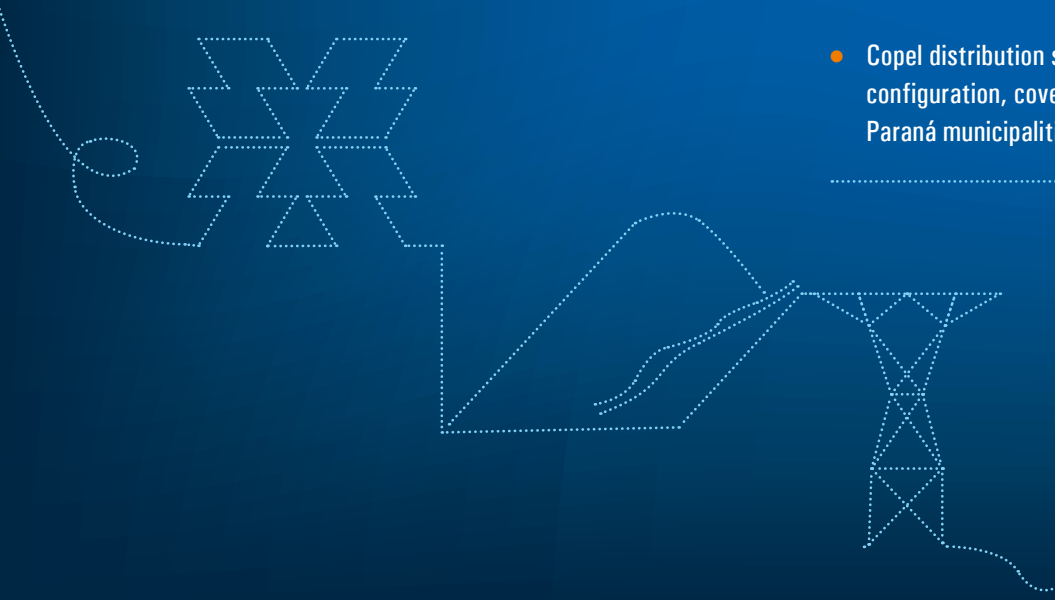
- Launching, in 1977 of the “minimum popular service panel” for service entry, low cost, and financing program for people to pay in 36 installments their purchase. Around 20 thousand houses – of a total of approximately 180 thousand at the time in the capital – started to benefit from electricity;
- Partnership with Paraná Federal University for creation of the Central Electrotechnical and Electronics Laboratory (LACEE – actual LAC), to conduct tests in the electricity system and telecommunications equipment, contributing to the Company’s equipment quality and reliability;
- Inauguration of the System Operation Center (COS), at Rua Padre Agostinho, which started up the first digital System for Supervision and Control in the country.

1980'S DECADE

- Inauguration of the Bento Munhoz da Rocha Netto HPP (Foz do Areia), the largest hydroelectric plant of Iguaçú River and Copel: 1,676 megawatts of power, compacted rockfill dam with 160 meters in height and 838 m long, and spillway with capacity for 11 thousand m³/s flow. To house the thousands of workers in the works, Copel built Faxinal do Céu village at 12 km from the dam, with school, hospital, sports club and a trade center. The village is currently a touristic attraction;
- Achievement of 100 thousand rural connections in 1984 and 1.5 million customers in Paraná in 1986;
- Installation of the Image Follow-up Unit (UAI), for meteorological surveillance;
- Launching of Clic Rural, the largest rural electrification program of the electricity sector, with 100 thousand rural properties served in one year;
- Preparation of the first Environmental Impact Study/ Environmental Impact Report (EIA/RIMA) of the Brazilian electricity sector;
- Copel distribution systems assume the current configuration, covering 395 of the 399 Paraná municipalities.

1990'S DECADE

- Inauguration of the Segredo plant (currently Gov. Ney Aminthas de Barros Braga). With a final installed power of 1,260 MW, the hydroelectric plant is, since then, the second-largest among Copel power plants;
- Substitution of 150 km of the Maringá conventional grid for a compact grid to prevent disconnection by wire contact, with tree branches, and lower environmental impact;
- Opening of the São Paulo stock exchange in 1994. Later, Copel entered New York stock exchange, in 1997, and Latibex de Madrid, in 2002;
- Copel launches CopelNet, first intranet in the electricity sector;
- Partnership with Hubei Qingjiang Hydroelectric Development Liability Corporation, the first in the Brazilian electricity sector with a Chinese company;
- Selection of two Copel projects in Paraná coast among 260 most successful Brazilian experiences in sustainable development for presentation in the UN General Assembly in New York;
- First company in the Brazilian electricity sector to obtain Anatel permission to render services specialized in telecommunications;
- Inauguration of the Palmas Wind Farm, first of the kind in the south of Brazil;
- Inauguration of the Salto Caxias plant (today named Gov. José Richa HPP). With an installed power of 1,240 megawatts, the plant expanded supply to a third of the total demand at the time.



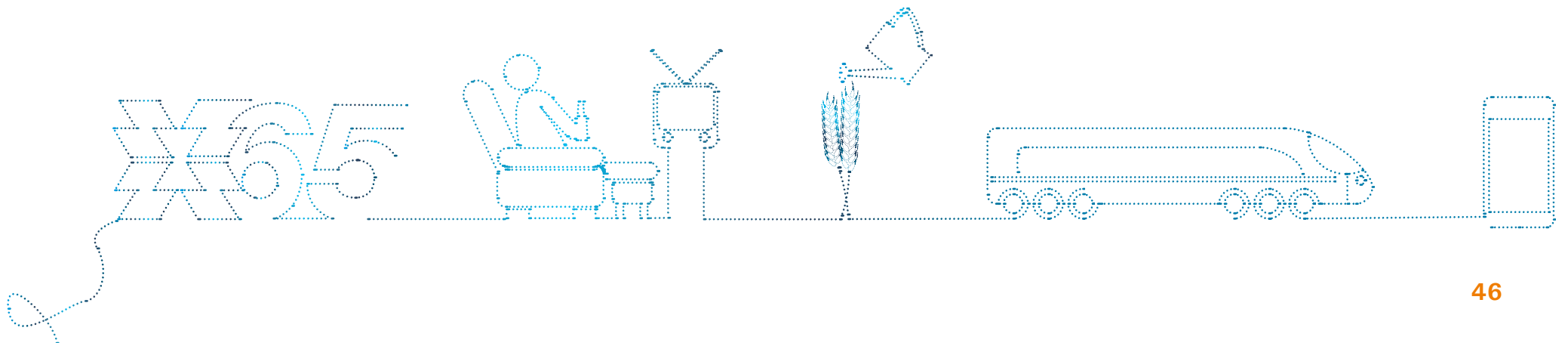
THE 2000s

- A pioneer automation in the Brazilian electricity sector of the Jardim Tropical substation, in the Northwest of the State, using computerized systems developed by the Company itself;
- Successful experience with biodegradable vegetal oil used as isolating fluid in electric equipment and transformers, replacing the mineral oil – a derivative from petroleum, toxic and more pollutant. The project was a finalist in the Fundação Coge award for its social responsibility and obtains the Ecology Expression Award granted by Expressão magazine. The magazine awarded Copel in the “Natural Resources” category for the preservation of 9.6 thousand m² of Atlantic Forest in Paraná coast;
- Reopening of the Iguaçu Regional Museum;
- Inauguration of the Faxinal do Céu forest garden visitors center;
- Agreement with Paraná Visually Impaired Persons Association (Adevipar) to issue consumption bills printed in Braille;
- Adoption of new technology for consumption reading, with simultaneous print and delivery to the customer;
- Implantation of corporate governance: leading the way in signing the commitments of the UN Global Compact and the Millennium Goals. Adoption of effective practices in favor of ethics and transparency in corporate administration: the creation of Risk Management Department and Internal Controls in the Financial and Investor Relations Office; creation of the Audit Committee and Confidential Communication Channel; and reformulation of the Ethics Guidance Council;
- Start of operation of the first fuel cell in the South Hemisphere, to supply Copel Data Processing Center, in Curitiba;
- A pioneer in the automation of all transmission substations;

... leading the way in signing the commitments of the UN Global Compact and the Millennium Goals. Adoption of effective practices in favor of ethics and transparency in corporate administration



See how Copel permeates the life of people from Paraná and Brazil





Governador Bento Munhoz Power Plant
Credit: Guilherme Pupo

- Launching of bills in Braille and start of the LIS project – a system for Simultaneous Reading and Printing of bills;
- Foment of projects on alternative energy sources, like sugarcane bagasse, animal waste biodigestion, biofuels and wind strength;
- First inventory of greenhouse gas emissions according to criteria and parameters established by the Greenhouse Gas Protocol (GHG Protocol);
- Victory in auctions to build and operate two large size works in São Paulo, largest electricity consumer center in the country – the 500 thousand volts and 356 km long transmission line connecting the Araraquara 2 and Taubaté substation, and construction of a substation with 230 volts and 300 MVA of transformation power in Cerquilha;
- Victory in the dispute to build and operate the Colíder Plant, undertaking with 300 megawatts of power in Mato Grosso, 700 km from the capital;
- Expansion to the Northeast region with the acquisition of four wind farms in Rio Grande do Norte;
- Transformation of Paraná as the first Brazilian state to have all its 399 municipalities reached by digital telecommunications network;
- Inauguration of the Mauá Hydroelectric Plant, with 85 m high and 745 m long dam, and total installed power of 361 megawatts (MW), to serve 1 million people;
- Laying of 22 km of submarine cables to integrate several islands in Paraná coast to the National Interconnected System, and the start of installation of photovoltaic panels to bring energy to all isolated island communities;
- 100% coverage of the concession area with a network of stations and service agencies;
- Inauguration of the Cavernoso II SHP, in the south-central region of the state. The 19 megawatts (MW) unit marked the company return to small generation undertakings;
- Auction purchase of undertakings that will double the transmission assets in the mid-term. The largest lot, in partnership with Furnas, will have 847 km of lines in Paraná and São Paulo, bringing energy from new generation plants installed in Amazonia;
- Restructuring of the Company to manage business expansion and comply with the sector regulation, which resulted in its breaking down into a holding company and five wholly-owned subsidiaries.

THE 2010s

- Copel acquires the São Bento do Norte wind farm complex (94 MW), in Rio Grande do Norte;
- Launching of Paraná Olympic Talent (TOP), largest foment program in Brazil;
- Paraná becomes the first digital state for taking Copel optical fiber grid to all municipalities;
- Inauguration of the Mauá Plant (361 MW);
- Achievement of 4 million consumers and universalization of the service in Paraná;
- The high levels in Iguaçu River exceed the expectation for 10 thousand years, and the Foz da Areia HPP empty reservoir avoids a big tragedy by retaining a large part of the flow;
- Start in Curitiba of 'Paraná Smart Grid', a pilot project of intelligent energy grids in an area with 10 thousand inhabitants between Bigorriho and Mossunguê neighborhoods;
- Inauguration of its first transmission lines outside Paraná, with undertakings in 10 Brazilian states;
- Chosen by UN to coordinate the first regional center of Global Compact Cities Program;
- Inauguration of the first Eletrovia in Latin America (a road with charging infrastructure for electric vehicles) and, in Ipiranga, the first city with 100% automated electrical grid;
- Launching of Paraná Trifásico (Three-phase Program), a program that will revolutionize, in six years, the quality of energy supply in the state's rural areas.



Cutia Wind Farm, RN
Credit: Freire Neto

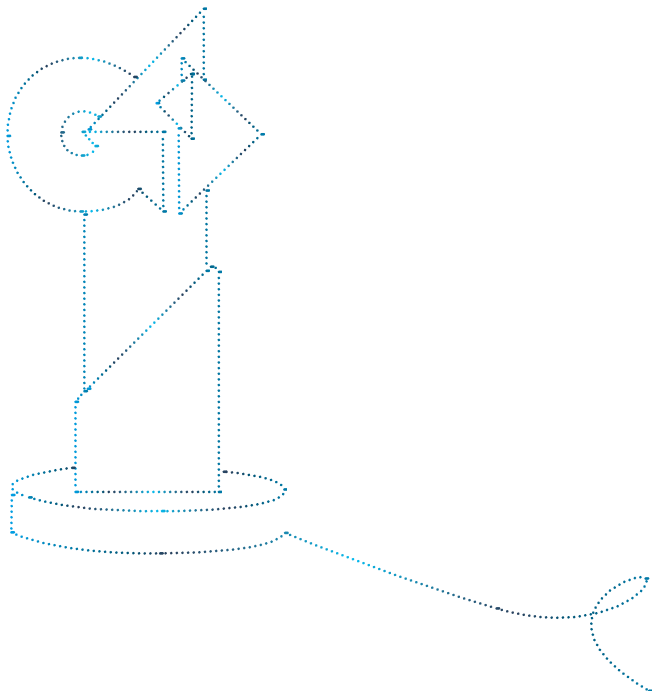


CORPORATE GOVERNANCE

GRI 103-1, 103-2

Copel's Corporate Governance model is based on the principles of transparency, equality, accountability and corporate responsibility, conducted by ethical principles established in the Code of Conduct, in accordance with its values, the Global Compact principles and corporate governance principles, and following the best practices in the market.

These principles are reflected in the Corporate Governance Policy, which establishes guidelines, objectives and commitments applicable to Copel (Holding Company) and its wholly-owned subsidiaries, and, where applicable, to other companies Copel invests in, with due respect for their corporate procedures, proportionally to the relevance, materiality and risks involved in the business ventures.



7.1 Corporate governance practices

GRI 103-1, 103-2, 103-3

The corporate governance practices adopted by the Company are compliant with the requirements established for companies listed in Level 1 of Governance of B3 – Brasil, Bolsa, Balcão, meets the provisions of Federal laws No. 6.404/1976 and No. 13.303/2016, the rules of the Securities and Exchange Commission (CVM) and other applicable legislation in Brazil. Abroad, the Company complies with the rules of the Securities and Exchange Commission (SEC) and the NYSE, in the United States; as well as the LATIBEX of the *Bolsa y Mercados Españoles*, in Spain.

In 2019, improvements were made to this model in order to align it with its strategic benchmark and create value to be shared with stakeholders. This guidance is connected to the Board of Directors' guidelines and strategic goals: "To be a benchmark in corporate and environmental sustainability, governance, risk management and compliance".

Among the advances related to corporate governance, the following stand out:

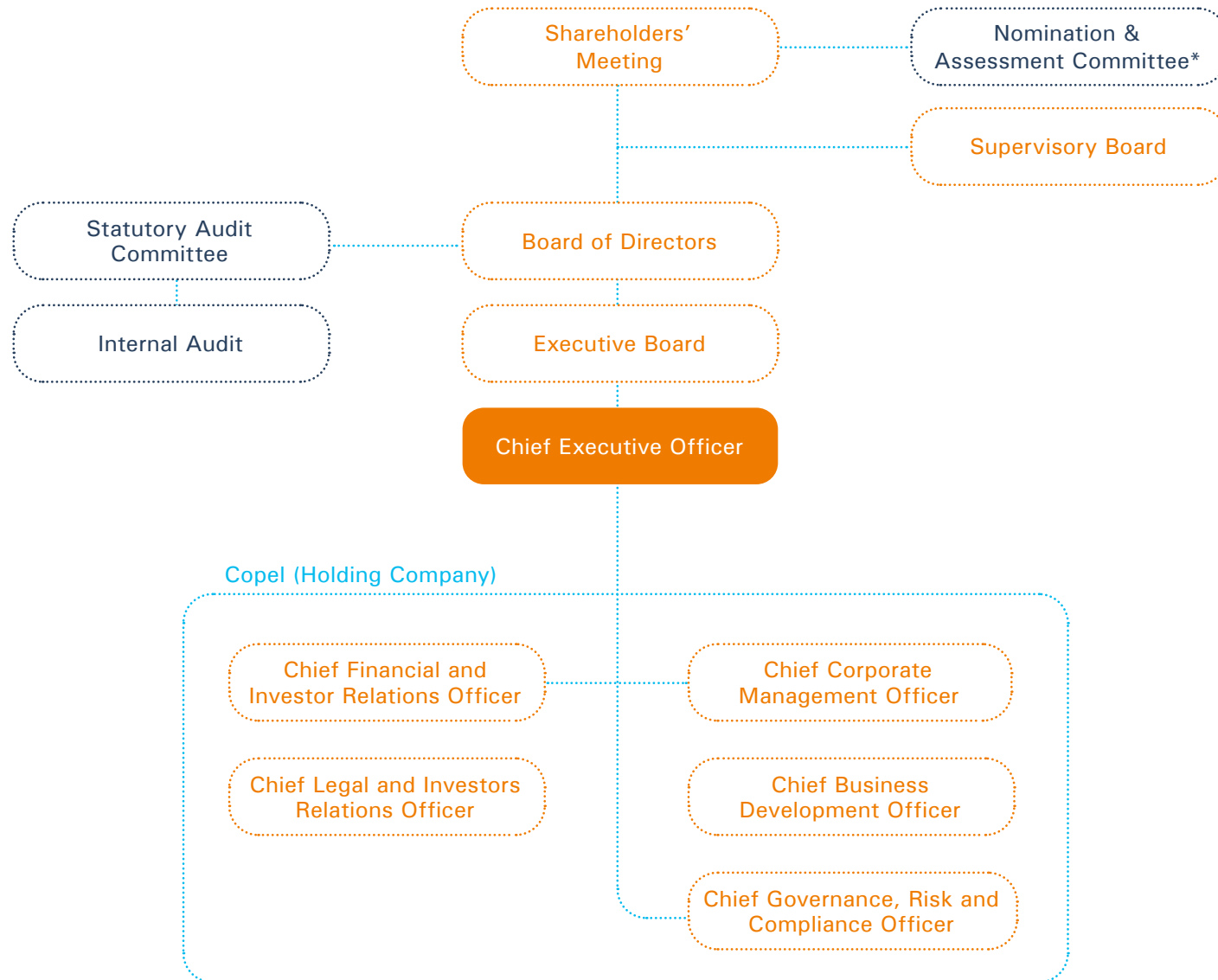
- The only company to reach a maximum score in B3's State-owned Enterprise Governance program;
- Certified with the Pró-Ética 2018-2019 Seal, acknowledgment by the Federal Government's Office of the Comptroller General (CGU) for corporate integrity, granted to companies that prioritize corporate integrity;
- Publication of the Annual Public Policies and Corporate Governance Letter – 2018/2019 cycle and the 2019 Corporate Governance Report;
- Review of the Company's Integrity Program, Code of Conduct and internal control system.

The full description of the administrative structure and other relevant information on corporate governance practices adopted by Copel can be found in the Reference Form, the Annual Public Policies and Corporate Governance Letter and other corporate reports available at www.copel.com.

7.2 Corporate governance structure

GRI 102-18, 102-22, 103-1, 103-2, 103-3

Pursuant to its Bylaws, the corporate governance structure of Copel (Holding Company) is composed of statutory bodies organized according to different levels of responsibility and authority.



*Statutory bodies marked with an asterisk are shared by Copel (Holding Company) and its wholly-owned subsidiaries.

7.3 Nomination and performance assessment of members of the statutory bodies

GRI 103-1, 103-2, 103-3

7.3.1 Appointment and nomination process

GRI 102-24, 103-2

The process of nomination of members of the statutory bodies meets minimum requirements of the applicable legislation (Law 6,404/1976, Law 13,303/2016, normative deliberations by the State-Owned Companies Control Council – CCEE), Copel Bylaws, and is guided by the Nomination Policy and procedures ruled by internal administrative norms.

One of the principles of Copel’s Nomination Policy is the promotion of diversity, acknowledging the relevance of different levels of education, qualifications and experiences, including aspects such as gender, religion, age and race.

In the global composition of the Board of Directors, diversity and complementarity of professional experiences are observed among those appointed, as well as the percentage of independent members, as established in the legislation in force. As a publicly-traded company, it also considers 10A-3 rule from the Securities Exchange Act and the Sarbanes-Oxley Act.

7.3.2. Conflict of interests

GRI 102-25

Copel defined guidelines to address conflicts of interest, which are described in the bylaws and internal regulations of statutory bodies, according to applicable legislation, specific policy and the best corporate governance practices of IBGC.

If a conflict of interest or personal interest of one of the members of the Board of Directors in relation to a particular matter to be decided on is detected, it is the duty of the director to state it promptly.

In case said director does not express the conflict, any of those present in the meeting, being aware of the fact, should do so. After the conflict of interest or personal interest is identified, the director involved shall recuse him or herself from the discussion and decision-making process. Conflicts of interest that have been dealt with are recorded in the Board of Directors meeting minutes and made available at Copel’s website.



Copel’s Head Offices, in Curitiba
Credit: Marcelo Rothen

Additionally, the Company has a Related-party Transaction and Conflict of Interest Policy that establishes guidelines to ensure that transactions to the benefit of Copel or its wholly-owned subsidiaries are based on principles of independence, competitiveness, compliance, transparency, equality and commutativity.

7.3.3 Statutory bodies performance assessment

GRI 102-28, 103-3

The process of assessment of the performance of Copel (Holding Company) and its wholly-owned subsidiaries' statutory bodies is carried out annually, compliant with requirements provided in Federal Law No. 13,303/2016, Bylaws and the Policy for Annual Performance Assessment of Statutory Bodies, observing the best practices of corporate governance, with the Board of Directors as responsible for its conduction with methodological support from the Nomination and Assessment Committee.

The performance assessment is executed collectively (peers and body) and individual (self-assessment), for members of the Board of Directors, Supervisory Board, statutory committees, the Company's board, the corporate governance secretariat. The process's independence is ensured by hiring an external consultancy to develop the model and apply the assessments.

7.4 Development of members governance bodies

GRI 102-27, 103-1, 103-2

In addition to training on the Integrity Program (page 54), in 2019, directors, officers and members of other statutory bodies participated in a course offered in partnership with the Brazilian Corporate Governance Institute (IBGC) where relevant themes for their position were debated, such as legislation and governance, capital markets, information disclosure, the Anti-corruption Law - Law No.12,846/ 2013, Copel's Code of Conduct, internal controls and best practices for the Board of Directors and the Supervisory Board.

7.5 Integrity

7.5.1 Integrity Program

GRI 102-16, 103-1, 103-2

Copel's Integrity Program, reviewed and approved by the Company's Board of Directors in August 2018, specifically focuses on anti-corruption measures adopted for prevention, detection and remediation of acts harmful to the Company, involving, for example, the occurrence of bribery, kickback, conflict of interests, fraud in bidding processes and payments, among others.

The program is supported by the Code of Conduct, which has been in force since 2003 and is reviewed periodically, and also through public consultation every four years. The document incorporates COPEL's values, the principles of the UN Global Compact and Corporate Governance, and presents a set of behaviors related to integrity, compliance, transparency, safety and health, social and environmental responsibility, and respect and relationship with segments where the Company operates.

The document is the guiding instrument for the acts of all persons who carry out activities on behalf of the Company and its stakeholders, establishing conduct parameters for employees, members of the board of directors, boards and committees, trainees, suppliers, service providers and contractors. It is widely disclosed among all these audiences, including the suppliers, through the Supplier's Manual.

It should be noted that non-compliance with the principles and commitments expressed in the Code of Conduct subjects the individual to the penalties provided for in a standard of functional discipline. The document is available to all stakeholders on the company's website.

7.5.2 Disclosure of the Integrity Program

GRI 102-16, 102-17, 102-27, 205-2

The dissemination of the Integrity Program and other compliance initiatives is made periodically by electronic means throughout the Company. The Program is also fully available for consultation on the Compliance Portal. Copel’s business partners are informed about the anti-corruption measures adopted by the Company, as well as its policies and standards, through workshops, lectures and events, and the Supplier’s Manual, which is accompanied by a Statement of Awareness and Commitment, which must be signed.

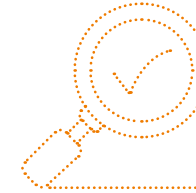
The Code of Conduct includes training, in the distance learning modality, for all employees and managers. For the first audience, the content developed is based on assessments of fraud and corruption risks in order to reach the most vulnerable areas and business processes. For managers, the material includes questions related to the Anti-corruption Law, transactions with stakeholders and conflicts of interest, risk management and Copel policies.

Annual training is offered to those responsible for the execution of Internal Controls, promoted by the Governance, Risk and Compliance Office, in partnership with UniCopel.

Members of governance bodies and own employees trained in policies and procedures to fight corruption | GRI 205-2

Total of members of governance bodies	Total of members of governance bodies trained	Percentage of members of governance bodies trained
35	15	43
Total of own employees	Total of own employees trained	Percent of own employees trained
7,095	5,438	77

Note: All members of governance bodies and own employees are based in the State of Paraná.



Copel’s Integrity Program has a specific focus on measures for the prevention, detection and mitigation of acts that harm the Company, involving bribery, kickbacks, conflicts of interest, fraud in bidding processes, payments, among others.

7.5.3. Anti-corruption practices

103-1, 103-2, 103-3

Corruption interferes with the development, reliability and continuity of companies. COPEL believes that the fight against corruption is everyone’s responsibility. The perception that corruption affects not only the public administration but also the economic order, has mobilized Brazilian society in this decade. This mobilization has generated quite advanced national legislation, which has as its main target the companies, since these are the economic engine of the Country and are directly involved in the most notorious cases of corruption in the recent history. The Anti-Corruption Law and its Decree No. 8,420 brought obligations such as the implementation of Integrity Programs

and sanctions like the administrative and civil liability of legal persons for the practice of acts against the public administration, national or foreign.

The non-compliance with the legislation entails risks that can compromise the long-term business of organizations. In this context, effective integrity mechanisms reduce financial losses, promote trustworthiness in relation to the market and society, and improve the workplace, as they offer instruments to curb unethical behavior. This anti-corruption apparatus is also considered and attenuating factor in the case of isolated criminal cases. Depending on the magnitude of the case, this can mean, for a company, the difference between remaining active or shutting down.

The COPEL Integrity Program has a specific focus on prevention, detection and remediation measures of acts harmful to the Company, involving bribery, kickback, conflict of interests, fraud in bidding processes, payments, among others. It allows the integrated management of internal controls and is a planned environment to provide reasonable assurance that the authorizations and records of accounting transactions are carried out properly so as to allow the preparation and disclosure of financial reports in accordance with current standards. The structure of internal controls follows the standards of the Committee of Sponsoring Organizations of the Treadway Commission

(COSO), which is an internationally recognized framework. COPEL uses tools provided by the ERP-SAP system.

The Integrity Program and the Code of Conduct are the most important guiding instruments for preventing and combating corruption, but COPEL has other complementary documents to the topic: The Corporate Risk Integrated Management Policy, the Stakeholder Transaction Policy, the Integrity Policy, the Reporting Channel Policy and the Administrative Standard for Prevention and Treatment of Fraud and Corruption. The policies apply to COPEL (Holding Company), its wholly-owned subsidiaries and its controlled companies. The standard is followed by all, except the controlled companies, for which it serves as a recommendation. These materials are in line with the US Foreign Corrupt Practices Act (FCPA) of 1977, SarbanesOxley Act of 2002 and COSO. The policies were reviewed in 2018 and the standard is reviewed every three years, with the next update due in 2021.

Operational processes are annually assessed for risks related to errors or fraud that could interfere with the results of the financial statements. The process begins in October, when internal controls are audited by the internal auditors and the independent auditor, and the results are reported to the Administration. Tests are completed by assessing the severity and magnitude of deficiencies at the time of filing Form 20-F

in the Securities and Exchange Commission (SEC) in April of each year.

Also, annually, the Risk and Compliance Management areas elaborate on the Fraud and Corruption Risk Matrix to identify risks and their relationship with the Company's business processes. This document outlines the treatment actions for identified vulnerabilities and impacted target audiences.

Considering COPEL (Holding Company) and its wholly-owned subsidiaries, 100% of COPEL's operations were subject to a risk assessment related to corruption in 2019, and corruption cases were not identified. [GRI 205-1, 205-3](#)

COPEL adopts the best anti-corruption practices. In 2014 the Company also adhered to the Call to Action of Governments in the Fight Against Corruption statement and, in the following year, the Corporate Pact for Integrity and Against Corruption. It also expressed its support for the UN 2030 Agenda movement in its efforts to promote sustainability, ethical conduct and best corporate governance practices. Besides, its principles are based on the Charter of Principles of Social Responsibility, the UN Convention against Corruption and the Organization for Economic Cooperation and Development (OECD) guidelines. Finally, it is worth mentioning that Copel is a signatory of the UN Global Compact, whose principles comprise corruption fight in all its forms, including extortion and bribery.

7.5.4 Communication channels

GRI 102-17, 103-1, 103-2, 103-3

To receive opinions, criticisms, complaints, denunciations and inquiries, COPEL provides communication channels that, in addition to contributing to the fight against fraud and corruption, also improve the organization's relationship with its stakeholders. The Company encourages these parties to record any situation that indicates a violation of ethical principles, policies, standards, laws and regulations, or other improper conduct.

The communication channels are disseminated through reports on the intranet and banners affixed on work centers, intranet and internet. In 2019, advertisements were broadcasted by Paraná radio stations and training provided to employees, managers and board members, among other audiences.

Reporting Channel



Aiming at improving and enhancing the perception of the guarantee of anonymity to the complainant, COPEL makes available, since June 2018, its new Reporting Channel, managed by a contracted company through a bidding process. The initiative is part of the set of measures that are being adopted to strengthen the Company's governance. With outsourcing, the number of reports received between 2018 and 2019 alone was 132% superior to the communications accumulated since 2005, the year when Copel deployed its first Channel.

All complaints are treated in a confidential manner, which guarantees anonymity, confidentiality and protection of the reporter. COPEL encourages the filing of complaints about fraud, corruption, non-compliance with laws, norms or the Code of Conduct, and other illegal acts or irregularities involving finance, auditing or accounting.

0800 643-5665

<https://www.copel.com/canaldedenuncias>

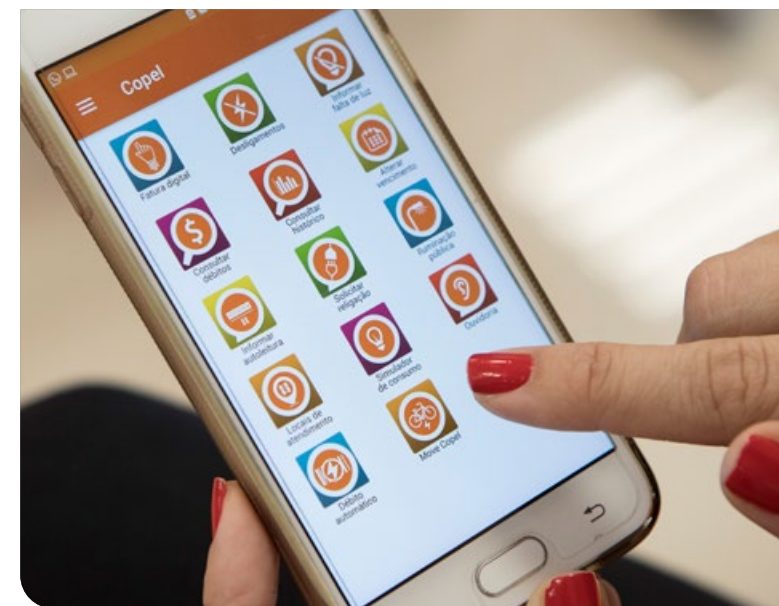
Available 24/7

Open to internal and external audiences

Complaints received by the Reporting Channel in 2019

GRI 102-34

Total	427
Founded	87
Partially founded	29
Unfounded	129
Not applicable	98
Insufficient data	55
Outside the scope	5
Not defined	5
Consultation	6
Inconclusive	4
Report not addressed by Copel Reporting Channel	9
Still under analysis on 12/31/19	135



Copel Distribuição Ombudsman



Suggestions, complaints and reports

0800-647-0606

ouvidoria@copel.com

Available on business days, from 8 am to 6 pm

Rua Professor Brasília Ovídio da Costa, 1703, Santa Quitéria – Curitiba (PR) – ZIP CODE 80310-130

Receives reports in person

Open to internal and external Audiences

Moral Harassment Reporting Analysis Commission (CADAM)

Commission for attendance and support to every employee victim of moral harassment in the workplace. The information is confidential and both the complainant and the person accused have a guarantee of identity preservation

www.copel.com/canaldedenuncias

Available on demand

Open to the internal public only

Ethics Guidance Board (COE)*

An advisory body that appreciates and issues guidance on processes related to ethical conduct in the Company, with a maximum deadline of 90 days for the final response

www.copel.com/canaldedenuncias

Available on demand

Open to internal and external audiences

* In December 2019, the Board of Directors approved a change in the Ethics Guidance Board (COE), which started to be called Ethics Committee. The Ethics Committee absorbed all COE attributions and is responsible for assessing and monitoring all reports and consultations received in Copel Reporting Channel as well.

Copel Telecomunicações Ombudsman



Suggestions, complaints and reports

0800-649-3949

ouvidoriatelecom@copel.com

Available on business days, from 8 am to 6 pm

R José Izidoro Biazzetto, 158 - Bloco A - Sala 06 Curitiba - PR - ZIP CODE 81200-240

Receives reports in person

Open to internal and external audiences

Demands addressed by COE in 2019

GRI 102-34

51 complaints

18 consultations and other demands

7.6 Risk management

GRI 102-11, 102-15, 102-29, 103-1, 103-2

Identifying and proactively responding to events with the potential to affect strategic goals is critical to the sustainability of any company. Not only because this activity is directly linked to organizations' continuation and image, but also because it is a demand of investors and other financiers of the business.

At Copel, the seriousness with which this matter is addressed is expressed in the Corporate Risk Integrated Management Policy, which establishes that risk maintenance must be kept at adequate levels. According to the document, this process is divided into five macro stages: identification, assessment, treatment, monitoring and communication. This Copel model is based on the Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management (COSO - ERM) and the Corporate Governance Best Practices Code of the Brazilian Institute of Corporate Governance (IBGC).


Risks are measured in terms of impact (or consequence) and probability, and are classified as:

- Inherent, when they exist before the adoption of treatment actions that aim to alter the probability or the impact of materialization; and
- Residual, when they remain after the adoption of actions of treatment of inherent risk.

The main risks affecting Copel and its wholly-owned subsidiaries, as well as the mitigation measures adopted, are described throughout this document. Further information on this matter is available on Form 20-F and the Company's website. COPEL is aware that failure to properly manage its risks can generate financial losses, damage to reputation and operations, or damage to environmental resources and society.

As part of the process for defining the Strategic Planning 2018-2027, Copel reviewed the strategic risks associated with its operations at the end of 2017. The work consisted of identifying and analyzing risks, defining a control and contingency plan, and determining monitoring actions. Throughout 2018, strategic risks were monitored quarterly, and periodically reported to the Statutory Audit Committee and the Board of Directors.

STRATEGIC RISKS

- 
- **Copel GeT:** Loss of Concessions; Hydrological risk; Regulatory change; Drop in Business profitability; Drop in Projects' profitability; Failures in dams; Works delay/Capex increase; and Cybersecurity.
 - **Copel DIS:** Loss of Concession; Regulatory instability; severe climate adversities; and Cybersecurity.
 - **Copel COM:** Culture and Commercialization; Increased competition; Increased regulatory risk; Operations' Financial exposure; and Default increase.
 - **Copel CTE:** Loss of customers and incomes; Competitiveness losses; Lack of business processes' automation; Lack of internal controls; Disposal value below expectation; and Covenants' break.
 - **Copel:** Risk of litigation; Legal actions; Covenants' break; Restriction in fundraising; Liquidity risk; Monitoring of investments; Concession loss; D&O liability insurances; Assets recovery; Investment in assets; Company expansion level; Adequacy to the General Law of Personal data protection; Fraud/Corruption in operations; Cybersecurity; Digital transformation; and Support areas' costs.

7.6.1 Risk management at Copel

GRI 102-11, 102-15, 102-29, 102-30, 103-1, 103-2, 103-3

Risk management model

The risk management model adopts parameters of appetite for risk, considering the probability of their occurrence and their financial, operational, image and socio-environmental impacts, and provides tools for their treatment and mitigation.

Guide for risk management

RISKS	IMPACTS
Strategy Risks associated with senior management decision-making and strategic planning.	Substantial loss in Copel's economic value.
Reputation Negative advertising.	Losses due to the deterioration of Copel's market brand in the market, customers and regulatory bodies.
Market Change in market prices, like an exchange and interest rates, and shares.	Oscillation of fair value or future cash flows of financial instrument.
Liquidity Insufficient resources, cash or other financial.	Impossibility to settle obligations on due dates.
Credit Failure of customers to fulfill their contractual obligations.	Difficulty in receiving amounts billed to clients or counterparts in the financial instrument.
Disclosure Possibility of issuing incomplete, inaccurate or untimely financial, managerial, regulatory, fiscal, statutory reports.	Copel penalty with fines or other sanctions.
Processes Ineffectiveness and inefficiency of Copel's operations, including financial and operational performance goals.	Losses resulting from failure, deficiency or inadequacy of internal processes, people and systems, or external events.
Information Technology Vulnerabilities in access control, role segregation failure, policy violation, external attacks, IT outages, improper information change or disclosure.	Unauthorized access to Company data and IT environment, undue change or disclosure of information.
Social and environmental Impacts of Copel's operations on society and the environment. It is also related to severe climatic events resulting from climate change, scarcity of natural resources or mobilization of communities.	Impacts on the reputation and assessment of the Company by the supervisory bodies. It may also disrupt the rendering of services or damage to energy production.
Projects Risks associated with the generation, transmission, distribution, telecommunications, research and development, among others.	May entail additional costs, delay in the project delivery and charging by regulatory bodies.
Laws and standards Non-compliance with environmental, labor, tax and regulatory laws to which Copel is subject, including internal policies and standards.	Charging by regulatory bodies.
Fraud and corruption Theft of physical assets, information leakage, deviation of financial resources, conflict of interests, Influence peddling, bribery, kickback, collusion with suppliers and clients, among others.	Financial losses, fines, sanctions and penalties by inspecting bodies and deterioration of the Copel image.

RISK PROTECTION INSTRUMENTS

- Approval and function segregation competences;
- Incident reporting and control practices;
- Periodic review of risks and associated controls, according to their exposure level;
- Periodic reports to the Statutory Audit Committee and Board of Directors.

AREAS RESPONSIBLE FOR RISK MANAGEMENT

- Board of Directors;
- Statutory Audit Committee;
- Executive Board;
- Governance, risk and compliance office;
- Internal audit.

7.6.2 Process efficiency and risk management

GRI 102-30, 103-3

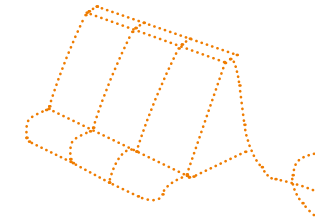
Among the Copel Board of Directors assignments, analysis and approval of the Company's strategic planning are outstanding. For such, studies and assessments of scenarios and risks, in addition to management policies and their respective changes are carried on. The body is also responsible for implementing and supervising risk management and internal control systems, including risks associated with accounting and financial information integrity and the occurrence of corruption and fraud.

The Statutory Audit Committee (CAE) advises the Board in this activity. It is responsible for checking the efficiency in the use of resources and establishing controls to protect Copel from eventual losses in the face of each business risk. CAE annually prepares a report with the effectiveness analysis results and those of eventual deficiencies in risk management and internal control systems; and describes recommendations presented to the boards, recording and justifying those that were not met.

7.6.3 Dam safety

GRI 102-15

On January 25, 2019, the rupture of the tailings dam occurred in Córrego do Feijão, Brumadinho (MG). Due to this occurrence, the Ministerial Council for Supervision of Responses to Disasters recommended, with Resolution No. 1, of January 28 of that year, immediate approval of inspection



The hydroelectric plants have the Dam Safety Plan (PSB) and Emergency Action Plan, according to legal parameters. The Company also counts on the Dam Safety Engineering Sector, with professionals dedicated to the safety of these structures, responsible for maintenance procedures and continuous monitoring of dams and their associated structures.

of facilities considered as "high associated potential damage" or as "high risk"; the immediate update of Dam Safety Plans and assessment of the need to remove installations that support installation undertakings located in dams' area of influence.

The National Dam Safety Policy (PNSB) was defined by Law No. 12,334, sanctioned on September 20, 2010, where standards, regulations, monitoring procedures, among other guidelines are established for dams destined to accumulation of water for any use, final or temporary disposition of waste and accumulation of industrial residues. It also creates the National System for Information on Dam Safety.

Additionally, the Brazilian Electricity Regulatory Agency (Aneel), in the scope of the electricity sector, regulated Law 12,334 with Resolution No. 696, approved on December 15, 2015. The document sets forth the criteria for the classification and formulation of the Safety Plan and the Periodic Dam Safety Review. Every year, the agency receives from companies the Dam Safety Form (FSB), whose last version, referring to the 2019 cycle, was forwarded by Copel in March 2020. Of the 24 dams under the Company's responsibility, 16 were classified as B (low risk, high potential damage), 2 as C (low risk and medium potential damage), and 6 were exempt from this classification.

Dams are important structures for the Company's business, because they concentrate on the larger part of the energy generation capacity. However, as in any engineering work, they present an intrinsic risk of failure associated with different factors, internal or external. In order to mitigate this risk and ensure integrity to dams under its responsibility, Copel works in a preventive way, with criteria and procedures in accordance with the best engineering practices and legislation in force. The hydroelectric plants have the Dam Safety Plan (PSB) and Emergency Action Plan, according to legal parameters. The Company also counts on the Dam Safety Engineering Sector, with professionals dedicated to the safety of

these structures, responsible for maintenance procedures and continuous monitoring of dams and their associated structures.

In February 2019, the Board of Directors provided suggestions to improve the monitoring of dams under Copel responsibility. As a result, there was a proposition of a plan with the following actions: expansion of staff and restructuring of the dam safety team activities; hiring of independent consultants with recognized knowledge for validation of procedures; the anticipation of the Periodic Safety Review (RPS) for all dams; expansion of investment in monitoring technology and safety systems; implementation of Emergency Action Plans (PAE); research and development (R&D) projects; and reassessment of the subject in annual meetings.

Compliant with the monitoring schedule for the year, Copel performed 20 Regular Safety Inspections (ISR). It is worth emphasizing that hydroelectric plants' dams are built with well-consolidated construction standards and safety criteria and the safety verification is carried out in all phases – project, construction and operation.

Aneel also conducts inspection campaigns – 13 in 2019 – to check in loco, among other aspects, the regulatory compliance of PSB and PAE, dam installations, and their associated structures.

Copel engages authorities in dams' safety while promoting meetings with Civil Defense coordinating bodies (state and municipal) for delivery and or clarification of PAEs, which subsidize the preparation of municipal Contingency Plans. So, the Company makes known the procedures to be implemented in case of risk of rupture, explaining the role of each institution involved. In 2019, 15 meetings were held with Civil Defense coordinating bodies of 28 municipalities and, eventually, State Civil Defense coordinating bodies.



Governador Bento Munhoz Power Plant
Credit: Guilherme Pupo



SUSTAINABILITY MANAGEMENT

PME 1,2

Over its 65 years of existence, Copel was consolidated as a company committed to sustainable development. The Company's practices, actions and commitments reflect its focus on sustainability, in accordance with strategic guidelines, mission, vision and corporate values. Such practices are developed in the light of the Sustainability Policy, whose guidelines exceed internal activities and are extended to the encouragement of sustainable operations of suppliers as well, and in favor of the community.

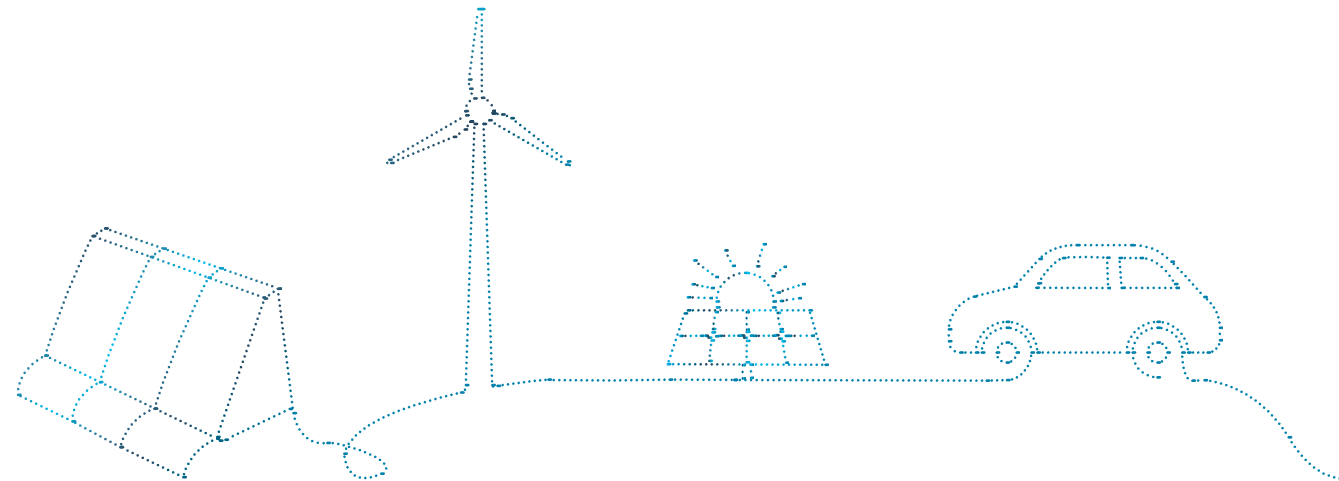
Due to its responsible and competent performance, guided by the balance of economic, social and environmental aspects, the Company has obtained significant results, generating shared value for its stakeholders and increasingly conquering the recognition of society.

This orientation towards sustainability is proven by the Company's permanence in the following portfolios:

- Corporate Sustainability Index (ISE), from [B3], for the 14th time
- FTSE 4Good Emerging Index¹

Copel's responsible attitude concerning sustainability is also expressed by the participation in platforms that provide benchmarking, measurement and assessment of its development:

- **Ethos Indicators for Sustainable and Responsible Business Models** – Copel uses indicators to manage and measure the level of excellence about corporate social responsibility;
- **Ethos Indicators – Integrity, Prevention and Fight against Corruption** – the signatory companies of the Business Pact for Integrity and Against Corruption respond annually to a set of 70 questions concerning commitments made at the time of its accession;
- **Excellence in Management Model (MEG) of the National Quality Foundation (FNQ)** – reference model in organizational management that aims at the "Best in Management" award of the National Quality Foundation (FNQ). It is composed of 8 fundamentals, among them, Sustainable Development, composed of economic, financial, environmental and social themes. In 2019 Copel GET and Copel DIS participated in FNQ Assessment.



¹ Index that measures the performance of companies in the environmental, social and governance domains. Developed by the independent production company of indexes FTSE, it is composed of The Financial Times and the London Stock Exchange.

For accountability, to guide the engagement with stakeholders and performance reporting, Copel adopts:

- **Global Reporting Initiative (GRI)** – The Company started preparing its sustainability reports in 2005, based on the GRI guidelines, aiming at offering transparent information on its management and performance in the most relevant aspects for the business sustainability, by means of consistent and comparable indicators.
- **International Integrated Reporting Council (IIRC) Integrated Report** – since 2015, COPEL has been adapting its report to the methodology of the Integrated Report.
- **Greenhouse Gas Protocol (GHG Protocol)** – Since 2008 COPEL has published the inventory of greenhouse gas emissions following the standards of this global initiative. As of 2012, the inventory is now verified by a third party.
- **Carbon Disclosure Project (CDP)** – through this platform, since 2010, COPEL has reported on greenhouse gas emissions, management practices and strategies for climate change.

In the chapters on capital performance (pages 71 to 124), further information on the theme can be found.



SUSTAINABILITY POLICY GRI 103-2, 103-3

A document prepared by professionals from the areas of sustainability, environment, social responsibility, corporate integrity, innovation, finances and management, with the support of professionals from the wholly-owned subsidiaries. The Copel sustainability area coordinated the work. The document guidelines are based on the commitments assumed with sustainable development, (see page 65), Corporate Governance principles, and the Copel Code of Conduct values and principles. The policy is reviewed and updated every two years.



Wind power generation and transmission network
Credit: Marcelo Rothen

8.1 Voluntary commitments

GRI 102-12 | PRME 1, 2, 5, 6

Throughout its history, Copel has assumed, supported and disseminated voluntary commitments that are recognized worldwide as good practices of corporate sustainability as listed in the next table.

One of the most important commitments is with the Global Compact, a UN initiative to engage companies and organizations in the adoption of principles of Human Rights, Labor Rights, Environment and Fight against corruption. The Company participants in the Global Compact Brazil Network, composed of companies, agencies from the UN in Brazil, corporate entities, civil society organizations, teaching institutions, among others. As part of this group and due to its level of commitment, Copel contributes financially and participates in the Brazilian Global Compact Committee (CBPG), responsible for the rules of Thematic Groups, guidelines, the definition of budget and integrity measures of Rede Brasil.

The Company is directly involved in the Working Groups of Sustainable Development Goals (SDGs), Energy and Climate, Human Rights and Work, and in the Communication and Engagement Commission (CEC).

Copel's progress in the adoption of the ten Global Compact principles is described in this document (further information on page 146 to 152).

INITIATIVE

DATE OF INITIATIVE

Global Compact [GRI 102-43]	2000
Gender and Race Equity Program	2009
Women Empowerment Principles – WEP	2010
Principles for Sustainable Executive Education (PRME)	2014
2030 Agenda [GRI 102-43]	2015
Business Pact for Integrity and Against Corruption	2015
National SDG movement 'Nós Podemos' (We Can) [GRI 102-43]	2016

8.2 Copel and the Sustainable Development Goals

UN Global Compact projects that the period from 2020 to 2030 will be the “Decade of action”. Ten years is the period given to all UN member countries for them to fulfill the 169 goals of the 17 Sustainable Development Goals, an initiative called the “2030 Agenda”. In September 2019, global leaders launched a movement to accelerate the achievement of these goals worldwide.

For such, the commitment of business organizations is critical. Copel, as the Global Compact signatory and follower of the Sustainable Development Goals, promotes actions referring to SDG considered a priority for the Brazilian Electricity Sector, coordinated by Rede Brasil do Pacto Global, as presented next:

SDG	Goals	Actions	
7 ENERGIA LIMPA E ACESSÍVEL 	Ensure reliable, sustainable, modern and affordable access to energy for all		
	7.1*	Ensure universal, reliable, modern and affordable energy services until 2030.	Distribution coverage; DECI FECi (page 28)
	7.2*	Substantially increase renewable energies' participation in the global energy mix until 2030.	% Renewable energy in the Generation Mix (page 113)
	7.3	Double the global rate of improvement in energy efficiency until 2030.	Transmission and Distribution Losses (page 28)
	7.a	Reinforce international cooperation to facilitate access to clean energy research and technologies, including renewable energies, energy efficiency and advanced and cleaner fossil fuel technologies until 2030, and also promote investment in energy infrastructure and clean energy technologies.	Investments in R&D&I (page 90)
	7.b	Expand the infrastructure and modernize the technology to provide modern and sustainable energy services to all developing countries until 2030, particularly in the least developed countries, small developing island states and developing landlocked countries, according to their respective support programs.	Investments in infrastructure (pages 112 to 119)
8 TRABALHO DECENTE E CRESCIMENTO ECONÔMICO 	Promote sustained economic growth, inclusive and sustainable, full and productive job and decent work to all		
	8.1	Sustain per capita economic growth according to national circumstances and, particularly, annual growth of at least 7% of the gross domestic product (GDP) in the least developed countries.	Direct Economic Value Generated and Distributed
	8.2	Reach higher levels of productivity of economies with diversification, technological modernization and innovation, including through focusing on high added-value sectors and labor-intensive sectors.	Investment in infrastructure (pages 112 to 119)
	8.3	Promote policies turned to the development that supports productive activities, generation of decent jobs, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro, small and mid-size companies, including through access to financial services.	Special hiring for biddings to micro, small and mid-size companies. Human Rights Program (page 70)
	8.4	Gradually improve, until 2030, the efficiency of global resources in consumption and production, and undertake to dissociate economic growth from environmental degradation, according to the Decennial Plan of Programs on Sustainable Production and Consumption, with developed countries assuming the leadership.	Energy Efficiency Programs (page 29)
	8.5	Reach full and productive employment and decent work for all women and men until 2030, including youth and disabled persons, and equal remuneration to works with equal value	Diversity Program Human Rights Program (pages 76 and 70)
	8.6	Substantially reduce the proportion of youth without job, education or training until 2020.	No specific action.
	8.7*	Take immediate and efficient measures to eradicate forced labor, eliminate modern slavery and human trafficking, and ensure the prohibition and elimination of the worst forms of child labor, including recruitment and use of soldier children, and put an end to child labor in all its forms until 2025.	Actions promoted to fight slave and child labor. Human rights program (pages 101 and 70)

SDG	Goals	Actions
8 TRABALHO DECENTE E CRESCIMENTO ECONÔMICO 	8.8* Protect labor rights and promote safe and protected work environments for all workers, including migrating workers and particularly migrating women and people in precarious jobs.	Actions promoted in HOS and worker's well-being. Human rights program (pages 86 to 87 and 70).
	8.9 Prepare and implement policies to promote sustainable tourism that generates jobs and promotes local culture and products until 2030.	No specific action.
	8.10 Strengthen national financial institutions' capacity to encourage the expansion of access to banking, insurance and financial services for all.	No specific action.
	8.a Increase support from Aid for Trade to developing countries, particularly least developed countries, including the Enhanced Integrated Framework for Trade-related Assistance for the least developed countries.	No specific action.
	8.b Develop and make operational a global strategy for youth employment and implement the International Labor Organization (ILO) Global Jobs Pact until 2020.	No specific action.
Build resilient infrastructures, promote inclusive and sustainable industrialization and foment innovation		
9 INDÚSTRIA, INOVAÇÃO E INFRAESTRUTURA 	9.1* Develop reliable, sustainable, resilient and quality infrastructure, including regional and cross-border infrastructure, to support economic growth and human well-being focused on equitable access and affordable prices to all.	Investments in infrastructure (pages 112 to 119)
	9.2* Promote inclusive and sustainable industrialization and, until 2030, significantly increase industry participation in the job sector and GDP, according to national circumstances, and double its participation in the least developed countries.	Market participation (page 118) Direct economic value generated and distributed (page 123)
	9.3 Increase access to small industries and other companies, particularly those in developing countries, to financial services, including accessible credit and its integration in value chains and markets.	No specific action.
	9.4 Modernize infrastructure and rehabilitate industries to make them sustainable until 2030, with increased efficiency in the use of resources and more adoption of clean and environmentally correct technologies and industrial processes, with all countries working according to their respective capacities.	Investments in the energy sector (pages 112 to 119)
	9.5 Strengthen scientific research, improve industrial sectors' technological capacities in all countries, particularly developing countries, including, until 2030, encouragement to innovation and substantially increasing the number of workers in research and development per millions of people, and public and private expenses with research and development.	Investments in infrastructure, investments in R&D&I (pages 90 and 112 to 119)
	9.a Facilitate the development of sustainable and resilient infrastructure in developing countries, with higher financial, technological and technical support to African countries, least developed countries, small developing landlocked countries and small developing island states.	No specific action.

SDG	Goals	Actions
9 INDÚSTRIA, INOVAÇÃO E INFRAESTRUTURA 	9.b Support technological development, research and innovation in developing countries, also ensuring a propitious political environment for, among other things, industrial diversification, and to add value to commodities.	Insert investments in R&D (page 90).
	9.c Significantly increase access to information technologies and communications and undertake to offer universal and affordable access to the Internet in the least developed countries until 2020.	Telecommunications services, investments in telecommunications infrastructure (page 119).
	Make cities and human settlements inclusive, safe, resilient and sustainable	
11 CIDADES E COMUNIDADES SUSTENTÁVEIS 	11.1 Ensure access to safe, appropriate and affordable housing and basic services to all and urbanize the “favelas” until 2030.	Energy distribution coverage; special tariffs (pages 116 and 94).
	11.2 Provide access to safe, affordable, sustainable transport systems to all until 2030, improving road safety with the expansion of public transport, and special attention to the needs of persons in vulnerability situation, women, children, disabled persons and elderly people.	Investments in R&D&I, Eletrovia (a road with charging infrastructure for electric vehicles) (pages 90 and 48).
	11.3 Increase inclusive and sustainable urbanization and capacities for planning and management of participative, integrated and sustainable human settlements in all countries until 2030.	Investments in infrastructure (pages 112 to 119)
	11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage.	Preservation areas (pages 157 to 167) Support to culture (pages 55 to 56)
	11.5 Significantly reduce the number of deaths and the number of people affected by disasters by 2030, in addition to substantially reducing the direct economic losses they cause in relation to global gross domestic product, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.	Dam safety (pages 60 and 61) Consumer safety
	11.6 Reduce negative environmental impact per capita of cities until 2030, with special attention to air quality, municipal waste management and others.	Ecoefficiency program (pages 105 and 106).
	11.7* Provide universal access to safe, accessible and green public spaces until 2030, particularly to women and children, elderly and disabled persons.	Local communities (pages 95 to 98)
	11.a* Support positive economic, social and environmental relations across urban, peri-urban and rural areas, reinforcing the national and regional development planning.	Investments in infrastructure (pages 112 to 119)
	11.b Until 2020, substantially increase the number of cities and humans that adopt and implement policies and integrated plans for inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters; and develop and implement according to the 2015-2030 Sendai Framework for Disaster Risk Reduction, holistic management of disaster risk in all levels.	Investments in infrastructure, Dam safety, Consumer safety (pages 112 to 119 and 60 and 61).

SDG	Goals	Actions
11 CIDADES E COMUNIDADES SUSTENTÁVEIS 	11.c Support the least developed countries including technical and financial assistance for sustainable and resilient constructions using local materials.	No specific action.
	Take urgent measures to fight climate change and its impacts	
13 AÇÃO CONTRA A MUDANÇA GLOBAL DO CLIMA 	13.1 Reinforce resilience and capacity of adaptation to risks associated with climate and natural disasters in all countries.	Investments in R&D&I (page 90)
	13.2* Integrate climate change measurements in national policies, strategies and planning.	Climate change program (pages 104 to 105)
	13.3* Improve education, raise awareness and human and institutional capacity with regard to mitigation, adaptation, impact reduction and early alert of climate change.	Climate change program (pages 104 to 105)
	13.a Implement the commitment assumed by developed countries parties in the United Nations Framework on Climate Change (UNFCCC) to the goal of jointly raise US\$ 100 billion per year as of 2020, from all sources, to meet the needs of developing countries, in the context of significant mitigation actions and transparency in the implementation, and make fully operational the Green Climate Fund with its capitalization, as soon as possible.	No specific action.
	13.b Promote mechanisms for the creation of capacities for planning associated with climate change and efficient management, in the least developed countries, including the focus on women, youth, local and marginalized communities.	Climate change program (pages 104 to 105)

Copel hosted, in November 2019, the regional edition of the “Laboratory for SDG Integration in the Brazilian Electricity Sector”, the second phase of the Global Compact Network Brazil initiative to accelerate the incorporation of global challenges to the electricity sector companies’ business strategy. The initiative was launched in 2017, with a survey that diagnosed the level of understanding and commitment of the sector companies to the SDG. The workshop was dedicated to unfolding priority SDGs for sector planning. Copel and Itaipu action cases were presented in accordance with the SDGs, before the execution of the laboratory of co-creation of goals specific to the sector. Other events will be held in 2020 for the whole country.

Copel raises employee’s awareness about the SDG with messages and events. To learn more about Copel actions associated with the Global Compact principles and other SDG, access the Appendix – Incorporation of Global Compact Principles and SDGs, on page 146.

8.3. Human rights

GRI 413-1

Copel keeps the Human Rights Program based on the following practices: disclosure and circulation of didactic materials; courses and lectures; review and preparation of norms; planning of events and actions turned to the internal audience, production chain and local community; and refinement of Copel policies for prevention, inspection and mitigation of violations. The initiative is grounded on the Universal Declaration of Human Rights, Global Compact and Guiding Principles on Business and Human Rights, UN documents and initiatives intended to promote social responsibility and sustainable development worldwide.

One of its most recent results is the first version of the Human Rights Policy. As part of its scope, the Company made available the distance learning training in Human Rights, with contents that include the relationship between Human Rights and the Constitution; identification of violations inside and outside the Company and applicable reporting channels. By the end of 2019, 26% of the company had completed the training, amounting to 3,714 hours. [GRI 412-2](#)

There was also an important movement to disseminate the theme among stakeholders: Copel “Human Rights at Work: Let’s talk” booklet resulted in 2019 in the “Human Rights and Work” video. The material focuses on outsourced employees: it informs on rights and identification of violations, with simple and accessible language. However, production and circulation are not restricted to the outsourced employees: the material is also used in integration meetings and was disclosed in Copel profiles on LinkedIn and YouTube.

8.4. Copel Sustainability Challenge

An educational competition created by Copel, jointly with subsidiaries, to learn the Company’s facilities in all regionals, work on the SDGs and the 10 Sensors (quality program) and propose a reflection on the relation of employees with decisions made in the work environment, from a sustainable point of view.

The facilities were broken into six Delegations: Cascavel, Centro-Sul, Curitiba, Sede, Maringá and Londrina; obeying locality criterion, as already occurs in the Company’s internal sports games. The challenges were broken into 3 modalities: 1) fixed: measurement and comparison of data in social and environmental spheres (ecoefficiency) across participating facilities; 2) free:



An educational competition created by Copel, jointly with subsidiaries, to learn the Company’s facilities in all regionals, work on the SDGs and the 10 Sensors (quality program) and propose a reflection on the relation of employees with decisions made in the work environment, from a sustainable point of view.

employees created teams of their choice and proposed actions mandatorily associated to the SDGs and the 10s to be fulfilled by the end of the period defined; and 3) Most Sustainable Facility: the space with a higher number of sustainable items.

All facilities participated with more than 20 employees, totaling 49 units: 82% of the Company’s staff. Moreover, 411 people competed in the free challenges, with creative proposals that went beyond the Company, involving the local community, public institutions and non-governmental organizations. The results of the first edition of the Challenge exceeded the Company’s expectations.



CAPITAL PERFORMANCE



HUMAN CAPITAL

9.1 Human capital management

GRI 102-43, 103-1, 103-2, 103-3, PRME 1, 2

The poor management of human capital generates risks of loss of fundamental knowledge on the Company, acquired during the professional career, low productivity and lack of accordance with the organizational culture. In order to avoid them, Copel uses the People Management Policy. It makes clear that employees are the most valuable resources of the Company, because their qualification, dedication and engagement are fundamental for the business's success. Their knowledge and continuous development constitute the pillars of excellence. Ethics, transparency, trust, mutual respect and upright behavior are the foundations of professional relations.

In addition to this policy, there are also the Occupational Health and Safety Policy (page 83), the Code of Conduct (page 53) and the Copel Manual, which guide the performance of employees in their work routines. Also, Copel acts under the fundamental conventions of the International Labor Organization (OLT) and the International Declaration of Human Rights, and with the current legislation.

The Company's strategic goals are to provide a healthy work environment, which enhances the valorization and well-being of employees, as well as promoting a culture of people management based on meritocracy and inclusion. The importance of human capital for the Company is evidenced by the

presence of Copel for the third consecutive year in the ranking of the 150 Best Companies to Work For of Guia Você S/A.



Smart Copel, Curitiba
Credit: Guilherme Pupo

Copel, through its People Management Policy, makes clear that employees are the most valuable resources in the Company, because their qualification, dedication and engagement are fundamental for the business's success.

9.1.1 Human capital profile and diversity

GRI 103-1, 103-2, 103-3, 102-, 102-8, 102-41, 401-1, 405-1, PRME 1, 2, 3, 6

Total of own employees

per employment contract and gender



Total of own employees

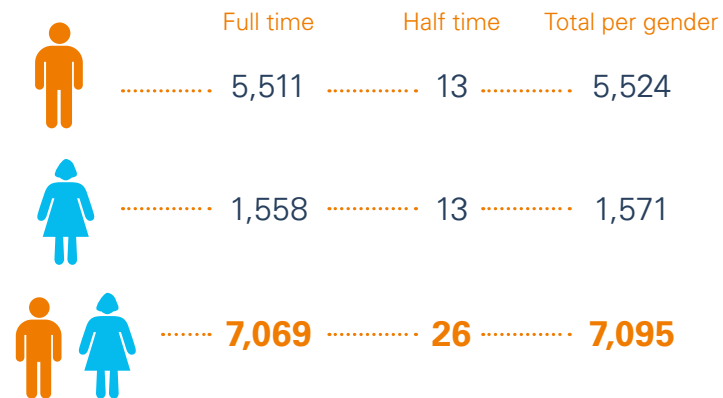
per permanent contract and region



Notes: 1. Copel does not have own employees with temporary contracts.
2. Copel does not control the division of outsourced employees by gender because each subsidiary has its own management over the various outsourcing contracts.

Total employees

per type of job and gender



100%

Copel own employees are covered by Collective Bargaining Agreements

Total employees per functional category and gender

Functional category	Own employees	MEN	WOMEN	TOTAL
Medium level prof	2,886	2,886	1,111	3,997
Technical level prof.	1,631	1,631	116	1,747
Higher education	950	950	344	1,294
Operational	57	57	0	57
Total	5,524	5,524	1,571	7,095

Total of black and mixed-race own employees **929**

Total of disabled persons own employees **171**

Total of outsourced employees **7,200²**

Total of outsourced apprentices **153**

Turnover

	Total admissions	Admission rate (%)	Total dismissals	Turnover rate (%)
	4	50.00	404	2.68
	4	50.00	120	0.81
	8	100.00	524	3.49
Up to 30 years	1	12.50	33	0.22
Between 30 and 50 years old	3	37.50	196	1.31
Over 50 years old	4	50.00	295	1.96
South region	6	75.00	519	3.45
Southeast region	0	0.00	3	0.02
Midwest region	0	0.00	2	0.03
Northeast region	2	25.00	0	0.00

Notes: 1. Total admissions consider employees admitted (2) and reintegrated (6).

2. For calculation of admission rates, the admission per gender, age group or region/total admissions formula was used. For calculating the turnover rate, on the other hand, the formula (dismissed+admitted)/2/2018 staff was used.

Diversity Program and Standing Committee on Diversity

GRI 413-1

Copel's Diversity Program fosters the search for equal rights, opportunities and recognition for all, with attention to vulnerable and discriminated groups. The Program is directly linked to the Standing Committee on Diversity, which determines which actions are priorities and how they will be implemented. It also seeks to provide and support internal actions in accordance with public policies and movements geared towards diversity.

Copel keeps the Standing Committee on Diversity since 2015, with the participation of different areas of the Company, whose objective is to plan, execute and monitor actions focused on its six pillars: gender, race, accessibility, sexual orientation, age and religion. Annually, resources from Copel (Holding Company) and subsidiaries are used to carry out the initiatives proposed by the Diversity Committee, which are revised at each new period.

Throughout its existence, the Diversity Committee has contributed to the promotion of human rights, especially seeking to generate more egalitarian working relations. Diversity, therefore, represents an opportunity for Copel to consolidate universal values in its practices.

In 2019, the group was involved in the following activities [GRI 413-1]:

- Internal qualification for diversity;
- Partnership with the Secretariat of Justice, Family and Labor for Social Development;
- Forwarding of opinion for Human Resources Committee, containing guidance for improvement of the Ethnic-racial quotas system in notices for Copel Public Tenders;
- Forwarding of the proposal of Sexual Harassment Report flowchart for approval by the Ethics Guidance Board (COE);
- Participation of the Diversity Committee representatives in the Meeting promoted by the State Public Prosecution Office about the employability of people from the LGBTQ+ group;
- Participation in UN Women research;

Encouragement and good management of diversity provide higher productivity and engagement of employees, generate better social, economic and financial performance, and positively influence stakeholders to adopt best practices associated with the theme. Moreover, they minimize risks of lack of diversity of ideas and limitation of staff's creative potential, as well as the risk of non-compliance with Law No. 8,213/1991 (Quota Law).

Since access to job vacancies in Copel occurs through public tender, there is no distinction in selection processes, and the risk of discrimination in this stage is avoided. Due to that, the Diversity Program and Committee focus on the other processes of the Company. GRI 102-15, 102-29

Throughout its existence, the Diversity Committee has contributed to the promotion of human rights, especially seeking to generate more egalitarian working relations. Diversity, therefore, represents an opportunity for Copel to consolidate universal values in its practices.

Copel's commitment to diversity

- Global Compact – UN
- Inclusion of disabled persons MP/PR
- Pro-Equity Gender and Race Program - Federal Government
- Principles of Women's Empowerment (WEPs) - UN
- SDG – Nós Podemos Paraná (We Can Paraná) – SDG Brasil
- Pact for the Social Inclusion of Black Men and Black Women in the World of Work - MPT / PR

Internal diversity initiatives

- Acknowledgement of the social name – normalization of the use of the social name by the Company's employees according to legislation in force.
- Breastfeeding rooms – for mothers to have a comfortable and appropriate structure for milking when they return from maternity leave, Copel keeps 7 breastfeeding rooms in its facilities. The existence of the rooms is also an encouragement for the continuation of breastfeeding, thus promoting the babies' health and well-being.
- Disabled persons (PwDs) – to meet obligations provided in Law No. 8,213/1991 (Quota Law), Copel

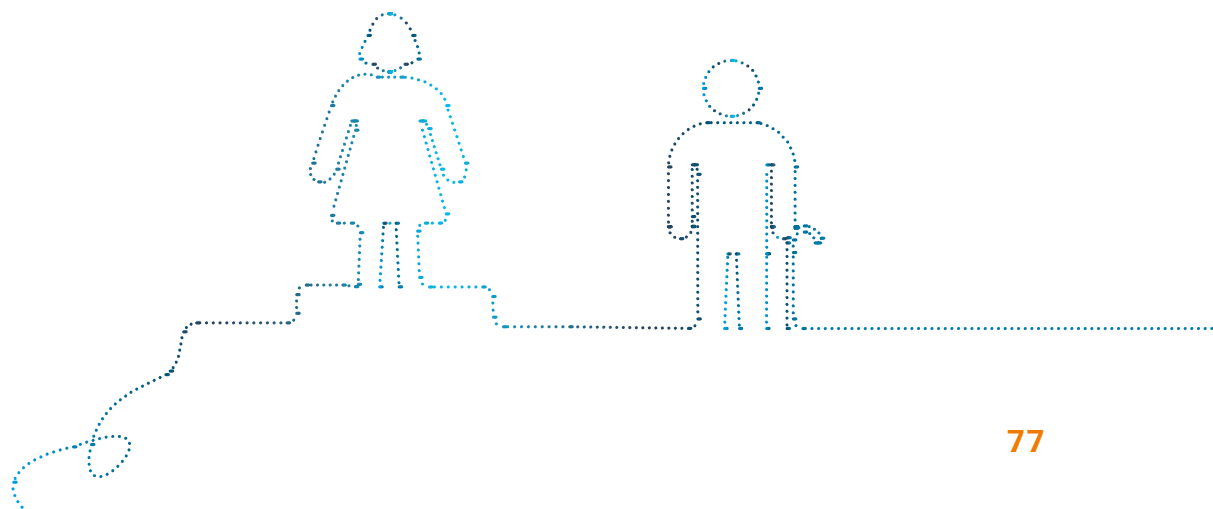
establishes in its public tender notices the distribution of differentiated percent for entry of disabled persons in positions that will ensure accessibility and safety. In 2019, the Company reached 2.3% of the mandatory quota for disabled persons (5% of the staff).

- Religion – relevant theme for the Company, addressed in lectures and annual forums.
- Notable Women – Copel's intranet community that aims to honor women professionals who have made - or still make - the difference for the growth and success of the Company.

External diversity initiatives

- Performing 150 gynecological nursing consultations for women from the community around the Faxinal do Céu Plant - "Women's Health" Project;

- Performing 216 consultations to monitor the physical and cognitive development of babies, the risk conditions of newborns and guidance to mothers in the community surrounding the Faxinal do Céu Power Plant - "Children's Health" Project;
- Launching of the documentary about the Apucarantina indigenous community, which received approval from the National Indian Foundation (Funai) and the Ministry of Woman, Family and Human Rights of the Federal Government.
- Official sponsorship of the Paralympics Team of Wheelchair Fencing – Paraná Association of Disabled Persons;
- Approval of supplementary fund (R\$ 3,601,200) to execute remaining accessibility works.



9.1.2 Remuneration and benefits

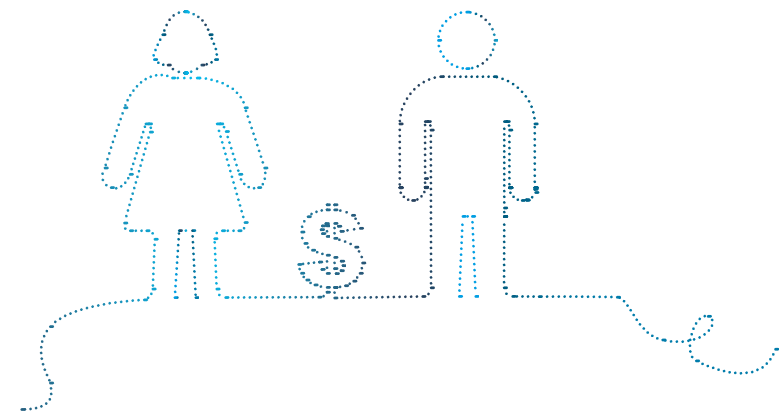
Copel's careers and their respective remunerations are set out in the Structure of Careers and Remuneration document, based on market practices for position, role and level of training and qualification. The benefits and short-term variable compensation are established in the Collective Bargaining Agreement, which is annually carried out between the trade unions and Copel. [GRI 103-2](#)

The Human Resources area is responsible for managing this process, which aims to:

- identify positions and roles necessary for the development of the Company's activities;
- define training required to perform the activities of each position and role;
- establish levels of maturity and complexity of positions and roles to meet the demand of jobs;
- establish rules of functional movement (vertical) and salary (horizontal) of employees;
- identify opportunities for growth and development in careers.

The ratio between the total annual compensation of the highest-paid individual of the Company and the total annual average compensation of all employees is 7.24 (the total annual average compensation of all employees was calculated by the sum of the salaries of all employees, divided by the total number of employees, except for the highest-paid ones). The variation between the lowest wage and the minimum wage¹ is 1.89 for men and women². The percentage of increase in compensation received in 2019, compared to the previous year, was 2.92% for the highest-paid employee and 4.46% for the other employees - a proportion of 153% -, considering salary, additional pay for time of service, collective agreement, additional pay resulting from roles performed and integration of legal food aid. [GRI 102-38, 102-39, 202-1, 405-2](#)

For outsourced employees, minimum remuneration and working hours' standards, according to the legislation, are ensured by the Term of Awareness and Commitment, mandatorily signed by suppliers.



The benefits package offered by Copel to its staff goes beyond the current legislation, and is compatible with that of companies that are benchmarks in people management. This package is granted to all employees, regardless of their work hours. The Company annually publishes Copel Benefits Report (BBC), a statement of salary, additional, allowances, profit sharing, social security plan, food aid, daycare assistance, performance premium and health plan, among others. The BBC is available to employees on the SAP Portal. [GRI 401-2](#)

According to the latest BBC, the benefit that encompassed more people and mobilized more resources in 2019 was Vale Refeição/Alimentação (Food Vouchers), with 100% of the employees assisted and R\$120 million spent. The benefits policy is one of the Company's attractions. Further information on the package, including those extended to family members, can be found on pages 78 and 136.

¹ National minimum wage on 12/31/2019: R \$ 998,00. Copel does not use minimum wage as the basis for the definition of its wages.

² The calculation of the proportion of remuneration is based on the salaries of full-time employees.

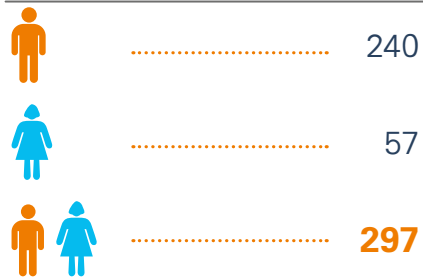
Parental leave

GRI 401-3

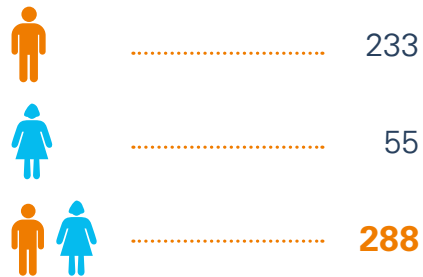
All Copel's own employees are entitled to parental leave. The company adopts the benefit of 6 months for women and 20 days for men. In addition, in the case of women, after the return from the leave, the working day is reduced to 6 hours for 60 days, for breastfeeding.

Parental leave indicators

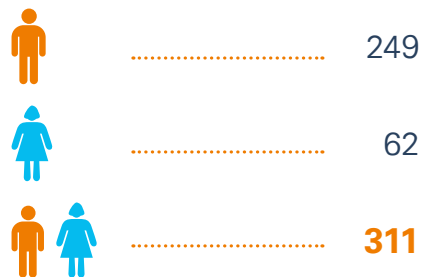
TOTAL OF EMPLOYEES THAT USED THE LEAVE



TOTAL OF EMPLOYEES THAT RETURNED TO WORK AFTER LEAVE¹



TOTAL OF EMPLOYEES THAT REMAINED 12 MONTHS IN THE JOB AFTER RETURN FROM LEAVE²



RETURN RATE (%)



RETENTION RATE (%)



Notes: 1. Considers leave start and return in 2019.
2. Considers leave start in 2018 and return in 2019.

Complementary pension and retirement plan

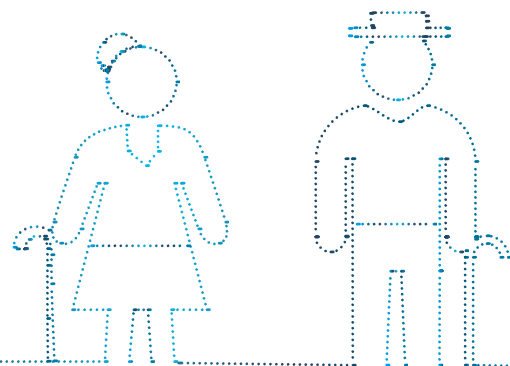
GRI 201-3, 404-2

Copel offers, through Copel Foundation, a complementary pension plan for the employee to build a financial reserve fund during his professional life. At each normal contribution, the Company contributes with the same value. Moreover, employees can make contributions to increase their future income without the sponsor counterpart. The reserve is transformed into benefit upon retirement, and payment is made of the lifelong monthly value, calculated based on the total accumulated.

Copel Foundation promotes Viva Tranquilo, a financial and social security education program, that seeks to make employees aware of the importance of a supplementary pension plan, which increases their reserve funds through extra intakes and contributions. It also encourages the employee to transfer his pensions from banks and insurance companies to Copel Foundation. On the Foundation page, the employees can simulate the value of their future benefit based on their current contribution and the extra contributions.

Viva Tranquilo also assists employees in their transition to retirement, addressing issues such as financial management and the importance of living an active life. In this regard, COPEL has maintained, since 1979, the Retirement Preparation Program (PPA), with a series of lectures on social security education, consumer behavior and savings, entrepreneurship, quality of life and health.

Retirement is also addressed annually in the lectures promoted by the Internal Commission for the Prevention of Accidents (Cipa).



VOLUNTARY REDUNDANCY PROGRAM (PDI)

Copel promoted, in 2019, the new phase of the Voluntary Redundancy Program (PDI). From January to December 2019, 524 employees left the Company, 397 of them through the plan.



Smart Copel, Curitiba
Credit: Guilherme Pupo

9.2 Professional performance management

GRI 103-1, 103-2, 103-3

9.2.1 Development

GRI 404-2, EU14, PRME 1, 2, 3

Copel considers the professional development of employees a strategic factor, as it favors increased productivity and competitiveness, and enhances well-being and safety of all.

The Corporate Education Policy establishes the guidelines to promote qualification actions ranging from basic training to graduate courses and research. Actions are organized in corporate programs; training (destined to basic qualification to exercise the function); mandatory training (courses destined to specific activities); training for professional improvement; events (seminars, lectures, workshops, conferences, etc.); and research and development projects.

Training related to the Integrity Program, sustainability, leadership and preparation for the future, among others, are under the responsibility of UniCOPEL Corporate University. Copel also promotes courses with internal and external instructors on topics related to quality management, processes and projects, and tools to support this management. The Company also runs a foreign language training program for employees who use another language in their work activities, and 54 people attended German, Spanish and English courses.

Copel also invests in lato and stricto sensu graduate courses for professionals who need to deepen their knowledge in their area of activity. In 2019, a notice was published to meet Copel COM, with courses concerning the energy market. There are four professionals taking the courses. Since 2016, the Company has also entered into partnerships with educational institutions that are interested in granting benefits to employees, some of which extend to dependents, by means of a public call for proposals. The partnerships include basic, higher and professional education, and qualification and improvement courses.

For the managers, the Company maintains the Transforming Leadership program, whose objective is prepare these professionals for the responsible management of business and people, with attention to to the well-being and development of teams. As part of the Program, the Human Leaders workshop was held in 2019, to promote practices and methodologies that can help the routine of that position. The activity was divided into 20 workshops on different

RELOCATION PROGRAM

The search for new opportunities and challenges is disseminated with transparency by the Relocation Program. Opportunities are made available on the Employee Portal and disclosed via email, so those interested can change function, area or locality and apply for the available vacancy. This practice values and potentiates the Company's human capital, with equal opportunities for employees in the moving process.



themes, in which 404 managers participated. Copel (Holding Company) also offered an immersive course to managers who had not yet participated in training management, which was composed of three monthly meetings, for the development of behavioral competencies that help in career transition. Twelve new managers were trained in 2019.

For the outsourced workforce, a specific training was conducted, like the training on Operation of Substations Under Supervision, where 569 persons were trained, and the course for mowing workers. Communication for Leadership workshops were carried out with supervisors and outsourced collaborators, in order to improve interpersonal relationships, communication and people management.

Copel GET and Copel DIS subsidiaries executed their own initiatives for people development, which can be checked in the Socio-environmental Responsibility and Economic-Financial Reports of the Companies.

9.2.2 Performance assessment

GRI 404-2, 404-3

Nossa Energia (Our Energy) is a corporate program that establishes a standardized way to track and evaluate employee performances based on meritocracy. It consists of two axes: Organizational Competencies, related to the expected behaviors of each employee, and Results, related to business goals. The

program subsidizes decision-making, based on meritocracy, regarding promotions, functional adequacy, participation in conferences, training, graduation programs and foreign language courses, among others.

In 2019, 98% of employees with more than three months in the Company who were not in retirement process or on leave, and that worked at least 60 days in the year, were assessed.

The Calibration Committees were created in this program, aiming to align the understanding of the evaluators with regard to the comprehension of the assessment questions, in order to reduce the subjectivity in the process of analyzing the employee performance. Calibration takes place in two stages, the first of which is a pre-evaluation, focused on reviewing the program guidelines and guiding managers on the process and the appropriate management posture; the second, post-evaluation, when the people management area studies the result of that cycle and proposes criteria for managerial attitude analysis. Managers are selected to present to the Committee arguments and contextualization of the assessments, which generates development actions to these leading professionals. [GRI 103-3](#)

9.2.3 Investment in human capital

Total invested (R\$)

2017	2018	2019
7.58 million	8.3 million	8.7 million

Average training hours | [GRI 404-1](#)

	TOTAL EMPLOYEES	TRAINING HOURS	AVERAGE TRAINING HOURS
	5,524	216,595.92	39.21
	1,571	40,783.06	25.96

FUNCTIONAL CATEGORY	TOTAL NUMBER OF EMPLOYEES	TRAINING HOURS	AVERAGE HOURS OF TRAINING
Operacional	57	2.208,85	38,75
Medium technical level professional	1.747	88.586,21	50,71
Medium Level Professional	3.997	108.878,14	27,24
Higher Level Technical Professional	1.294	57.705,78	44,59
Total	7.095	257.378,98	36,28

9.3 Occupational Health and Safety

GRI 103-1, 103-2, 103-3, 403-1, 403-2, 403-3, 403-4, EU16

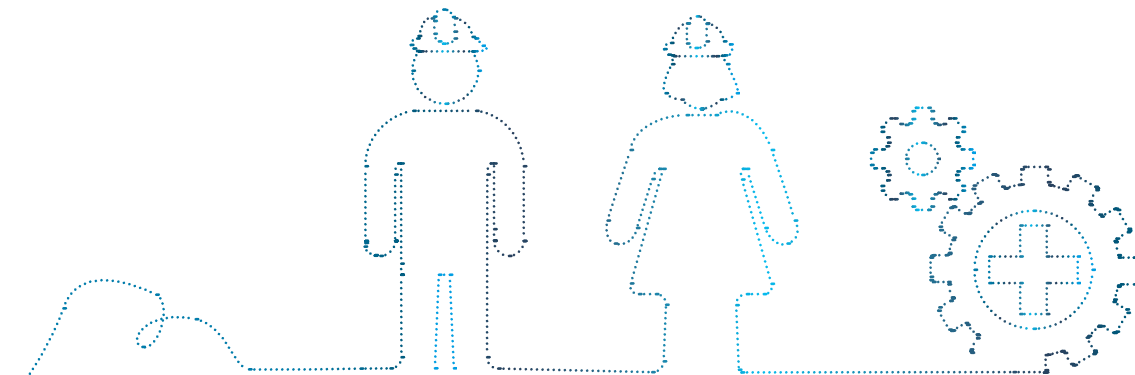
Occupational Health and Safety are considered fundamental themes for the sustainability of the Company, so much that they are part of its strategic reference. Copel values and respects the human being in its entirety and always puts life in the first place. Health and safety directly impact on the employee welfare and satisfaction, as well as on their productivity and readiness. On the other hand, when accidents occur, they entail costs for the Company and impact the lives of employees.

Each Copel subsidiary has a specific area responsible for Occupational Health and Safety management. It is carried out through the anticipation, recognition, evaluation and monitoring of risks in establishments.

At Copel (Holding Company), there is a coordination responsible for the integration of these areas and the creation of corporate policies, standards and procedures.

The area of occupational medicine is centralized in this coordination and serves the whole Company, promoting health actions integrated to work safety. These teams are composed of technicians and occupational safety engineers, doctors, and occupational nurses and nursing assistants. In addition to these professionals, the entire managerial framework, as well as contract managers, inspectors, supervisors, Internal Accident Prevention Commissions (CIPAS) and Fire Departments also play an important role in safety management.

100% of Copel’s employees are represented by the CIPA. The main guidelines for action come from the Occupational Health and Safety Policy, which must be followed by the entire Company and its subsidiaries. The document indicates that everyone is responsible for safety, health and well-being and that all accidents can be avoided. It also states that nothing justifies breaking the safety rules and it is everyone’s commitment to eliminate risk situations. Safety, according to the policy, should be part of every moment, both inside and outside work. The document was drafted



by the Occupational Health and Safety areas in conjunction with other Copel areas and approved by the Executive Board. Its guidelines comply with international standards such as the International Electrotechnical Commission (IEC), National Fire Protection Association (NFPA) and International Labor Organization (ILO).

In addition to the Policy, Copel follows corporate norms of Occupational Health and Safety and Personnel Training and Development, according to which no own employee or outsourced employee can execute activities considered risky or unhealthy or that demand specific knowledge, without previous training. It also counts on the corporate norm for Safety Equipment and Uniforms. Individual Protection Equipment (IPE) is provided to own or outsourced employees according to Copel technical specifications and replaced whenever necessary, due to wear, damage or something else. The policy and norms linked to Occupational Health and Safety are updated whenever necessary, observing the maximum period of three years.

The strategic goals of this management are: promote a healthy work environment, where workers collaborate with a process of continuous improvement of the protection and promotion of the safety, health and well-being of all; comply with legal requirements and disseminate a culture of prevention; promote work safety and a culture of

prevention; prioritize occupational safety and promote the culture of safety, health and quality of life.

Copel also undertakes commitments related to the subject, such as the requirements for obtaining OHSAS 18001 (Occupational Health and Safety Management Systems). The Company also promotes campaigns that address issues related to the main health and safety risks to which it is subject, including awareness activities, education and orientation of employees and service providers for the prevention of occupational accidents and diseases.

Specific programs and actions are also conducted, such as Occupational Health and Safety Management (GSST); Preserving Life (PPV) and Behavioral Verification (VCO), which are focused on the field inspection of employees and service providers hired by the Company. Finally, sector safety meetings are held, where employees discuss periodically matters related to safety and accident prevention. Through the Hunt for Risk initiative, any employee can register a risk or near accident to be analyzed by Cipa, with the support of the health and safety area. [GRI 403-2](#)

Annually, each subsidiary defines its goals and objectives, which are broken down into corporate goals. They are voluntary, but in some cases, classic indicators are used, which have reference standards.



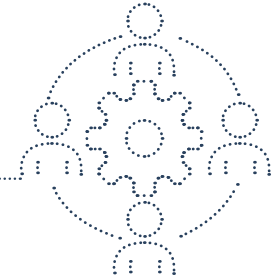
Maintenance of the three-phase network in the rural area, Prudentópolis - PR.

There are Targets for Frequency Rate (TF), Rate of Severity (TG), Safety Commitment Attendance Index (IACS), inspections, valid Occupational Health Certificate (ASO), and absenteeism rate. The objectives are defined during the strategic planning, in October and November of the previous year. There are also monthly goals of indicators, whose consolidation contributes to the annual result. Performance is analyzed and consolidated monthly. The evaluation is made both internally and by third party. A benchmarking is also done with other companies, through the Coge Foundation and participation in awards of the electricity sector.

Copel Occupational Health and Safety indices are on the average of the sector.



OUTSOURCED EMPLOYEES



Outsourced professionals in all and any service rendering agreement must follow, in addition to the policy guidelines, the Occupational Health and Safety Manual. Contractually, outsourced companies must apply the guidance provided in the Guide for Occupational Health and Safety for Companies Contracted (available online) and demonstrate satisfactory performance with regard to their employees' health and safety management.

The guide defines guidelines for implementation of control measures and preventive safety systems in processes and environment work conditions of service provider companies, according to determinations of legislation in force and internal standards on Occupational Health and Safety. GRI 403-7

Before starting their activities, outsourced employees undergo the Integration Training, where risks and measures referring to health and safety in the execution of tasks are addressed. Additionally, for risky activities, certificates of mandatory training are required, as provided in Regulatory Norms of the Ministry of Labor and Employment. Mandatory training is made outside the Company. GRI 403-5

In 2019, 100% of Copel (Holding Company) and Copel GeT and 76% of Copel DIS outsourced workers participated in the integration process, where the theme Occupational Health and Safety is presented. GRI EU18

2019 Occupational Health and Safety Indicators¹

	2017		2018		2019	
	TF ²	TG ²	TF ²	TG ²	TF ²	TG ²
Own	3,57	100	4.11	148	2.36	84
Contracted	6,14	580	6.42	890	5.27	558
Total	4,94	355	5.38	555	3.99	350

Notes: 1. Calculations according to NBR 14280 (Brazilian Association of Technical Norms).

2. TF: Frequency rate

TG: Severity rate

Main Occupational Health and Safety Actions

Health and safety meetings: Copel ensures employee engagement in health and safety with monthly meetings, per department and locality. These meetings are called Sectorial Safety. There, employees discuss preventive and corrective actions based on everyday activities, in addition to other aspects for improvement of their well-being and satisfaction. The sectorial representative brings these topics for appreciation by Cipa, responsible for indicating solutions to be implanted. There are also weekly meetings of Risk Control, for exchange of information and dissemination of attitudes that prioritize safety in the routine. The set of activities adds points, monthly, and departments with a higher score in the quarter are awarded in the Safety Award. [GRI 403-1](#)

Training and qualification: Programs such as Training of Field Inspectors and Preliminary Risk Analysis - APR in Focus, are offered to employees, which aim at active prevention to identify and block the agents of work-related illnesses and accidents. [GRI EU16](#)

Preserving Life Program (PPV): It's an initiative to supervise the technical and safety procedures in the field during the execution of the activities, in accordance with the Occupational Health and Safety Management (GSST) standards. A work or area safety technician performs the monitoring of the teams and issues report with a score of the found failures. The program facilitates follow-up of compliance with legal requirements by service providers.

Health promotion: An agreement for diagnosis examinations of diseases that may affect the capacity and productivity at work. It is offered by Copel Foundation.

Rodeo of Electricians: Copel encourages the participation of its electricians in this technical competition held with state and national phases involving professionals from different electricity distributors across the country. This is a playful way of valuing electricians, encouraging integration, improving occupational safety and sharing experiences and knowledge.

Healthy Management: In 2018, Copel extended the maternity leave to 60 days and implemented reduced working hours at the return from the leave, from 8 hours a day to 6 hours a day for more than 60 days, besides encouraging breastfeeding. The Company also offers a breastfeeding support room in its main poles, an exclusive and comfortable space where mothers can properly collect and store their milk. Users are provided with a kit with storage guidelines, glass bottles and a thermal bag for the correct transport of the containers.

Working hours' reduction: Since 2018, Copel workers can reduce their work load from eight to six hours. With this option, the salary is discounted by 25%, but profit sharing, food aid benefits, snack vouchers and the 13th of food aid are maintained.

APR Easy: pp for registration of preliminary risk analyses in tablets. The preliminary risk analysis (APR) is mandatory before the execution of any activity that interferes with the electrical system and is intended to encourage professionals to plan their activities considering safety, previously listing risks, and taking the required measures to avoid them. In addition to the APRs digital registration, the app provides traceability, georeferencing and connection with Copel other systems, which has contributed to reducing the issue of printed documents that need physical filing.

Chemical Dependency Program: initiative intended to improve the employees' health conditions, well-being and productivity, contributing to life quality, prevention of work accidents, absenteeism, medical expenses, disciplinary measures, low performance, among others. The initiative is led by a working group composed of professionals from occupational health and social service areas and includes the internment of the employee, sessions of therapy and psychiatric consultations, besides monitoring by the social service.

Copel fully covers the employee's first hospitalization, including the medication prescribed for the treatment, within 90 days, plus 48 psychotherapy sessions with psychologists and/or psychiatrists specialized for the employee and 24 sessions for the family. The entire process is guided by internal regulations (NAC 040120 AND IAP 040120-1).

Training and integration of outsourced employees: contractors' employees participate in Health and Safety Integration, a mandatory minimum training for performing fieldwork with electricity. The professionals also attend the lecture on risk analysis related to the activity. The minimum mandatory control for work with electricity is carried out with its own application, with information on the contractors' employees and contracts.

Encouraging physical activities: The Company promotes the Copel Internal Games (JICs) since 1974, with more than 20 sports, individual and collective. Disputes occur among employees of the different regions of Paraná, distributed according to their stocking area.

Another traditional sports event of the Company is the Rustic Running and Walk in Atuba - Curitiba neighborhood where one of the complexes of the company is located, which annually brings together approximately 450 participating athletes each December. In addition, Copel supports the participation of its employees in external events, such as street races and SESI Games.

For further information on Copel GET and Copel DIS health and safety practices, access:

[Copel GET's Socio-environmental Responsibility and Economic-Financial Report](#)

[Copel DIS Socio-environmental Responsibility and Economic-Financial Report](#)





INTELLECTUAL CAPITAL

PERIGO
RISCO DE
CHOQUE
ELÉTRICO

10.1 Research, development and innovation

GRI 103-1, 103-2, 103-3, EU8, PRME 4

Research & Development are fundamental activities to the Company, and are included in its Business Plan, Strategic Planning and management practices. Copel sees investments in these activities as an opportunity, given that innovation is a competitive advantage.

For the electricity sector, investment in R&D is also a regulatory requirement, established by Federal Law 9,991/2000 and supervised by the Brazilian Electricity Regulatory Agency (Aneel) in the scope of the Electricity Sector's Research and Technological Development Program, (ProR&D). All companies of this sector must, mandatorily, allocate part of their net operating income (NOI) to this activity.

The ProR&D program proposes different research lines, like alternative sources of electricity generation, management of basins and reservoirs, energy efficiency and service quality and reliability, among others. The Company develops projects in these lines, always linked to its strategy, based on demands arising from routine problems, like the need for new technologies or construction of low-cost generation undertakings. Each project has its own schedule whose terms for the conclusion are regulated by Aneel. Commitments already assumed must be completed until January 2021.

The teams responsible for research and development management at Copel are the Innovation Coordination and R&D areas of Copel DIS and Copel GET. Management is conducted via SAP system, Initial Project Proposal (PIP) and Project Formulary (FPD). The subsidiaries' R&D areas support the management of the initiatives, including initial hiring, management of monthly payments and monthly verification of financial statements. To obtain information on the development of R&D programs and their budget execution, access the Innovation Portal, which is a supporting tool for project managers.

In 2019, 5 patent requests were filed with the National Industrial Property Institute (INPI). In total, since the first patent, Copel has 31 registrations in INPI. Copel also has 1 international patent request in the United States and Europe, via the Convention of Union of Paris (CUP).

In 2019, R\$ 62.17 million were invested in 74 R&D projects, 23 of them strategic, with themes established by ANEEL through Strategic Projects' Call. For the coming years, investment of R\$ 77.5 million is planned for new projects.

PROMOTION OF INNOVATION

In order to encourage the search for innovative businesses at Copel, the Innovation Coordination was extinct in September of 2019, giving room to the Innovation Sector, linked to the Business Development Board (DDN). The new area is dedicated to the prospection and development of businesses turned to the company's strategic goals. After this change, the Innovation Policy is under review by the DDN.

In the new configuration of Aneel R&D management that seeks to improve processes, develop methodologies, software, among other solutions, is entirely under the responsibility of Copel GET and Copel DIS subsidiaries, which are in charge of fulfilling regulatory obligations.

Investment in Research & Development in 2019 (per theme)

Energy storage	2,043,787.32
Electricity generation alternative sources	20,333,810.12
Management of basins and reservoirs	1,830,841.42
Environment	1,762,137.22
Measurement, invoicing and fight against commercial losses	1,291,756.21
Operation of electricity systems	9,222,941.98
Electricity systems' planning	1,733,134.73
Supervision, control and protection of electricity systems	7,653,297.67
Safety	2,884,511.61
Electricity services quality and reliability	3,965,418.33
Other	8,751,395.78
R&D&I management	421,245.83
Total	61,894,278.22

10.1.1 R&D Highlights

Electric mobility

Copel opened, in May 2018, the call for the Strategic R&D Project No. 022/2018, for the search of business models, equipment, technologies, services, systems and infrastructures to support the development and operation of electric or hybrid plug-in vehicles, powered by battery or fuel cell.

The projects must contribute to generating future businesses, demonstrate the technical and economic feasibility of efficient electric mobility in national territory and provide relevant subsidies to improve or formulate normative acts that will ensure the effective operation of this modality in the country.

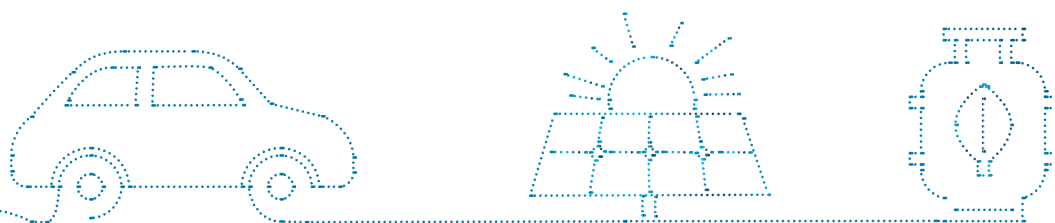
Five opportunities were ranked, totaling 27MW. After in-depth analysis, negotiations are underway for two of them.

Energy generation with biogas

After three years of research and implementation, the Entre Rios do Oeste (PR) Biogas Thermal Power Plant began its operations. With an investment of R\$ 17 million in resources of the National Electrical Energy Agency's R&D, a technical and economic arrangement makes it possible to convert the biogas obtained from pig manure into electricity. The manure is obtained from 18 rural properties, interconnected by a 22-kilometer collecting network.

The project innovatively groups small production units around a large biogas energy plant, enabling scale gains in generation costs. The energy produced is destined for the public buildings of the municipality. The arrangement ensures the treatment of the animal waste and allows extra income generation, from which marketable by-products are derived.

The model for the treatment of animal waste for the production of biogas and biomethane from the pilot project can be replicated in other regions of Paraná.



Solar energy research station network

A project inaugurated by Copel in December 2019, jointly with Paraná Federal Technological University (UTFPR), in order to transform the state into a reference in solar energy.

Budgeted in almost R\$ 6 million, the network consists of stations installed in six campi of UTFPR: Curitiba, Ponta Grossa, Pato Branco, Medianeira, Campo Mourão and Cornélio Procópio. They will enable the analysis, with high precision, of solar radiation variation over the year in different regions of the state. Data can also indicate which photovoltaic module technologies are more appropriate and advantageous for each region, according to their microclimate.

A photovoltaic plant was also inaugurated in the Curitiba campus headquarters, which will generate, annually, 115 thousand kWh for local supply.

Preventive maintenance methodology

This methodology was developed to estimate the frequency of replacement of equipment and polymeric accessories from protected grids, before the occurrence of failure. It is based on the consumption assessment of antioxidant additives (polyethylene) or low molecular weight compounds and losses of the methyl group (silicone rubber) in polymeric formulations used for the confection of covered cables, polymeric insulators, polymeric fuse switches, spacers and fastening rings.

Study on Tillandsia spp. – Bromeliaceae in electricity distribution grids

The occurrence of atmospheric bromeliads (Tillandsia spp – Bromeliaceae) in energy distribution grids' structures provides negative visual effects and causes the impression of abandonment or lack of maintenance in assets, in addition to favoring the accumulation of still water, consisting of a risk for disease proliferation, like dengue fever. So, Copel researched and developed a methodology to avoid, minimize or control this plant infestation in its grids.

As a result, the bromeliad species that occur in the structures of the energy networks in 35 municipalities of the state of Paraná were characterized; it was possible to better

understand the occurrence of bromeliads in the energy distribution networks, as well as their relationship with climatic factors, sources of nutrients and atmospheric pollution; the effects of the plants on the equipment and accessories of the networks were evaluated; a method and prototype tool for the removal of bromeliads from the cables in live line was created; among other discoveries. Copel entered an application for the registration of intellectual protection for this tool.

Monitoring and assessment of online transfer function and power transformers' core current

A project that structured the electrical equipment (transformers) monitoring through online follow-up the response in frequency and measurement of the magnetic core current.

The main advantage of online tests is the possibility of executing them with the transformer energized – without need to stop the equipment – and, therefore, reduction in operational costs. It is worth mentioning that monitoring in real-time can increase the system reliability, foreseeing failures and ensuring maintenance teams' higher control over the evolution of the equipment operative condition. The project generated, in addition to new scientific knowledge, a form of guaranteeing operation with more quality, avoiding disconnections and stops that impact the Company and society.



Compact Electrical Grid, Londrina – PR
Credit: Marcelo Rothen



 **COPEL**

SMART




**SOCIAL AND
RELATIONSHIP CAPITAL**

11.1 Engagement with stakeholders

GRI 102-21, 102-40, 102-43, 103-1, 103-2, 103-3

Copel can positively impact its stakeholders by developing the local economy, improving the quality of life of vulnerable communities, offering opportunities for socio-cultural development, economic performance and employability. On the other hand, if it does not act within its values and in compliance with the legal provisions and their norms and standards, Copel may negatively impact them in all the dimensions mentioned. This also has consequences for the Company, which becomes subject to receive notices, fines and sanctions, besides income loss. For this reason, Copel acts preventively, aiming at the mitigation of eventual environmental, social, cultural or economic losses.

As part of the process, Copel constantly informs its mission and values in order to keep the stakeholders' commitment to these premises. The Company always listens to its stakeholders to understand the characteristics of surrounding communities, the yearnings of shareholders, the expectation of employees and the opinion of customers and suppliers to maintain its standard of excellence and meet the expectations of these audiences.

Copel's relationship with these audiences is based on the Sustainability Policy, which includes, among its guidelines, "the promotion of transparent, regular and structured dialogue with stakeholders, considering their demands, priorities and expectations", "periodic reporting, or whenever necessary, of relevant information, adapting languages and media to the needs of the different stakeholders" and "valuation of the contributions from communities in the regions where Copel operates, promoting local sustainable development with shared value creation. Further information on the policy can be found on page 64.

11.2 Customers and consumers

GRI 102-40, 102-43, 103-1, 103-2, 103-3

The actions turned to this public seek to meet its main expectations: to have energy and internet available at low cost, a bill without errors and agile and quality service, as well as favorable conditions in the contracting process. For such, a series of online and in-person channels is available. Statements and complaints recorded are fundamental to map services' improvement opportunities. In 2019, from 3,665,426 calls recorded in the distributor call center, only 100,284 refer to complaints, among which, 41,768 were considered founded.



Besides, periodical satisfaction surveys are conducted with different customers' profiles. Copel Distribuição was chosen as the best energy distributor in Brazil in Abradee 2019 survey – from the Brazilian Association of Electricity Distributors. The Company received the highest grade in the Perceived Quality Satisfaction Index (ISQP).

Copel Telecomunicações also conducts, every year, consumer satisfaction surveys, following data collection methodology used by the National Telecommunications Agency (Anatel).

With this methodology, the Company's quality indicators' results can be compared to data from other companies in the sector. In 2019, the General Satisfaction Index (ISG) based on the customer experience with Copel Telecom's fixed internet was 7.97.

Copel GET conducts the survey biannually, therefore, the current results are from 2018, published in the previous Integrated Report. In 2020, a new survey will be conducted.

Main service channels

	Virtual agency
	Copel Mobile App
	In-person service
	Telephone service
	E-mails
	Contact us
	Audible Response Units (ARUs)
	Self-service Portal
	Copel DIS and Copel TCE Ombudsman

Further information on customers is available in Copel DIS and Copel GET Socio-environmental Reports.

11.2.1 Affordable energy

Energy tariff represents a direct impact on the economy of consumers, regardless of social class. Such understanding leads COPEL to play its social role in partnership with the federal, state and municipal governments. To this end, the Company promotes several programs to make energy accessible to all.

Social Energy Tariff (TSEE): offers discounts on electricity consumption, up to a limit of 220 kWh, to families enrolled in the Single Registry of Social Programs of the Federal Government, provided that the other criteria outlined in Aneel Resolution No. 414/2010, resulting in savings for the consumer. In 2019, 282 thousand consumer units were regularly served with TSEE, or 7.4% of the total residential households serviced by COPEL, the equivalent, in amounts, to R\$ 70.2 million.

Luz Fraterna Program (Fraternal light Program): A program of the Government of the State of Paraná that pays the bills of consumers enrolled in the Social Energy Tariff, provided that consumption does not exceed 120 kWh. In 2019, 153,000 families were attended monthly, through government investment of R\$ 43.6 million

Night Irrigation and Rural Night Tariffs: initiatives that are the result of a partnership involving Copel, the State Secretariat of Agriculture and Supply, the Paraná Institute of Technical Assistance and Rural Extension (Emater) and the State Secretariat of



ACCESS TO INFORMATION

Blind consumers can receive their electricity bills in Braille. Copel's website is adapted for access by visually and hearing-impaired persons.

Environment and Water Resources. The Night Rural Tariff aims to encourage agricultural productivity through a 60% to 70% discount on the electricity tariff used for production in the period between 9:30 p.m. and 6 a.m. The Night Irrigation Tariff offers subsidies for the construction or reinforcement of networks to serve irrigators. By December 2019, 13,565 consumer units had been registered for the first tariff and 3,953 for the second.

+Clic Rural Program: a program for modernization of rural grids with investments in infrastructure turned to serve the four sectors most sensitive to energy supply quality in Paraná: pig farmers, tobacco farmers, poultry and milk producers. In 2019, R\$ 94.3 million were destined for the initiative, benefitting 600 thousand consumer units. Learn more about Copel investments in infrastructure on pages 112 and 119. To obtain further information on the program, refer to Copel DIS and Copel GET Socio-environmental Reports.

11.2.2 Energy Efficiency Program

A program for the promotion of efficiency in the final use of electricity, whose main mechanisms is the Project Copel in the Community. This program is aimed at low-income consumers benefitted by the Electricity Social Tariff (TSEE). It promotes lectures on safe and efficient consumption, energy diagnosis and replacement of equipment with low consumption equipment.

In 2019, the Company announced the destination of the record value of R\$ 100 million to energy efficiency projects presented by consumers in its concession area, in Paraná. Residential condominiums, industrial consumers, welfare and philanthropic organizations, public authorities' facilities, commercial centers and rural consumers can participate for performance contracts or non-repayable, depending on the nature of the activities. Projects with higher potential to reduce consumption will be classified and contemplated after technical analysis by Copel in 2020.

11.2.4 Ilumina Paraná (Illuminating Paraná)

The initiative from the Paraná Government in partnership with Copel was launched in 2019 for the modernization of street lighting systems in the state municipalities, with the replacement of conventional lamps and luminaires with more efficient models, like those of LED technology.

The program covers projects to make street lighting more efficient in municipalities with up to 10 thousand lighting points, by means of credit lines from Banco Regional de Desenvolvimento do Extremo Sul (BRDE) and Fomento Paraná. In addition to making cities more sustainable, the program will generate up to 50% economy in the energy bill and will increase safety in traffic and sidewalks, contributing to reduce the number of crimes.

The initiative includes the removal and appropriate disposal of existing equipment and, if necessary, the replacement of the fixing arms of the luminaires.

11.3 Communities and social investment

GRI 102-40, 102-43, 103-1, 103-2, 103-3

Energy is Copel's main product and represents the quality of life, health and development to society. While supplying this resource with quality and reliability, the Company promotes income generation for municipalities where undertakings are installed, employability and execution of socio-environmental improvement programs.

Social Responsibility is managed by Copel (Holding Company), while wholly-owned subsidiaries rely on specific areas in their structures to foment actions related to their businesses. Copel is responsible for, among other functions: proposing policies,

standards and guidelines associated with social responsibility; representing Copel and managing the relationship of corporate interest on the theme; defining and coordinating programs, projects and initiatives, as well as supporting research or innovations; and establishing and monitoring corporate indicators.



The Sustainability Policy guides the fundamental aspects of Social Responsibility. Copel must:

- promote social responsibility actions guided by the mission, values and voluntary commitments assumed;
- manage the private social investment and tax incentives with transparency, aiming at maximizing the social return of funds invested;
- encourage the engagement of employees in voluntary works to improve society's life quality;
- promote awareness and educational actions for the internal public and other stakeholders associated with sustainability;
- promote accessibility in all its forms, ensuring all rights of disabled persons.



SURROUNDING COMMUNITIES PME 1,2

At each new undertaking, studies are conducted on the socio-economic environment as part of the licensing process, with a frequency that varies according to the complexity of the work. The results ground socio-environmental programs intended to mitigate and compensate for possible negative impacts, as well as raise awareness in the surrounding communities.

In cases where population displacement is necessary, assessment is made by Socio-economic Registration. Copel GeT is currently implanting the Bela Vista SHP, of which it is the majority shareholder.

The Company renders service to Bela Vista Geração de Energia S.A for the construction and implantation of the undertaking, including with regard to liberation and land tenure indemnities. Due to the construction impact, it will be necessary to relocate families that dwell in the property called MD-04 (property number 4 at the reservoir right margin) to other locations, under study by Copel land area.

The Company is implanting the 525 kV Blumenau - Curitiba East transmission line, whose interferences by the institution of the right of way correspond to 11 households and 26 other rural betterments, including deposits, shacks, coverage, troughs, coal furnaces, barns, band-stand, chicken houses, among others. For the houses affected, the Social Registration of families is provided, which facilitates the search for solutions to each case, without, however, providing information that will influence the process of evaluation of real estates.

This registration will also be made in properties without betterments, however, where the right of way affects more the 50% of the property area, which can make it unfeasible. GRI EU22

11.3.1 2019 Initiatives

GRI 413-1

Promotion of volunteering

Copel performs the Eletricidadania program – a corporate program that incentives voluntary works during part of the working hours. The Company regularly opens public calls for social institutions to increase the number of opportunities in this regard and encourage the participation of more employees.

In 2019, 359 Copel workers summed 3,014 hours of volunteering. The highlight goes to the Project Iluminando Mentas (Illuminating Minds), developed with R\$ 50 thousand of funds paid by Banco do Brasil Foundation to Copel. The amount was received by the Company in August 2018, as a prize of Viva Voluntário in Public Sector Volunteering category. The award is promoted by the National Volunteering Program, linked to the Federal Government.

Five Paraná cities hosted Iluminando Mentas (Illuminating Minds) editions. In Curitiba, Copel employees provided development mentorship in management areas to institutions that serve disabled persons. In Londrina, Maringá, Cascavel and Ponta Grossa, Copel volunteers were made aware of the PwDs cause and performed activities with the persons assisted in the institutions.

Copel Sustainability Award Susie Pontarolli Award

Biannual initiative for the valorization of external socio-environmental projects to reinforce Copel

commitment with sustainable development, acknowledge and disseminate good practices and encourage its continuation and multiplication.

The most recent edition – the fourth one – was held in 2018 for social institutions and suppliers that presented significant socio-environmental projects related to at least one Sustainable Development Goal. The winners received the award in 2019 (fund to be invested in the proposed actions).

Cultivar Energia (Cultivate Energy)

It is a corporate program for the implementation of community gardens under Copel energy lines, in partnership with city halls Consolidated as an auxiliary strategy to curb irregular occupations, its main objectives are to contribute to the management of the Company's properties, promote the environmental improvement of urban space and stimulate food security and income generation for socially vulnerable families.

The initiative is compliant to public urban agriculture policies and contributes to Sustainable Development Goal 2 (Zero Hunger and Sustainable Agriculture – goals 2.1 and 2.4); 10 (Reduce inequality in the countries and among them – goals 10.1 and 10.2) and 17 (Strengthen means of implementation and revitalize the global partnership for sustainable development – goal 17.17).



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In addition to promoting the continuation of already productive community gardens (Vila Esperança, Parque Itaipu, Cidade Canção, Parque Verde and Costa Rica), Copel signed, in 2019, the terms for cession and use and agreement among Curitiba City hall, Copel GeT and Copel DIS for implantation of the Uberaba Community Garden, which inauguration occurred in the beginning of 2020. There was also the establishment of partnerships with Francisco Beltrão and Umuarama municipal governments. Other three cities work with Copel in the program: Maringá, Cascavel and Ponta Grossa. Approximately 200 families are benefited.

11.3.2 Indirect economic impacts

GRI 203-2

Most indirect economic impacts are generated in the surroundings of Copel subsidiaries' operations. Further information is available in Copel GeT and Copel DIS socio-environmental and economic-financial reports. Copel CTE, in its turn, makes available data infrastructure to promote citizenship, bringing Paraná judiciary bodies close to the population to provide decent conditions for access to justice and raise awareness about rights.

Copel (Holding Company) promoted in 2019 public calls for commercial and educational partnerships. Such calls work as follows: there is previous analysis for verification of participating suppliers' reputes, since commercial relations will occur between the company and employees, without Copel involvement. As compensation, at each partnership signed, Copel discloses internally the name of the commerce, supplier or teaching institution and the benefits being offered, usually discounts for employees and their dependents.

Public calls are open to companies of different sizes in several segments: book shops and stationery shops, bars and restaurants, beauty and esthetic salons, parking lots, flower shops, automobile manufacturers and car dealerships, mechanical workshops, music and dance schools, gyms, nurseries, drugstores, cinemas and theaters and pet shops.

11.4 Suppliers

GRI 102-9, 102-40, 102-43

Supply chain management is an important pillar of social and environmental responsibility. Through strategies and contractual requirements, Copel promotes the improvement of the management of its productive chain and the optimization of resources for the benefit of the community, in order to incorporate in the internal and external relations, values that broaden citizenship, dialogue between the parties, ethics and transparency.

Among the risks related to the supply chain accidents with employees, accidents or damages to the population, and facilities and precarious working conditions are outstanding. Economically and socially there are risks related to the economic and financial dependence on Copel, legal obligations, fiscal charges, social and labor risks, and to the wages and additional payment. There are also environmental risks, which involve disrespect to environmental legislation, inadequate source of inputs and deficiency in the treatment of waste. Copel seeks to mitigate these risks by determining strict contracting rules, reaffirming its commitment to socio-economic

development, and understanding that the management of its supply chain guided by sustainability adds value to the brand, thereby strengthening it in the market.

These rules are provided for in Federal Law 13,303 / 2016, in the Internal Regulations for Tenders and Contracts and the Management of Contract, Registration, Supplier Evaluation, Company Code of Conduct, Supplier Manual and Human Rights Booklet. They are in line with best practices in the market and have the objective of aligning Copel's performance with the needs and expectations of suppliers and managing the risks of sectors considered critical to operations.

The Procurement Policy applicable to Copel (Holding Company) and its wholly-owned subsidiaries compiles the technical and ethical guidelines for conducting bids within Copel and is in line with the Sustainability Policy (see pages 64) which, in turn, has a guideline that addresses the social character of the relationship with suppliers: "To value the contributions of communities in the regions of insertion of Copel's businesses and to promote local sustainable development with shared value creation".

Responsibility for supplier management is shared between procurement and contracting, sustainability, social responsibility and contract management teams. The process is carried out through the ERP/SAP systems

and the Employee Registration of Outsourced Companies (CET).

Although it does not currently evaluate its supplier management, Copel evaluates some sectors considered critical to its operations. For example: outsourcing customer activation and maintenance services and providing call center services in the case of Copel Telecomunicações; the implementation of a technological solution to manage trading in the free energy market at Copel Comercialização and the supply of IT equipment at Copel (Holding Company). For such, Copel considers in the assessment legal, financial, environmental, Occupational Health and Safety areas, population safety aspects, the company's image, customer and society perception, and continuation of processes. In bids, it demands that the requesting area must define the criticality of the object to be hired, in order to adjust the assessment criteria related to the economic-financial qualification of companies.

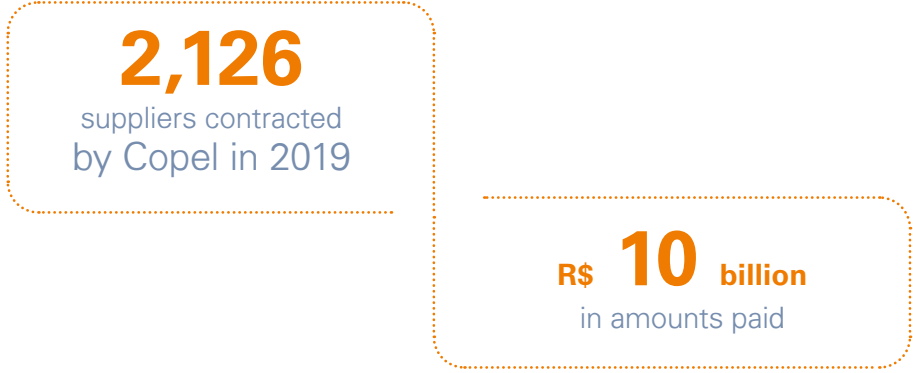
This measure is intended to avoid the shutdown of the provision of services and the discontinuation in the delivery of materials, preventing possible financial impacts to the Company and risks associated with the safety of employees, communities and the environment.

Suppliers have the opportunity to evaluate Copel's relationship with them through the Suppliers Register.

In it, there are satisfaction rates regarding: contractual management; services from financial areas, suppliers' registration and technical, tender, contractual management areas; availability of information; on-time payments of Copel; and similar.

11.4.1 Suppliers profile

GRI 102-9



Hydroelectric Power Plant
Credit: Guilherme Pupo

Main suppliers

- **generation and transmission:** Suppliers of project preparation, consulting and execution services and business-related services;
- **distribution:** Generators/distributors and traders of energy, suppliers of materials and equipment, providers of engineering and maintenance services;
- **telecommunications:** Suppliers of materials, activation and maintenance services, contact center services and supply of equipment for data transmission;
- **Copel (Holding Company):** suppliers of services and materials for corporate use, like fleet rental, hardware and software, building infrastructure, supply of food vouchers, among others;
- **trading:** generators and traders of energy, providers of technological solutions for the free energy market, providers of services for the definition of forward and risk market prices, and counterpart credit assessment.

11.4.2 Qualification, selection and hiring

Copel demands in different materials that its suppliers respect the current legislation: in the Internal Regulations for Tenders and Contracts, contractual clauses, supplier registration manuals and technical standards and manuals, made available online.

If there is a need for assignment of labor, all the workers assigned, without exception, undergo an integration process, where COPEL highlights its contractual demands regarding environmental, social, human and labor rights, accessibility and occupational safety issues. Failure to comply may lead to administrative sanctions, such as fines, contractual termination and impediment, for up to two years, of participating in new bids by the Company. Compliance with contractual clauses is monitored through contract managers and supervisors. [GRI 414-1](#)

Copel contracts include a standard clause of social and environmental responsibility and human rights aspects, particularly the fulfillment of the 10 Principles of the Global Compact. Depending on the object to be contracted, specific clauses regarding environmental requirements are inserted in the minutes that accompany the auction notice when it is published. In specific cases, a request is made for sending greenhouse gas emissions through inventory. The hirings also include Reputation and Social Responsibility Declaration.



Copel Electrician

In case of non-compliance with the clauses, administrative sanctions are applied to the supplier, which vary according to the situation severity. There is warning in writing when the act does not cause concrete harm to Copel, society, environment or third parties; there are contractual fines as provided in contract; temporary suspension of participation in biddings and impediment to contract Copel, its subsidiaries and controlled companies for up to two years. The last case refers to acts with severe consequences or significant impact on Copel or public interest; or when result in

a severe accident, with permanent injury or death. Depending on the consequences of the occurrence, the supplier may have its contract terminated and competent legal bodies are informed of the infraction.

Suppliers are assessed as to their level of risk to Copel, considering legal, financial, environmental, Occupational Health and Safety, population safety, image, customer and society perception and process aspects. Those whose risk is considered significant are classified as critical suppliers.

Incentives to supplier development

COPEL reserves quotas of up to 25% for the acquisition of materials of Micro-enterprises (ME), Small Enterprises (EPP) and Individual Microentrepreneurs (MEIs) in a contest whose object is the acquisition of divisible assets, as defined by Complementary Law No. 123/06. This initiative allows MEs, EPPs and MEIs to be hired by the Company.

There are also bids up to R\$80 K, which, due to the maximum value, can be defined as exclusive to MEs, EPPs and MEIs. Another form of incentive for these companies occurs in the processes with broad participation, where the benefits of Complementary Law No. 123/06 ensure to these companies the right to offer a proposal with a price lower than that of the company best classified in the bidding (if they are in the range of 5% in the trading modality or 10% in other modalities, considering the value of the best proposal received).

CHILD LABOR OR SLAVE LABOR RISKS | GRI 408-1, 409-1

COPEL does not assess the risks related to these practices, but actively manages and supervises labor contracts, which have clauses of commitment to comply with labor laws. All contracts of the Company with suppliers have clauses on social and environmental responsibility, where a commitment is made not to employ children under the age of 18 years for nocturnal, dangerous or unhealthy work, and under 16 years of age for any work, except as apprentices (over 14 years old). It is also mandatory to incorporate the Global Compact Principles, in addition to other social commitments. Suppliers must also present the "Declaration of Social and Environmental Responsibility" in the qualification phase, a requirement for judgment of proposals.

The Company's confidential communication channel is open to complaints of irregularities or damages. If these irregularities are proven, managers are notified so that appropriate action is taken, as already mentioned in the "Qualification, selection and hiring" section of this report.

TYPE OF HIRING	NUMBER	%
ME/EPP Exclusive bidding	85	4.33
ME/EPP differentiated treatment	1,123	57.15
Other hiring	757	38.52
Total hiring in 2019	1,965	100

11.5 Subsidiaries

GRI 102-40, 102-43

The subsidiaries commit to Copel (Holding Company) in order to contribute to the maximization of the Company's value in a sustainable way. This commitment is included in the Management Contract between the parties. Copel needs and expectations are defined in the Strategic Planning, in the Executive Board meetings and the Board of Directors' meetings.

11.6 Employees

GRI 102-40, 102-43

The Company adopts different communication channels to approach its employees, keep them informed and identify their needs and expectations. For such, it has the Great Place to Work (GPTW) Survey and Confidential Channels (CADAM, COE, Ombudsman, Reporting Channel). Copel also makes available to its staff professional development and remuneration in accordance with the market, prioritizing transparency and equality in its actions (see pages 73 to 83).

11.7 Regulatory bodies

GRI 102-40, 102-43

In the energy sector, Copel is legally obliged, before regulatory bodies, to develop its actions compliant to applicable standards, regulations and legislation.

In the telecommunications sector, the Company must execute activities according to its respective regulatory framework. The Company periodically holds specific meetings with regulatory agencies, as well as public hearings and consultations, along with the exchange of official letters, emails, and inspection and guidance visits.

11.8 Shareholders and investors

GRI 102-40, 102-43

Shareholders and investors are responsible for providing Copel with part of its financial resources, from which the Company can carry out its activities with excellence and stability. On the other hand, it must dedicate efforts to generate value and returns for this public. The relationship occurs especially through the area of Investor Relations, which counts on its corporate policy.

11.9 Government

GRI 102-40, 102-43

The Government of Paraná is the majority shareholder of Copel, a position that directly influences the Company's strategy and business. Copel's relationship with this public is direct, through the participation of government representatives in the Board of Directors and the Statutory Audit Committee.

11.10 Partners

GRI 102-40, 102-43

Copel maintains partnerships with related and controlled companies and Special-purpose Entities. The Company monitors the development of their activities and performance, and keeps proximity, requiring the adoption of the same management practices in subjects such as health and safety, compliance with labor and environmental laws, compliance with regulatory standards, among others.





NATURAL CAPITAL

12.1 Climate

GRI 103-1, 103-2, 103-3

Climate change at Copel is considered under two aspects: as operational and financial risk – due to the need to change assets operation, loss of income for replacement of equipment and installations, and the possible charging of a fee for greenhouse gas emission, and as an opportunity – because it can potentiate the search for energy from alternative sources and low carbon emission, including trading

of renewable energy in the free market; distributed generation; and offer of services like charging stations and *Eletrovias* (roads with charging infrastructure for electric vehicles). For this latter, Copel is attentive and include them in business prospection activities, and research and development. GRI 102-15, 102-29, 201-2

As part of climate change management, Copel periodically monitors its emissions; follows government movements on carbon pricing; assesses climate risks of new investments, and analyzes measures for adaptation of businesses to climate change impacts. GRI 102-15, 102-29

Climate change - Copel Management

CLIMATE CHANGE POLICY

The Policy establishes guidelines for planning and promotion of actions to reduce greenhouse gas emissions and face the consequences of climate change in Copel businesses. It was elaborated by the Climate Change Steering Committee, which has representatives from several areas of the company and was approved by the Board of Directors. Its content was guided by the GHG Protocol, principles of the Global Compact, the National Policy on Climate Change, the State Policy on Climate Change and the Sustainable Development Goals (SDGs). The Climate Change Policy is in force since 2016.



PERFORMANCE

Based on Greenhouse Gas (GHG) emission reduction goals, with pre-defined terms, and compliant with the Global Compact principles and those of SDG 13 (Action against climate change) of the 2030 Agenda. The goals follow three lines:

- actions in the value chain;
- mitigation measures and reduction in direct and indirect emissions;
- adaptation to reduce vulnerability to climate.



MANAGEMENT EFFICIENCY

It is assessed via:

- monitoring, reporting and external verification of the GHG inventory, according to ABNT NBR ISO 14064-4 – Greenhouse Gases part 3 methodology;
- Integrated report;
- Corporate Sustainability Index - answer to the Dimension questionnaire - Climate Change
- Carbon Disclosure Project (CDP), to compare performance with that of other companies in the sector, national or international.



GHG Emissions

GRI 103-3, 305-1, 305-2, 305-3

GHG (T)	SCOPE 1	SCOPE 2 (BY LOCATION)	SCOPE 2 (BY CHOICE OF PURCHASE)	SCOPE 3
CO ₂	11,470.200	231,903.380	-	395.007
CH ₄	34.375	-	-	0.125
N ₂ O	163.900	-	-	3.576
HFCs	-	-	-	-
PFCs	-	-	-	-
SF ₆	1,459.200	-	-	-
NF ₃	-	-	-	-
Total	13,127.675	231,903.380	-	398.708

Note: 1. GHG emissions were reduced compared to 2018 due to the shutdown of the Figueira Thermal Power Plant operation
2. Emission data are verified by a third party.

12.2 Eco-efficiency and environmental management

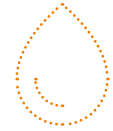
GRI 103-1, 103-2

The environmentally responsible actions' guidelines of Copel and its wholly-owned subsidiaries and controlled companies are defined in the Sustainability Policy.

Since its businesses are linked to environmental practices, environmental management is conducted in two ways: one linked to its administrative functions (ecoefficiency) and the other linked to its asset's construction and operation.

The Company and its partners follow license constraints for each type of undertaking and the Ecoefficiency Program premises, whose objective is to support projects for the better use of natural resources, raising awareness in the Company areas and obeying the strategic guideline of excellence in costs, processes and quality. The program also includes actions in mobility and fuel, education and communication. Further details on environmental initiatives can be found in Copel DIS and Copel GeT Socio-environmental Reports.

Copel natural resources management is assessed by a third party in audit processes or performance measurement, like the Corporate Sustainability Index (ISE). That way, a comparison to other companies in the sector can be made, frequently involving stakeholders.



The Company and its partners follow license constraints for each type of undertaking and the Ecoefficiency Program premises, whose objective is to support projects for the better use of natural resources, raising awareness in the Company areas and obeying the strategic guideline of excellence in costs, processes and quality. The program also includes actions in mobility and fuel, education and communications.

INTENSITY OF EMISSIONS	2018	2019
GRI 305-4		
Relative emission in tCO ₂ /thous R\$ (income)	0.0084	0.0008

Ecoefficiency goals

Electricity	Reduce 5% of electricity consumption by the end of 2022 (base year 2017). The goal was fractioned to 1.25% a year from 2019 to 2022. Base value = 33,136.87 MWh	The goal was not reached. 4.25% increase against the base value. GRI 302-4
Fleet emissions	Reduce emissions by 2% (base year 2017). The goal was fractioned to 0.5% a year from 2019 to 2022. Base value = 13,172.00 tCO ₂	Goal reached. 26% against the base value. GRI 305-5
Water	Reduction of 10% in water consumption until 2019 (base year 2014)	The goal was not reached. 72% above the base value

Copel energy intensity (GJ consumed/No. of own employees)

GRI 302-3

	2018	2019	VARIATION 2019 X 2018
Electricity consumed (GJ)	75,120.33	78,175.00	
Total of own employees	7,611	7,095	
Energy intensity	9.87	11.02	12%

Note: The number of employees in 2019 was reduced due to the voluntary redundancy program.

12.1.1 Energy and fuel consumption

GRI 103-3

Energy consumption (in GJ)¹ | GRI 302-1

	2018	2019	VARIATION 2019 X 2018
Fuel consumption			
Diesel oil	135.110,51	127.032,50	-6%
Gasoline	7.803,63	3.001,09	-62%
Aviation kerosene	2.730,91	58,41	-98%
Total	145.645,05	130.092,00	-11%
Renewable sources consumption			
Ethanol	34.512,85	37.387,36	8%
Biodiesel	13.349,02	13.666,23	2%
Total	47.861,87	51.053,60	7%
Total fuel consumption	193.506,92	181.145,59	-6%
Electricity consumption ²	75.120,33	78.175,00	4%
Total energy consumption³	268.627,25	259.320,59	-3%
Electricity sold	49.402.688,40	55.189.100,00	12%

Note: 1. Source used for conversion from kWh to GJ provided by the Applied Economic Research Institute data bank (ipeadata.gov.br).

2. As of 2019, Copel starts to report the energy consumption of its plants in the electricity field. This note does not include operations not related to electricity generation. GRI 102-48

3. There was a reduction in Copel total energy consumption due to the Figueira Thermal Plant (coal) shutdown in 2019.

12.2.2 Water consumption

GRI 103-3

With regard to water consumption in administrative facilities, in 2019 the total was 161 thousand cubic meters in all Copel and its wholly-owned subsidiaries' offices.

12.2.3 Waste

GRI 103-3

The Corporate Waste Management Program’s objectives are: reduction in generation, valorization of discarded material and promotion of reverse logistics. All the processes adopted by the Company are in compliance with the National Solid Waste Policy and all relevant legislation.

The waste generated in operations is duly segregated and sent for appropriate storage until their destination. In 2019 27% less waste was generated against 2018.

As a good practice, in order to comply with the National Solid Waste Policy, the Company maintains the Collective Solidarity Collection, which consists of the destination of the administrative recyclable waste to associations and cooperatives registered through Public Call. The initiative is part of Paraná state public policy in which Copel participates, and promotes the economic development of associations and cooperatives.

With regard to service providers, they must meet the contractual clause that requires the correct destination of waste classified as works debris.

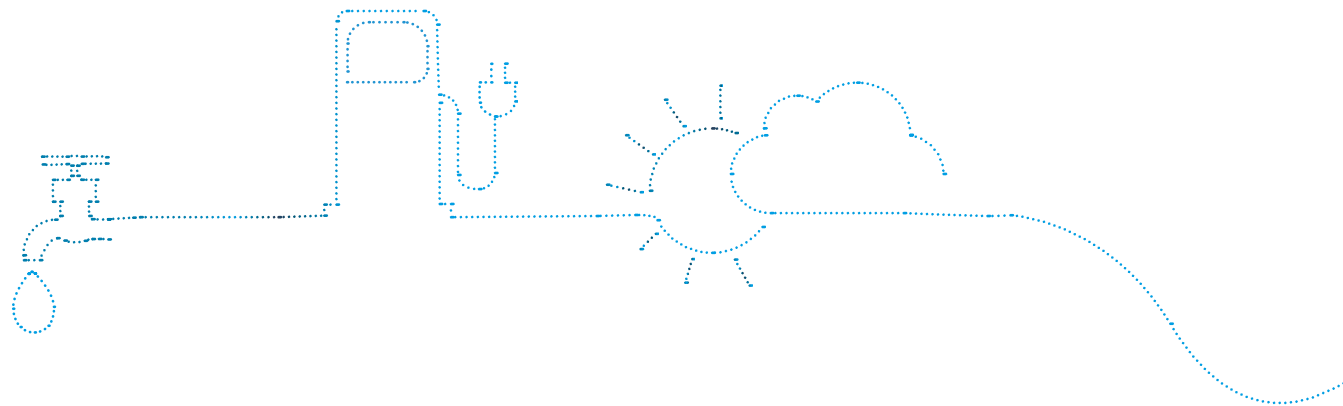
GRI 306-2

TOTAL WEIGHT OF NON-HAZARDOUS WASTE (T)	2018	2019
Recycling	42,329.19	43,063.20
Composting	29.28	35.34
Landfill	13,249.15	629.46
Total of non-hazardous waste discarded	55,607.62	43,728.00
TOTAL WEIGHT OF HAZARDOUS WASTE (T)	2018	2019
Incineration	1.08	0
Recycling	7,577.27	2,593.50
Landfill	63.12	84.00
Coprocessing	34.90	17.56
Treatment	0.00	1.22
Total of hazardous waste discarded	7,676.37	2,696.28
Total discarded	63,283.99	46,424.28

Note: From the total of hazardous and non-hazardous waste destined to recycling in 2019, 99% of each correspond to alienated waste.



Substation
Credit: Guilherme Pupo



12.2.4 Water

GRI 303-1

Due to the construction of hydroelectric power plants, the change in water flow is the main impact of Copel associated with water resources. Two mechanisms are used for monitoring: one for hydrological control and another for water quality control.

In the first one, the Company keeps a network for the monitoring of river basins. It consists of several hydrological stations, where data are collected on the water level of rivers and reservoirs, and rainfall data. These data, after processing in the System of Monitoring of Reservoirs (SMR), help and guide the operation of hydroelectric plants.

The second system monitors water quality rivers and reservoirs under the influence of the Company's undertakings based on the assessment of physical, chemical and biological parameters. The results of the analyses are interpreted and presented in annual reports to the Water and Land Institute (former Paraná Environmental Institute – IAP).

As a protective measure for reservoirs, Copel periodically inspects its reservoirs, and possible environmental intervention in lakes and surroundings are assessed, and specific measures are defined to remedy identified irregularities (constructions in the concession area, throwing of effluents, use and occupation of Permanent Protection Area, illegal fishing and hunting, among others).

In order to assist in the process of preserving areas of relevant environmental interest, the Company has an agreement with the Environmental Police Battalion of the State of Paraná and actively participates in the River Basin Committees and the National and State Council of Water resources.

12.2.5 Ecosystems

GRI 102-15, 102-29

Copel activities depend on nature and impact the environment according to the resource used and the undertaking at issue.

With regard to the expansion and operation of its assets, Copel generates energy through three sources: hydroelectric plants (water-driven), wind farms (wind-driven) and thermal plants (through the burn of fossil fuels, finite and non-renewable). Such a scenario makes natural resources management fundamental for the business's sustainability, particularly in contexts of water scarcity and transition to a low carbon economy.

Generation projects affect the physical, biotic and social environment, which can alter ecological processes, the composition of fauna and flora species, and impact the population's way of life and historical-cultural heritage. Moreover, there is the possibility of change in the hydrological regime of rivers where hydroelectric plants are installed; microclimate influence due to the presence of reservoirs and vegetation suppression; change in the quality of water and aquatic fauna in reservoirs; and losses to biodiversity. Among them, the interference in ecological dynamics; loss of habitats; reduction of populations and favoring invasive species.

The impacts are detailed in the environmental studies. They are carried out according to regulatory requirements and their results



URBAN FOREST PROGRAM

Copel supports city halls interested in planning arborization of public roads, contributing to the cities' environmental improvement and reduction of shutdowns in energy supply caused by the incompatibility of trees with the electrical systems. The Company produces seedlings and provides them via donation terms with charges. In 2019, 8,087 seedlings were delivered to 24 municipalities. The seedlings produced are also used to meet environmental licensing constraints.

are the basis for the development of actions aimed not only at mitigation, but also at preservation or recovery.

To mitigate impacts, Copel monitors and rescues flora and fauna; acts for recovery of Permanent Preservation Areas (PPAs), forestry reposition, archeological follow-up and rescue, among other actions. The initiatives are mainly conducted in the phase of the undertaking implantation and may affect the operation phase.

In terms of energy distribution and transmission installations, the main impacts occur at the time of implantation, when vegetation is suppressed. The process can increase forest fragmentation of environments and cause a reduction in native species population, for reasons like an increase in edge effect, reduction in fauna habitats and increase of hunting in the region. In distribution lines, favoring of exotic species, invasive exotic and other opportunistic species that meet ideal conditions to settle may occur, due to clearing opening for construction of structures and laying of cables.

Another risk to biodiversity (aquatic and terrestrial) is oil leakage from transformers and other electrical equipment, which can contaminate the soil and water table, in case there is no contention.

Protected areas

Copel DIS has 82.146 km of high voltage distribution lines (69 and 138 kV) that cross conservation units of Full Protection in Paraná. For Copel GeT, the area of operational units in Full Protection and Sustainable Use conservation units corresponds to 82.39 Km² and covers transmission lines, rights of way, structures of energy generation undertakings and real estates of the Company in several states. It is important to consider that this figure includes areas of the Company that are exclusively destined for environmental

conservation and that total more than 20 thousand ha. The facilities, as well as their size and biodiversity value of the area in which they are located, are detailed in the annexes on pages 159 to 169.

Forestry compensation

Copel acts along with the Water and Land Institute (former Paraná Environmental Institute) in the production of native forest seedlings for the restoration of Permanent Preservation Areas, Legal Forest Reserves and Forest Restoration Areas of the State of Paraná. The Company assigns jobs to outsourced workers that devote themselves exclusively to the production of seedlings.

Copel makes the recovery of previously degraded areas as compensation for the vegetation suppression necessary to implement some of its projects. This is done through the planting of native species in areas previously occupied by pastures, or donation of seedlings to private entities or city halls. The Company protects several areas of high value to biodiversity by means of constant monitoring.

Endangered species

GRI 103-3

To identify endangered fauna species in its undertakings' areas of influence, Copel cross-references data from programs for monitoring and rescue of fauna from two sources: the National Official List of Endangered Fauna Species from the Ministry of Environment

(MMA) and from the Brazilian Institute of Environment and Water Resources (IBAMA), and IUCN (International Union for Conservation of Nature) Red List of Threatened Species. Information on endangered species at the state level was not used.

Copel performs various protection actions. In the case of hydroelectric plants operations, it continuously monitors fish population (ichthyofauna) present in its reservoirs, including registration and monitoring of endangered, exotic and invasive species. In the installation phase of undertakings, it identifies

eventual changes in ichthyofauna caused by damming and changes in the body of water. With the monitoring, the environmental bodies and society are kept informed on long term changes in fish populations.

As a measure of compensation to possible impacts on Paraná ichthyofauna, where Copel has most of its hydroelectric plants, the Company keeps an Experimental Station for Ichthyological Studies since 1996, whose production follows the models of conservation and is dedicated to reservoirs in Iguaçu River.

Regarding terrestrial fauna, when implementing projects, Copel executes surveying and monitoring programs. It also undertakes specific rescue and relocation initiatives during works with potential impact on terrestrial fauna, in the conduction of activities such as suppression of vegetation and filling of reservoirs. The Company is a pioneer in the rescue and relocation of native bees in Paraná state, having started this type of activity in the installation of HPP Mauá, at the Tibagi River.

As for the flora, similarly to the terrestrial fauna, programs of surveying, monitoring and rescue (germplasm) in areas affected by the projects during the installation phase are carried out by specialized teams that are hired. Actions of re-composition and maintenance of Permanent Protection Areas (PPAs) of its reservoirs, with native species to each region are also conducted.

In the implantation of distribution undertakings, in environmental studies, fauna and flora species are classified as to the conservation state. In cases of suppression of trees classified as endangered, the constraints established by the environmental body are observed.



Governador Bento Munhoz Power Plant Botanical Garden
Credit: Marcelo Rothen



MANUFACTURED CAPITAL

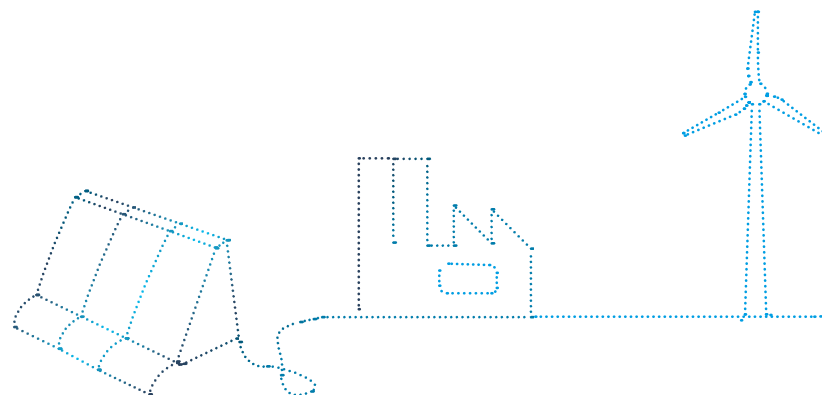
13.1 Generation assets

GRI 102-2, 102-6, EU1, EU2

Copel operates 43 owned power plants and in 11 other plants, including 23 hydroelectric plants, 29 wind farms and 2 thermoelectric plants, with a total installed capacity of 6,397.73 MW and assured energy of 3,018.4 MWa. It serves the following sectors: electricity distribution in the Regulated Contracting Environment; commercial and industrial and energy trading in the Unregulated (free) Contracting Environment; and the National Electric System Operator (ONS) and accessing users connected to the basic network in the transmission segment. In 2019, the net energy production was 17,156.51 GWh, which is lower compared to 2018 (19,362.4 GWh) due to Figueira Thermal plant operations shutdown (see page 114).

Conheça o
parque gerador da Copel

Copel is investing in undertakings to expand the installed capacity of generation of the National Interconnected System, respecting precepts of economic-financial and socio-environmental sustainability. Two projects are under construction, Bela Vista SHP and Jandira Wind farming Complex, which are expected to start operations in 2024 and 2025, respectively (see installed capacities of these units in the diagram).



In compliance with the regulatory requirement, Copel was the first electric power distributor in the country to adopt centralized management of generation and transmission assets, in addition to separation shared operation of transmission and distribution assets. The Generation and Transmission Operation Center (COGT) is headquartered in Curitiba for the remote operation of the generator park and plants for which the Company provides operation and maintenance services, as well as transmission assets. It also supervises Copel's projects in partnership, inside and outside the state.

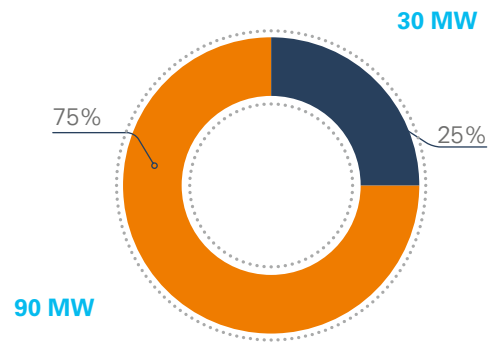
The availability and reliability of the energy supply are ensured by processes Operation and Maintenance (O&M) that follow a management model based on techniques of reliability. With these and the support of cause and effect analyses, you can define ideal fault management policies, to avoid or restrict the consequences of functional problems and related issues: health, environment, safety and costs.

Installed capacity | GRI EU1

	2017 (MW)	2018 (MW)	2019 (MW)
Hydroelectric plants	4,722.80	4,934.40	5,340.62
Thermal plants	310.50	407.30	411.19
Wind farms	280.10	486.30	645.92
Total	5,313.40	5,828.00	6,397.73

Construction capacity per source

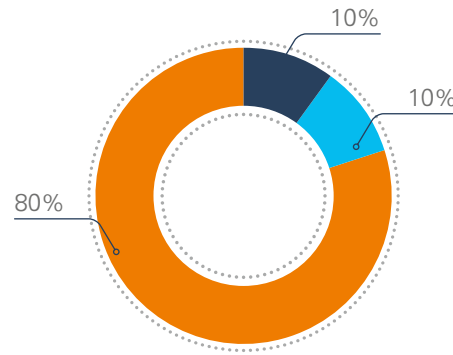
GRI EU10



Total : 120 MW

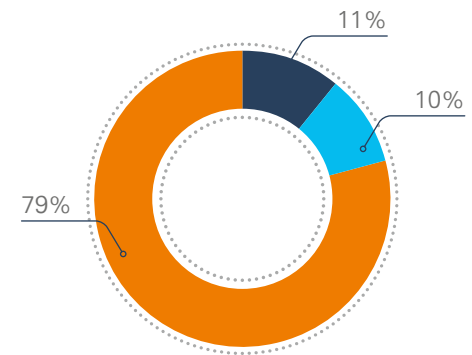
- Small Hydroelectric Plants (SHPs)
- Wind

Installed capacity – assured energy per source



- Hydroelectric
- Wind
- Thermal

Energy output projected for 2020 assured energy per source



- Hydroelectric
- Wind
- Thermal



Jayme Canet Junior Power Plant

Net energy generation

GENERATION SOURCE	2018 (GWH)	2019 (GWH)
Hydraulic	18,009.20	17,750.02
Wind	1,312.03	1,915.02
Thermal	41.17	99.90
Total	19,362.4	19,765.52

13.2 Plant availability

The average availability indicator of plants is monitored for generation activities, in order to measure the number of hours of interruption. In 2019, this indicator presented the following results:

Average availability factor GRI G4-EU30

	2017	2018	2019
Total of planned interruption hours	28,426	34,703	42,389
Total of forced interruption hours (not planned)	11,290	9,635	10,785
Owned hydroelectric plants	0.96	0.95	0.94
Hydroelectric plants with Copel equity interest	0.94	0.97	0.97
Thermal plants	0.81	0.92	0.49
Thermal plants with Copel equity interest	0.98	0.99	0.99

13.3 Generation projects highlights

Start of operations

In May 2019, Copel started operating at the Baixo Iguaçu HPP (350.2 MW), in Paraná Southwest. Investments amounted to R\$ 2.3 billion for the construction, executed in partnership with Neoenergia. In the same year, Cutia and Bento Miguel wind farming complexes in Rio Grande do Norte started operating. Together, they represent 312.9 MW of installed power in 149 wind turbines. The investment in these undertakings was of R\$ 2.1 billion.

The Company inaugurated the Colíder hydroelectric plant (300 MW), whose works started in 2019 at the North of Mato Grosso and costed R\$ 2.3 billion as a whole. Finally, it retook the construction of small hydroelectric plants in Paraná, starting, in July, the Bela Vista Project (29 MW), in Dois Vizinhos. With a budget of R\$ 200 million, the SHP may start operation by the end of 2020.

In 2020, Copel will start the Jandira Complex in the Northeast, with 90 MW distributed across four wind farming complexes. The energy was already contracted in the Federal Government auction in 2019, to start supply in 2025. The investment in the complex is to reach R\$ 400 million.

Figueira Thermal Plant Modernization

The Figueira TPP is undergoing modernization works to increase efficiency and reduce gas and particle emissions resulting from coal burn. The first company contracted presented difficulties to execute the contract activities and was substituted. The new supplier presented financial and planning problems, which delayed too much the works and ended up in contractual termination in December 2019. The process continuation is in the contractual preparation phase, expected to be concluded in 2020.



Figueira TPP
Credit: Marcelo Rothen

13.4 Transmission assets

GRI 102-2, G4-EU4

Copel holds full ownership and participates in operating concessions corresponding to 7,441 km of transmission lines, with substations with transformer power of around 16,174 MVA. The Company is investing in projects that will add 391 km of extension and 3,600 MVA of transformation capacity to its owned and shared portfolio.

The Company relies on teams specialized in electro-electronic maintenances for protection, automation and substation control equipment and devices; electromechanics of transmission lines with voltages ranging from 69 to 525 kV; in addition to inspection in factory and commissioning of new transmission installations.

Throughout 2019, the following assets started operation: Medianeira Substation 230/138 kV - 300 MVA; Baixo Iguaçu – Realeza 230 kV transmission line, in a simple circuit and approximately 38 km long; Andirá Leste Substation 230/138 kV - 300 MVA; Curitiba Centro Substation (insulated in SF6) 230/138 kV - 300 MVA; and 230 kV Curitiba Centro – Uberaba 230 kV transmission line, underground, 8 km long. The concession contract also contemplated the 525 kV Curitiba Leste – Blumenau transmission line, expected to start commercial operation in March 2021. The whole set of undertakings represents a Permitted Annual Revenue (RAP) of around R\$ 116.9 million to Copel.

Four substations are under construction for the implantation of the bank of capacitors or reinforcements.

13.4.1 Transmission projects highlights

Operation and commercialization

In 2019, 632 km of lines were added to the Copel transmission network. Among the projects concluded, the 230 thousand Volts Uberaba-Curitiba Centro underground line is outstanding. It replaces the high voltage line of Comendador Franco avenue, in Curitiba – former Avenida das Torres. In the location, 25 towers, 20 super posts and 42 km of conductor cables were removed from the avenue median strip.

Associated with this line, Curitiba Centro substation was built in a Copel terrain, next to Capanema viaduct, in Jardim Botânico district. The substation is the housed and gas-insulated type, with structure appropriate to the urban area. The undertaking directly benefits 80 thousand consumers in the capital and increases eight times the transmission capacity of the power grid that feeds the whole central region of Curitiba.

Copel also anticipated in 19 months the commercial operation of Baixo Iguaçu-Realeza line and started operation of Andirá Leste and Medianeira Norte substations, important reinforcement in energy supply to the West region agroindustry.

Construction

In 2019, Copel initiated the installation of an energy transmission line to connect the Curitiba Leste (PR) and Blumenau (SC) substations. The new grid will be 144 km long and will operate at 525 kV (extra high voltage). Investments will amount to R\$ 192 million in this undertaking, one of the main projects in the Company's expansion plan for the coming years. It is to be concluded in March 2021 and generate an annual income above R\$ 30 million when in operation. The project implantation is expected to generate around 250 direct jobs.

With the new line, Paraná can receive more energy from Rio Grande do Sul and Santa Catarina for internal consumption or export to the Southeast. Santa Catarina's East regions will be less dependent on the Jorge Lacerda Thermal Plant.

13.5 Distribution assets

GRI 102-2, 102-6

Copel is responsible for energy distribution to around 4.6 million consumers across 1,113 localities in 394 municipalities in Paraná and Porto União (SC). The Company also keeps 13.8 kV, 34.5 kV, 69 kV and 138 kV voltage level installations and manages approximately 200 thousand km of distribution networks, 374 automated substations with an installed power of 11.2 thousand MVA. The participation is 6.2% of the Brazilian market and 33.7% of the South Region market – in Paraná, participation is estimated at 97.7%.

In 2019, Copel started the largest investment in the distribution in its history: R\$ 2.6 billion in 42 new substations, plus 7 thousand km of high and medium voltage distribution lines and thousands of new reclosers, switches, voltage regulators and power transformers. The conclusion is expected for 2021.

The distribution counts on service posts in all municipalities within the concession area, in addition to service channels as listed on pages 56 and 57.

Distribution lines GRI EU4

VOLTAGE LEVEL	2017	2018	2019
13.8 kV	105,510.6	106,172.4	106,956
34.5 kV	84,639.2	85,185.2	85,735
69.0 kV	866.4	751.2	756
138.0 kV	5,935.0	6,264.8	6,507
Total extension (km)	196,951.2	198,373.6	199,954
Number of substations	369	369	374

13.5.1 Smart Copel

In October of 2018, Copel inaugurated in Novo Mundo district - Curitiba, the Smart Copel: an integrated center for operations and consumer services. The center brings together the entire operation of the company, which was previously done in five regions of the State. There is a model agency for in-person consumer service with automated systems, screening for simple or complex services, access to wireless internet and waiting room. The space uses cutting-edge technology to meet the future of the electric system, such as smart grids and storage and distributed generation systems.



Bituruna Substation
Credit: Drone

13.5.2 Distribution projects highlights

Investments in technological solutions

In 2019, a cutting-edge technology project for power grids was implanted. The Company acquired, for R\$ 45 million, the Advanced Distribution Management System (ADMS) solution, a platform that gathers software capable of controlling the grid in real-time and with full precision, facilitating more efficient, quick and safe operations in lines, substations and equipment. Few companies in the world operate with ADMS.

The system will coordinate practically the whole Copel distribution and is a fundamental component in shared energy management, produced from the distributed generation, since it adds command tools for small generators. The system will provide a quicker and safer re-establishment of energy in cases of contingency and, at the other end,

Copel will quickly receive information on the supply situation. The full project is expected to be concluded in three years.

Paraná Trifásico (Three-phase Program)

Copel will invest, as of 2020, R\$ 2.1 billion to install 25 thousand km of three-phase power grids across Paraná, which, in addition to assuring high quality and safe energy, it will provide to the rural producer access to it for a price lower than that currently paid.

With the three-phase installation, there will be interconnection across isolated grids, creating supply redundancy: one will cover the other in case of power shortage. Rural producers that demand more power to develop their business will be directly served. After all, the equipment with three-phase engines is usually more efficient, cheaper, and presents a lower failure rate. Moreover, the grid is safer, because the new cables will be protected, with reinforced resistance level when hit by tree branches or objects in general.

Paraná Trifásico (Three-phase Program) will be the base for Copel to bring new technologies to rural areas, like automation of reclosers and remote grid control, through Copel centralized Operations Center, installed in Curitiba.

Distributed generation

Copel opened a public call notice for companies with distributed generation projects, chiefly in Paraná, for the creation of partnerships. The Company prioritized larger projects, with up to 5MW of installed power, with the possibility of implantation by December. The objective is to diversify the portfolio and foment this market in Paraná.

The distributed energy market is regulated by the Brazilian Electricity Regulatory Agency (Aneel) since 2012 and has been reviewed both from regulatory and commercial points of view, due to a large number of new projects and popularization of energy generation equipment through renewable sources, like solar and biomass. The agency estimates 20 thousand independent producers in Brazil.



Three-phase rural electrical grid

13.6 Wire market (TUSD)

GRI 102-6

In 2019, the wire market, which considers all consumers who accessed the distributor's network, grew by 2.3%. The result was influenced by the migration of two industrial consumers to the basic network (230 kV) as a result of the adjustments to Aneel's Normative Resolution No. 722. In case of adjustment based on the comparison, the market would register a growth of 3.3%.

Wire market (TUSD)

	NUMBER OF CONSUMERS			DISTRIBUTED ENERGY (GWH)		
	DEC/19	DEC/18	%	DEC/19	DEC/18	%
Captive market	4,713,240	4,637,804	1.6	19,784	19,594	1.0
Concessionaires and Permissionaires	2	3	(33.3)	164	279	(41.2)
Free consumers	1,389	1,121	23.9	10,002	9,568	4.5
Wire concessionaires	5	4	25.0	684	511	33.9
Wire market	4,714,636	4,638,932	1.6	30,634	29,952	2.3

1. Total of free consumers served by Copel Geração e Transmissão and other suppliers in Copel Distribuição concession area.

13.7 Captive market

GRI 102-6

The number of captive consumers invoiced by COPEL in 2019 was 1.6% higher than that of December 2018, totaling 75.4 thousand new consumers – 4.7 million consumers in the system.

Energy sold (GWh)

	2017	2018	2019	% 18/19
Residential	7,126	7,238	7,499	3.6
Industrial	3,254	2,935	2,648	(9.8)
Commercial	4,651	4,653	4,730	1.7
Rural	2,257	2,288	2,361	3.2
Other	2,455	2,480	2,546	2.7
Total	19,743	19,594	19,784	1.0

13.8 Trading in the free energy market

GRI 102-6

Copel trades energy in the free energy market, both in Paraná and other states, and renders services that make possible for customers to safely operate in this market, such as representation before the Electricity Trading Chamber (CCEE), consultancy for migration, management in the free market of energy, modeling for generators, demand management, among others. With three years of existence, Copel Energia is already positioned among the large companies of the market, with a portfolio of over 384 customers in 14 states, and in the 11th position in energy sales ranking by traders in the full year of 2019.

Copel is approved by CCEE to act as a retailer, a modality where a single agent represents a group of consumers without the need for them to become agents of this body.

The target market of the company is the commercialization of energy with free consumers, particularly special consumers. This strategy is linked to the tendencies of market liberalization, characterized by the detachment between the captive market tariffs and the prices practiced in the free market, which makes the price competitive.

In 2019, Copel COM reached 1.3 GWa traded in CCEE. The goal is to become one of the largest traders in the Free Electricity Market until 2025.

13.9 Telecommunications

GRI 102-2, 102-6

Copel studies, plans, projects, implants, operates and keeps telecommunications, communications and correlated systems. It renders consultancy and engineering service in its field of actions, in addition to exploring; and renders services with value added, associated with access, storage, presentation, movement, recovery of information and other related activities.

The main services are broadband access to the World Wide Web (internet) through the availability of fiber infrastructure; multimedia communication in High Speed Private Network modality; multimedia communication in dedicated circuit modality for access and connection to the internet. Together, they respond for approximately 80% of Copel Telecom invoicing. In retail, the subsidiary serves 84 municipalities in Paraná and 1 in Santa Catarina. In the corporate market, it operates in all 399 Paraná municipalities.

The target market of the company is the commercialization of energy with free consumers, particularly special consumers. This strategy is linked to the tendencies of market liberalization, characterized by the detachment between the captive market tariffs and the prices practiced in the free market, which makes the price competitive.

In 2019, investments in infrastructure, equipment and installation services represented R\$ 17.25 million. 772 km of optical fiber cables were installed, of which 385 km of backbone grid and 387 km of access network. Altogether, Copel holds 36 thousand km of fiber grid, of which 12 thousand km are backbone grids and 24 thousand km of access network. The service availability in the year was one of 99.91%.

13.10 Participations

GRI 102-2

COPEL has corporate interest and association with companies, consortia and other institutions that operate in several sectors, in addition to the energy area, as presented in Notes 1.1 and 2 of the Financial Statements.



FINANCIAL CAPITAL

GRI 103-1, 103-2

The results obtained in 2019 show the financial discipline employed as a pillar for the sustained growth of the business. For the first time, consolidated net income has exceeded \$2 billion. Ebitda had 1,141.3 million more than to 2018, proving the efficiency and increase of the Company's productivity. The following are the main results of the exercise. For more details, see the Administration Report and Financial Statements.

The economic-financial performance is an of the main dimensions in the generation of value for Copel, as it allows for returns financial to shareholders and generates effects positive for employees, the government and the regulatory bodies. Influence on operational and investment capacity of Copel, as in the execution of the guidelines strategy, including the expansion of business sustainably and profitably, the achievement of cost excellence, the definition of processes and quality assurance, and the allocation of resources for research, development and innovation. It also interferes, in the strategic guidelines related to the human capital and the enhancement of the strength of work, as it enables the provision of training and capacity building on an ongoing basis, talent development and retention and knowledge in the Company, and the promotion of safety improvement activities of work and quality of life.

The Company publishes its results quarterly. As a publicly-traded company listed in stock Exchange, Copel is required by current regulations to practice open, clear and accessible to internal and external audiences, particularly with regard to subjects that are of interest to the capital market. This communication is based on the principles transparency, the symmetry of information and fair treatment, in attendance to Brazilian and North American legislation, as well as the specific regulations of the Brazilian Securities Commission (CVM) of Brazil and the Securities and Exchange Commission (SEC).

The risks related to economic and financial performance are credit and liquidity; consumer default; failure to meet the criteria of economic and financial efficiency of the Concession Agreement; drop in business profitability; drop-in project profitability (new business); and economic instability. The management of this performance aims to mitigate risks and enhance positive aspects, and is based on the Management Excellence Model (MEG) of the National Quality Foundation (FNQ). The financial goals are based on the Annual Corporate Budget, prepared by the wholly-owned subsidiaries and by Copel (Holding Company), and approved by the Board of Directors (CAD). Besides, they comprise the Management Agreement entered into between Copel's

companies. The monitoring of the fulfillment of these goals is done monthly during the Critical Analysis Meetings or its equivalent. The control is done through the Strategic Management System (SGE).

The report of the economic-financial performance is delivered monthly to the Board of Directors by the Financial Committee, provided by the Board of Finance and Investor Relations (IR). The IR department is responsible for coordinating communication with the capital market, by means of teleconferences, public meetings, road national and international shows and events with associations and stock exchanges. The investor relations website is kept up-to-date.

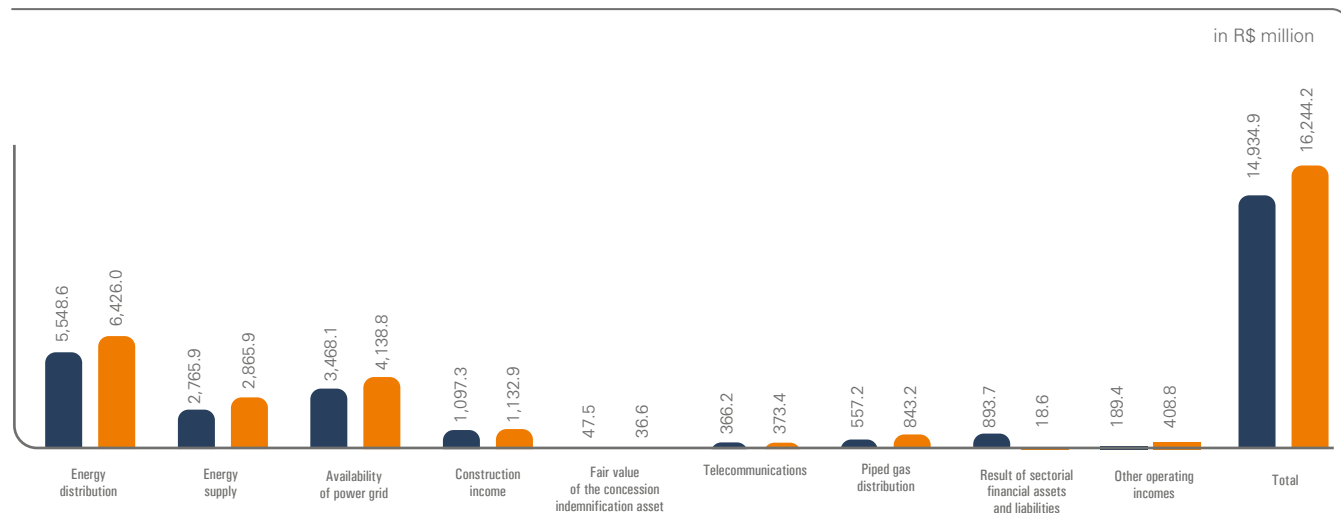
The Company publishes its results quarterly. As a publicly-traded company listed in stock Exchange, Copel is required by current regulations to practice open, clear and accessible to internal and external audiences, particularly with regard to subjects that are of interest to the capital market.

GRI 103-3

14.1 Net Operating Income | GRI 102-7

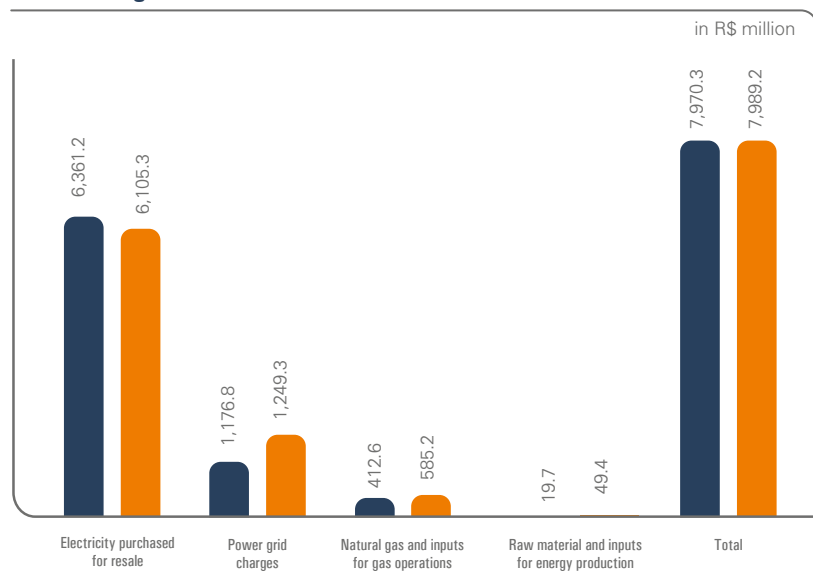
In 2019, the Net Operating Income increased by R\$ 1,309.3 million, representing an increase of 8.8% compared to 2018.

Net Operating Income

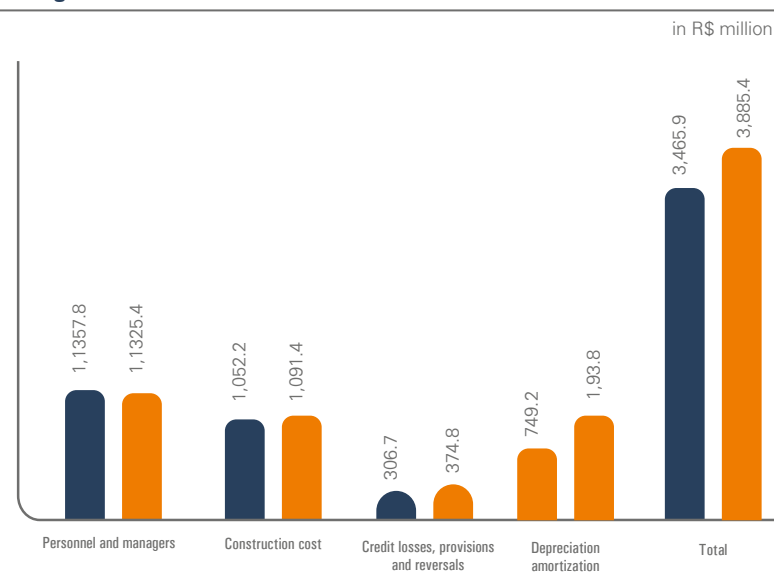


14.2 Operating costs and expenses

Non-manageable costs



Manageable costs



14.3 Ebitda

IN R\$ MILLION	CONSOLIDATED	
	2018	2019
Net profit	1,444.0	2,062.9
Deferred IRPJ and CSLL	(68.0)	205.8
IRPJ and CSLL	580.1	433.5
Net financial expenses (incomes)	438.1	488.5
Ebit	2,394.1	3,190.7
Depreciation and amortization	749.2	1,093.8
Ebitda	3,143.3	4,284.5
Net Operating Income (NOI)	14,934.8	16,244.3
Ebitda margin (Ebitda/NOI)	21.0%	26.4%

14.4 Financial Result

The financial result presented a reduction of R\$ 50.4 million, mainly due to the 8.5% decrease in financial income, resulting from interest and monetary variation on the transfer to the Clearing House Account (CRC) and the recognition of tax credits in 2018, and a reduction of 1.1% in financial expenses, as a consequence of exchange variation on Itaipu electricity purchase.



14.5 Value added

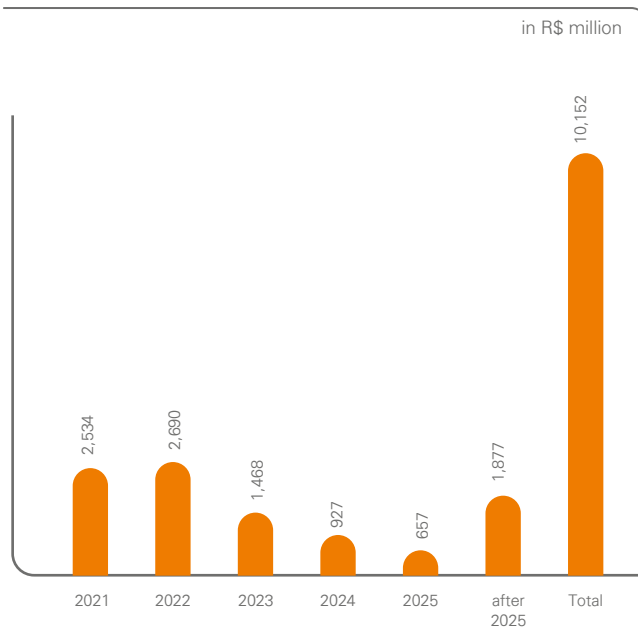
GRI 201-1



14.6 Indebtedness

Payments made in 2019 totaled R\$ 4,664.1 million: R\$ 3,638.0 million as principal and R\$ 1,026.1 million in charges.

Long term debt maturity schedule



Note: contemplates loans, financings and debentures.

14.7 Net Profit

In 2019, the net profit attributable to the shareholders of the parent company was of R\$ 1,989.9 million, 41% higher than that obtained in the previous year, of R\$ 1,407.1 million.



Hydroelectric Power Plant
Credit: Marcelo Rothen



GRI CONTENT INDEX

GRI Content Index

GRI 102-55

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.



GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 101: BASIS 2016				
GRI 102: 2016 GENERAL DISCLOSURES				
ORGANIZATIONAL PROFILE				
GRI 102-1	Organization name		Cover	
GRI 102-2	Activities, brands, products and services		33, 35 to 42, 112 to 119	
GRI 102-3	Organization headquarters location	Rua Coronel Dulcídio, 800, Bairro Batel, Curitiba (PR)	146	
GRI 102-4	Organization operations location		33 and 34	
GRI 102-5	Nature of ownership and legal form of the organization		33	
GRI 102-6	Markets served		112, 116, 118 and 119	
GRI 102-7	Organization size		33, 74, 122	
GRI 102-8	Information on employees (own and outsourced)		74	
GRI 102-9	Supply chain		98 and 99	
GRI 102-10	Main changes regarding size, structure or equity interest	Copel Board of Directors approved, in a meeting held on April 8, 2019, the opening of Copel Geração e Transmissão S.A. capital, a fact that was communicated to [B]3. The process did not involve the issue or sale of shares, or changes in Copel Geração e Transmissão S.A. control, which will continue as Copel (Holding Company) wholly-owned subsidiary. The holding company, in turn, will still hold 100% of Copel GeT's shares.		

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 102: 2016 GENERAL DISCLOSURES				
	GRI 102-11	Precautionary principle		58 and 59
	GRI 102-12	External initiatives		65
	GRI 102-13	Affiliations and associations	Copel Comercialização participates as a member of the Electricity Trading Chamber (CCEE). Copel CTE participates in the Brazilian Association of Competitive Telecommunications Service Providers.	25
STRATEGY				
	GRI 102-14	Message from the CEO		15 to 17
	GRI 102-15	Description of key impacts, risks and opportunities		58 to 61
ETHICS AND INTEGRITY				
	GRI 102-16	Values, principles, standards and norms of conduct	Whenever the Code of Conduct is updated, Copel forwards a copy of the document to each apprentice, trainee, employee, Director, Board Member and outsourced employee. Item 3.3 of NAC 030300 Code of Conduct (corporate norm) informs that these publics must “express their awareness and the commitment to observe it in the performance of their activities and responsibilities, through the Term of Commitment”. One copy of the Code of Conduct is also sent to Copel suppliers (when it s not included in a specific clause of the contract), who sign the Term of Commitment to the Code of Conduct. The Code of Conduct and information on the Integrity Program are available in Portuguese (Brazil) and English. The Governance, Risk and Compliance Office is the executive area responsible for the maintenance of values, principles and norms of conduct of Copel, as provided in its Bylaws.	43, 53 and 54
	GRI 102-17	Mechanisms of counseling and concerns with ethics	The Reporting Channel management is made by the Compliance Coordination. The Ethics Guidance Council is the collegiate, whose end is to ensure that Copel and its wholly-owned subsidiaries’ ethical and moral positioning will be kept at high levels. The Moral Harassment Complaint Analysis Commission assignment is to analyze moral harassment reports in Copel and its wholly-owned subsidiaries. Copel has two Ombudsman Superintendences, one at Copel Distribuição and the other at Copel Telecomunicações.	54 and 56
GOVERNANCE				
	GRI 102-18	Governance structure		51

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 102: 2016 GENERAL DISCLOSURES				
GRI 102-19	Delegation of authority	The competence to deliberate about economic, environmental and social subjects is defined in Copel Bylaws and detailed in the Internal Regulations of the Executive Board. The competencies of the subordinate areas of each executive board are established in Organization Norms - NCO, and NCO approval levels - Level of Competence.		
GRI 102-20	Executive level responsibility for economic, environmental and social issues	According to Copel Bylaws, the CEO and the Executive Board together are responsible for economic, social, environmental, climate change and corporate governance affairs. See articles 34 (items I, III and IV) and 42 (item I) of the document. The first reports to the Executive Board and the Board of Directors (CAD), and the second to CAD. According to the Board Internal Regulations, the Chief Legal and Institutional Relations Officer (article 5th), the Chief Finance and Investor Relations Officer (article 4th) and the Chief Governance, Risk and Compliance Officer (article 7th) also have related assignments. They all report to the CEO, the Executive Board and the Board of Directors. The mentioned documents are available on the Company's website.		
GRI 102-21	Stakeholder consultation on economic, environmental and social affairs	The Managers (officers and members of the Board of Directors) assess the process of definition of the materiality matrix that guides the Copel Integrated Report. This process involves a consultation to stakeholders on economic, environmental and social themes. Learn more on pages 11 to 13.	93	
GRI 102-22	Composition of the highest governance body and its committees		51 and 155	
GRI 102-23	Chair of the highest governance body	According to article 19 of the Bylaws, paragraph 2, the position of Chairman of the Board of Directors cannot be held simultaneously by Copel's Chief Executive Officer.		
GRI 102-24	Appointment and selection for the highest governance body		52	
GRI 102-25	Conflict of interests		52 and 53	
GRI 102-26	Role of the highest governance body in defining purpose, values and strategy	The powers and duties of Copel's Board of Directors include the development, approval and updating of the corporate purpose, mission, vision and value statements, and definition of strategies, policies and goals associated with economic, environmental and social matters of the organization, set forth in Copel Bylaws, Art. 30 "Powers and Duties".		
GRI 102-27	Knowledge and development of the highest governance body		53 and 54	
GRI 102-28	Assessment of performance of the highest governance body		53	
GRI 102-29	Identification and management of economic, environmental and social impacts		58 , 59, 76 104 and 108	

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 102: 2016 GENERAL DISCLOSURES				
GRI 102-30	Efficacy of risk management processes		59 and 60	
GRI 102-31	Assessment of economic, environmental and social issues	There is no pre-established frequency for conducting discussions for the evaluation of economic, environmental and social issues by the highest corporate governance body. However, these bodies follow an annual schedule of meetings where the various issues involving the Company are evaluated and resolved, as well as their impacts, risks and opportunities. In addition, the bodies specifically responsible for evaluating and deliberating certain issues, as established in Bylaws and Internal Regulations, also meet extraordinarily, as necessary.		
GRI 102-32	Role of the highest governance body in drafting sustainability reports	The Board of Directors' role in the preparation of sustainability reports is described in article 13 of Copel Bylaws, item XXIV, according to which the body must approve the document. The Board of Directors also approves, annually, the materiality matrix that fundamentals the report content.		
GRI 102-33	Communication of critical concerns	<p>Among its duties, the Statutory Audit Committee has to propose to the Board of Directors of COPEL (Holding Company) the promotion of actions aimed at:</p> <ul style="list-style-type: none"> - internal disclosure of procedures for receiving and processing information on relevant errors or frauds relating to accounting, auditing and internal controls, as well as Non-compliance with legal and regulatory provisions and internal rules, providing for specific procedures for the protection of the informant, such as anonymity and confidentiality of information; - annually monitor the quality and integrity of internal control mechanisms, financial statements and disclosed information and measurements; - evaluating and monitoring, quarterly or on a case-by-case basis, with the administration and Internal Audit, the adequacy of transactions with stakeholders in accordance with relevant policies; - evaluate and monitor risk exposures annually. <p>The Statutory Audit Committee shall, individually or jointly with the independent auditing firm hired by the Company, formally communicate to the management bodies, within a maximum of three business days from its identification, the existence or evidence of: non-observance of legal and regulatory norms, which jeopardizes the continuity of the Company's business; frauds of any value perpetrated by the Administration; relevant frauds perpetrated by employees, or third parties; and errors that result in material misstatements in the financial and accounting statements.</p>		
GRI 102-34	Nature and total number of critical concerns		56 and 57	

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 102: 2016 GENERAL DISCLOSURES				
GRI 102-35	Remuneration policies	Directors, officers, members of the supervisory board and of the statutory committees had their remuneration defined in the Shareholders' Meeting, following the determinations of the majority shareholder as established in CCEE Normative Deliberation No. 003/2019. The remuneration is composed only by the fee, with no payments linked to the attainment of targets, variable remuneration or performance indicators.		
GRI 102-36	Process for determining the remuneration	The remuneration process for directors, officers, , members of the supervisory board and of the statutory committees is presented in the 64th Annual Shareholders' Meeting minutes, of April 29, 2019, in item 6, "Setting of remuneration fordirectors, officers, , members of the supervisory board and of the statutory committees, as set forth in CCEE Normative Deliberation No. 003/2019 of the Council for Control of State-owned Companies (CCEE).		
GRI 102-37	Involvement of stakeholders in remuneration processes	Stakeholders are not involved in Copel's remuneration processes.		
GRI 102-38	Proportion of total annual remuneration		78	
GRI 102-39	Percent increase of total annual remuneration		78	
ENGAGEMENT OF STAKEHOLDERS				
GRI 102-40	List of stakeholder groups engaged by the organization		13, 93, 95, 98 and 102	
GRI 102-41	Collective bargaining agreements		74	
GRI 102-42	Basis for identification and selection of stakeholders to engage in	The identification of which stakeholders are to be engaged is based on the level of influence of these audiences in Copel's activities, business and decisions, as well as on the level of impact of the Company on them.		
GRI 102-43	Approach to stakeholder engagement		65, 73, 93, 95, 98 and 102	
GRI 102-44	Key themes and concerns raised with stakeholders		11 to 13	
REPORTING PRACTICES				
GRI 102-45	Entities included in the consolidated financial statements	The list of entities included in Copel's Consolidated Financial Statements can be found on the link: http://ri.copel.com/ptb/central-de-resultados#2019 .		
GRI 102-46	Definition of report content and limits for each material topic		11 to 13	
GRI 102-47	List of material themes		12 and 13	
GRI 102-48	Reformulations of information		106	
GRI 102-49	Changes in reporting		11	

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 102: 2016 GENERAL DISCLOSURES				
	GRI 102-50	Period covered by the report	10	
	GRI 102-51	Date of the previous report		
	GRI 102-52	Reporting cycle		
	GRI 102-53	Data for contact about the report	10	
	GRI 102-54	“Fair enough” option chosen by the organization	10	
	GRI 102-55	GRI Standards Content Summary	126 to 141	
	GRI 102-56	External verification	142	
INDICATORS OF THE ELECTRICITY SECTOR	EU1	Installed capacity, discriminated per source of primary energy and per regulatory system	112	
	EU2	Net energy production discriminated per source of primary energy and per regulatory system	112	
	EU4	Length of overhead and underground transmission and distribution lines, broken down per regulatory system	115 and 116	
MATERIAL THEMES				
CORPORATE GOVERNANCE				
GRI 103: MANAGEMENT APPROACH	GRI 103-1	Explanation of material themes and their limits	50 to 57	
	GRI 103-2	Management approach and its components	50 to 57	
	GRI 103-3	Management approach assessment	50 to 57	

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 205: ANTI-CORRUPTION 2016	GRI 205-1	Operations subject to risk assessments related to corruption	Main corruption risks identified in 2019: Collusion with Suppliers; Deviation of resources through sponsorships and expenses for events; Theft, loss or attacks to information; Deviation of funds; Conflict of interest; Collusion with clients; Manipulation of proposals and pricing; Use of inside information; Physical asset theft; Reception of presents and entertainment above limits permitted; Overbilling schemes; Deviation of funds through social programs and political donations; Illegal information leakage; Deviation of funds; Bribery and kickback.	55	
	GRI 205-2	Communication and training on anti-corruption policies and procedures		54	
	GRI 205-3	Confirmed cases of corruption and measures adopted		55	
GRI 415: PUBLIC POLICIES	GRI 415-1	Total value of financial contributions to political parties	As a joint venture company, Copel is legally prevented from making this type of contribution. Article 31, item III, of Law 9,096, dated September 19, 1995, prohibits parties to receive, directly or indirectly, under any form or pretext, monetary contribution or assistance, including through advertising of any kind, coming from public entities and legal entities of any nature, except for the appropriations referred to in article 38 of that Law and those from the Special Fund for Campaign Financing.		
OPERATIONAL EFFICIENCY					
GRI 103: MANAGEMENT APPROACH 2016	GRI 103-1	Explanation of material themes and their limits		26 to 30	
	GRI 103-2	Management approach and its components		26 to 30	
	GRI 103-3	Management approach assessment		28	
ELECTRICITY SECTOR INDICATORS	AVAILABILITY AND RELIABILITY				
	EU6	Electricity availability and reliability		27 and 28	
	AVAILABILITY AND RELIABILITY				
	EU10	Planned capacity against projected long-term power demand		113	

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION	
SYSTEM EFFICIENCY					
ELECTRICITY SECTOR INDICATORS	EU11	Average of generation efficiency of thermal plants per energy sources and regulatory regime	GPP Araucária (PIE - Independent Energy Producer) is the result of the partnership between Petrobras and Copel, which holds 20% and 80% of the company respectively, which is the owner of Thermal Plant Araucária (combined cycle thermal plant). Copel GeT is solely responsible for operating and maintaining the unit within the availability values. The net energy efficiency of the plant was 12.5% in 2018. The management of these data is carried out by the owner (GPP Araucária), who did not make available extra information. The only source used is gas.	Copel does not manage this indicator in this unit.	
	EU12	Losses in transmission and distribution of energy as a percentage of total energy		28	
	ACCESS				
	EU28	Frequency of interruptions in Energy supply	Learn more about the measures adopted by Copel DIS to reduce the frequency of interruptions in energy supply in the company's sustainability report.	27 and 28	
	EU29	Average duration of interruptions in the energy supply	Learn more about the measures adopted by Copel DIS to reduce the duration of interruptions in energy supply in the company's sustainability report.	27 and 28	
EU30	Average availability factor of the plant discriminated per source of energy and regulatory system		26 and 114		
OCCUPATIONAL HEALTH AND SAFETY					
GRI 103: MANAGEMENT APPROACH 2016	GRI 103-1	Explanation of material themes and their limits		83 to 87	
	GRI 103-2	Management approach and its components		83 to 87	
	GRI 103-3	Management approach assessment		83 to 87	
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018	GRI 403-1	Occupational Health and Safety management system	The company maintains the system Nexo CS, software for integrated management of Occupational Health and Safety and Social Security, subject to comply with the Brazilian legislation and applicable norms (Regulating Norms from the Ministry of Labor and Employment, eSocial, INSS/Social Security and Consolidation of Labor Laws). Nexo was implemented according to the best practices of project management in the market. All employees, from all Copel activities and companies, are covered by Nexo and the Company's health and safety management practices.	83 and 86	
	GRI 403-2	Identification of hazards, risk assessment and incident investigation		83 and 84	
	GRI 403-3	Occupational health services		83	

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018	GRI 403-4	Workers participation, consultation and communication on Occupational Health and Safety	100% of health and safety topics are covered in formal agreements with unions indirectly. Clause 36 of the Collective Agreement 2018/2019 provides for meetings between the Company's health and safety areas with the trade union forces every quarter, where subjects related to the theme are addressed, including equipment of individual protection; participation of employee representatives in health and safety inspections, audits and accident investigations; training and education; mechanisms for complaints and reporting; right to reject unsafe work; periodic inspections; compliance with International Labor Organization (ILO) standards, among others.	83	
	GRI 403-5	Workers training in Occupational Health and Safety	The employees of Copel (Holding Company) do not perform risk activities. For actions promoted by Copel GeT and Copel DIS, see these companies' socio-environmental reports.	85	
	GRI 403-6	Promotion of the worker's health	<p>The company counts on health insurance agreement (non-profit closed entity for social security and complementary assistance), whose monthly payments are co-shared, and offers broad accredited network in Paraná state for medical, dental and obstetric services, including out-patient, hospital and obstetric plan, in addition to psychology and physiotherapy services. Integrated to periodical medical examinations (legal scope for monitoring and prevention of work-associated risks), Copel includes the additional stage of preventive examinations associated to heart, gynecological, prostate, colorectal and ophthalmological diseases according to the employee sex and age, providing specialized medical evaluation and complementary examinations, without cost.</p> <p>The Company offers, in an institutionalized way, the chemical dependency program, aimed at the recovery of employees users of illicit drugs and alcohol by means of hospital and out-patient treatment, medical and psychological, with full payment of expenses according to the internal norm, in addition to follow-up by the company's social and health service, adapting activities and environmental risks to personal and collective safety.</p> <p>It also provides vaccination against flu for employees who want it, annually and without cost.</p> <p>Jointly with Cipas, it promotes campaigns for information and awareness, like yellow September, pink October, and blue November, among others.</p>		
	GRI 403-7	Prevention and mitigation of impacts on Occupational Health and Safety directly linked by commercial relations	Field inspections are conducted in order to make sure that all Copel health and safety requirements are being observed by service providers.	85	
	GRI 403-8	Workers covered by the Occupational Health and Safety management system	100% of Copel own employees (7,095) are covered by Occupational Health and Safety management system. Outsourced employees are not covered by this system, but follow the health and safety requirements of the Company.		
	GRI 403-9	Work-related injuries	This type of injury did not occur in 2019 at Copel (Holding Company). For Copel GeT and Copel DIS data, see these companies' socio-environmental reports.	170	

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018	GRI 403-10	Health issues associated with work	There were no cases of death or occupational diseases at Copel in 2019. The Company promotes field surveys and inspections jointly with the Internal Commission for Accident Prevention (CIPA), besides the annual update of PPRA of its establishments. Ergonomic conditions that may determine biomechanical risk due to the peculiarity of works in SEP, in certain circumstances (like in increased demand of activities due to emergencies) are associated with orthopedic problems in upper limbs. Measures are taken like the use of work equipment – like the hydroelevator (man basket) – facilitating the worker positioning with safety. Training of employees in the correct use of the equipment, in addition to inspection of field activities, aimed at mitigating risk and overload.		
EMPLOYMENT					
ELECTRICIT SECTOR INDICATORS	EU16	Health and safety of employees, contractors and subcontractors		83 and 86	
	EU18	Percentage of contracted and subcontracted workers who have undergone relevant health and safety training		85	
ECONOMIC-FINANCIAL PERFORMANCE					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		121	
	GRI 103-2	Management method and its components		121	
	GRI 103-3	Management method assessment		122 to 124	
GRI 201: ECONOMIC PERFORMANCE	GRI 201-1	Direct economic value generated and distributed		123	
	GRI 201-3	Coverage of pension plan obligations of benefits offered by the organization	All Copel employees are qualified for pension plans and adherence is voluntary. Normal contribution: Divided into two groups: the first is limited to 10 Social Security Units (UP) - each in the amount of R\$396.90 - with discounts ranging from 2% to 4%. The values of the Real Contribution Salary (SRC) that exceed the first group will have a discount of 12% on the difference.	80	
	GRI 201-4	Significant financial aid from the government		157 to 158	
PEOPLE MANAGEMENT					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		73 to 87	

GRI STANDARDS	DISCLOSURE	REMARKS	REPORT PAGE	OMISSION
GRI 103: MANAGEMENT METHODS 2016	GRI 103-2	Management method and its components	73 to 87	
	GRI 103-3	Management method assessment	73 to 87	
GRI 401: EMPLOYMENT	GRI 401-1	New hiring of employees and turnover per age group, gender and region	74	
	GRI 401-2	Benefits granted to employees	78	
	GRI 401-3	Rates of return to work and retention after maternity/paternity leave	79	
GRI 402: WORK RELATIONS MANAGEMENT	GRI 402-1	Minimum term for notification on operational changes		Copel does not have established deadlines for communicating operational changes. This issue is not foreseen in the collective agreement.
GRI 404: TRAINING AND EDUCATION	GRI 404-1	Average number of training hours per functional category and gender	82	
	GRI 404-2	Competence management programs and continuous learning	80 to 82	For more details on Copel DIS and Copel GeT training and qualification actions, access these subsidiaries' sustainability reports at copel.com .
	GRI 404-3	Percent of employees that received performance and career development analyses	82	Partially answered.
GRI 405: DIVERSITY AND EQUAL OPPORTUNITIES 2016	GRI 405-1	Diversity of governance and employee groups	171 and 172	
	GRI 405-2	Ratio of basic salary and remuneration between men and women	172	
GRI 406: NON-DISCRIMINATION	GRI 406-1	Total number of cases of discrimination and remedial measures taken		There were no records of discrimination cases in 2019.

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 407: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING 2016	GRI 407-1	Cases where freedom of association and collective bargaining may be violated	No cases of this type were identified. Copel follows the legislation and strict internal norms for hiring and monitoring of suppliers, as described on pages 98 to 101.		
ELECTRICITY SECTOR INDICATORS	EMPLOYMENT				
	EU14	Availability of specialized labor	Copel (Holding Company) does not promote actions like trainee or technical learning programs, partnerships with universities or research centers, or others intended to ensure the availability of specialized labors besides the personal development initiatives mentioned on pages 81 to 82. Refer to Copel GeT and Copel DIS socio-environmental reports to learn more about these subsidiaries' initiatives.	81	
	EU15	Percent of employees qualified for retirement in the coming 5 and 10 years, discriminated per occupational category and region.		173 and 174	
ENVIRONMENTAL MANAGEMENT					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		104 to 110	
	GRI 103-2	Management method and its components		104 to 110	
	GRI 103-3	Management method assessment		103, 107 and 109	
GRI 201: ECONOMIC PERFORMANCE	GRI 201-2	Financial implications and risks due to climate change	Copel does not control the financial implications of climate change, because this process would depend on the generation of information in several areas, and in many of them there is no management of this type of information.	156	
GRI 302: ENERGY 2016	GRI 302-1	Energy consumption in the organization		106	
	GRI 302-3	Energy intensity		106	
	GRI 302-4	Reduction in energy consumption		106	
GRI 303: WATER AND EFFLUENTS 2018	GRI 303-1	Interaction with water as a shared resource		108	
	GRI 303-2	Management of water discharge impacts	Copel does not consume water in its process. The consumption recorded by Copel generates domestic sewage only.		
	GRI 303-4	Water discharge	Copel does not make conjunctive use of water in its processes. The consumption registered by Copel generates only domestic sewage.		
	GRI 303-5	Water consumption	Copel consumed 161,014 cubic meters of water in 2019 from the municipal supply. The Copel GeT Socio-environmental and Economic-Financial Report brings more information on this subsidiary consumption.		

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 305: EMISSIONS	GRI 305-1	Direct greenhouse gas (GHG) emissions - SCOPE 1		105	
	GRI 305-2	Indirect greenhouse gas (GHG) emissions - SCOPE 2		105	
	GRI 305-3	Other indirect greenhouse gas (GHG) emissions - SCOPE 3		105	
	GRI 305-4	Intensity of greenhouse gas (GHG) emissions		105	
	GRI 305-5	Reduction in greenhouse gas (GHG) emissions	For further details on Copel actions with regard to targets associated with emissions, access the link.	106	
	GRI 305-6	Emissions of ozone-depleting substances (ODS)	Copel does not produce, import or export ODS.		
	GRI 305-7	Emissions of NOx, SOx and other significant atmospheric emissions	The only operation that produces atmospheric emissions is Figueira Thermal Plant, which did not operate in 2019 due to modernization works.		
GRI 306: EFFLUENTS AND WASTE 2016	GRI 306-1	Total water disposal discriminated per quality and destination	Copel does not consume water in its process. The consumption recorded by Copel generates domestic sewage only.		
	GRI 306-2	Total waste weight per type and method of disposal		107	
	GRI 306-5	Bodies of water significantly affected by disposals and/or flowing	Copel does not consume water in its process. The consumption recorded by Copel generates domestic sewage only.		
GRI 308: SUPPLIERS ENVIRONMENTAL ASSESSMENT 2016	GRI 308-2	Negative environmental impacts on suppliers' chain and measures adopted	Copel GeT assessed its critical suppliers with regard to environmental impacts in greenhouse gas emissions in 2019. Learn more about the action in the company's Socio-environmental and Economic-Financial Report		
RISK MANAGEMENT					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		59 to 61	
	GRI 103-2	Management method and its components		59 to 61	
	GRI 103-3	Management method assessment		59 to 61	
GRI 206: ANTICOMPETITIVE BEHAVIOR 2016	GRI 206-1	Lawsuits filed for unfair competition, trust and monopoly practices	Copel is not subject to lawsuits for unfair competition, trust and monopoly practices.		
REGULATORY ENVIRONMENT					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		24 to 25	
	GRI 103-2	Management method and its components		24 to 25	
	GRI 103-3	Management method assessment		24 to 25	

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 307: ENVIRONMENTAL COMPLIANCE	GRI 307-1	Non-compliance with environmental laws and/or regulations	Infraction notice 133.476 for violation of disposition in article 62, IV of decree 6514/2008. Payment of a fine of R\$ 226,686.33.		
GRI 419: SOCIAL COMPLIANCE	GRI 419-1	Non-compliance with laws and regulations in social and economic areas	Copel was, in 2019, subject to five processes filed by means of arbitration mechanisms. The Company did not record payments of fines or monetary sanctions in the period.		
CUSTOMER SATISFACTION					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		93 to 94	
	GRI 103-2	Management method and its components		93 to 94	
	GRI 103-3	Management method assessment		93 to 94	
COMMUNITIES AND SOCIAL INVESTMENT					
GRI 103: MANAGEMENT METHODS 2016	GRI 103-1	Explanation of material themes and their limits		95 to 98	
	GRI 103-2	Management method and its components		95 to 98	
	GRI 103-3	Management method assessment		95 to 98	
GRI 202: MARKET PRESENCE 2016	GRI 202-1	Variation in the lowest wage, broken down by gender, compared to the local minimum wage	Copel does not have detailed control over the wages paid to outsourced employees, as the information is spread among the various contract management areas and by the wholly-owned subsidiaries.	78	
	GRI 202-2	Proporção de executivos seniores contratados na comunidade local	A Copel contrata por meio de concurso público e, portanto, não é feita essa diferenciação para a contratação.		
GRI 203: INDIRECT ECONOMIC IMPACTS 2016	GRI 203-1	Investments in infrastructure and services offered	Copel investments in infrastructure are made through its subsidiaries. For further details access Copel GeT and Copel DIS socio-environmental reports.		
	GRI 203-2	Significant indirect economic impacts, including impacts' extension		98	
GRI 204: MARKET PRACTICES 2016	GRI 204-1	Proportion of expenses with local suppliers in important operational units	Copel (Holding Company) and Copel COM – 52.89%, considering as local suppliers those present in Paraná state Copel CTE – 38.98%, considering as local suppliers those present in Paraná state Copel DIS – 18.93%, considering as local suppliers those present in Paraná state Copel GET – 97.11%, considering as local suppliers those present in states where Copel Geração e Transmissão has subsidiaries and SPEs under direct control: Paraná, Mato Grosso, São Paulo, Rio Grande do Norte and Santa Catarina Copel does not have a policy for the hiring of local suppliers.		
GRI 408: CHILD LABOR 2016	GRI 408-1	Operations and suppliers with risk of occurrence of child labor		101	

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
GRI 409: FORCED OR SLAVE-LIKE WORK 2016	GRI 409-1	Operations and suppliers with risk of occurrence of slave labor		101	
GRI 412: ASSESSMENT IN HUMAN RIGHTS 2016	GRI 412-1	Operations subject to analyses of assessments on human rights	Copel does not conduct formal analyses of human rights. The Company follows processes and procedures for the management of suppliers' hiring as described on pages 98 to 101. With regard to own operation, human rights management is described on page 70.	70	
	GRI 412-2	Training of employees in human rights' policies or procedures		70, 76 and 97	
GRI 413: LOCAL COMMUNITIES 2016	GRI 413-1	Programs for engagement of the community, impact and/or local development assessments	Details on the programs executed by Copel DIS and Copel GeT can be checked in these subsidiaries' sustainability reports.		
	GRI 413-2	Operations with negative impacts on local communities	Negative impacts occur in the scope of Copel GeT and Copel DIS. The main negative impacts resulting from Copel GeT operations are pressure for urban infrastructure and public services resulting from demographic and urban increase during construction; interference in economic activities related to the use of natural resources and/or linked to the polygon of buildings affected by the developments; compulsory displacement of populations and changes in their lifestyles due to changes in economic production, local links and social organizations; risks of economic retraction and population depletion in municipalities after completion of the works; and inconvenience to the populations surrounding the facilities resulting from increased circulation of people and vehicles, noise emissions typical of the equipment. The main impacts of Copel DIS are: generation of waste and dust; increase in levels of noises and vibration; visual impact/change in the natural landscape due to vegetation suppression; limitation in land use and occupation; and interference in the surrounding communities' routine. The most significant socio-environmental impacts in distribution networks (low voltage and 13.8 and 34.5 kV) are accidents with third parties, management of vegetation under networks and interference in urban landscape. For further details, refer to the subsidiaries' social-environmental reports on copel.com.		

GRI STANDARDS	DISCLOSURE		REMARKS	REPORT PAGE	OMISSION
LOCAL COMMUNITIES					
ELECTRICITY SECTOR INDICATORS	EU19	Stakeholders participation in decision processes	<p>Compliant with environmental legislation in force and criteria from licensing environmental bodies, during the preparation of environmental studies there are consultations to dwellers in the area directly affected by the undertaking, which assists in the analysis of the works' socio-environmental feasibility.</p> <p>During the implantation phase, relationship programs with the community's involvement are performed for clarifications on the installations, possible impact during works, among other subjects. Communication channels are made available to the community to collect information and for eventual indications of impacts that require mitigating measures.</p> <p>Licensing bodies are involved in these activities, like Paraná Environmental Institute (IAP), Environment Secretariats, City halls, Public Attorney's Office, Brazilian Institute of Environment and Renewable Natural Resources (Ibama), Chico Mendes Institute for Biodiversity Conservation (ICMbio) and independent bodies (IPHAN, FUNAI, Institute of Waters, Agriculture and Supply Secretariats, Education Secretariats, among others.</p> <p>The participating civil society organizations are: Consumers Council, Rural Unions, APAEs Federation and Association of Residents.</p> <p>Copel also participates in several forums and associations for discussions related to the sector, particularly the Brazilian Association of Electricity Distributors (Abradee) in order to contribute to the electricity distribution sector development in Brazil.</p>		
	EU22	Number of people displaced, physically and economically and indemnification discriminated per type of project		96	



Companhia Paranaense de Energia – Copel

Independent Auditor's Limited
Assurance Report on the
GRI "Standards" Indicators contained
in the 2019 Integrated Report

Deloitte Touche Tohmatsu Auditores Independentes

INDEPENDENT AUDITOR'S LIMITED ASSURANCE REPORT ON THE GRI "STANDARDS" INDICATORS CONTAINED IN THE 2019 INTEGRATED REPORT

To the Managers and Shareholders
of Companhia Paranaense de Energia - Copel
Curitiba - PR

Introduction

We have been hired by the Management of Companhia Paranaense de Energia - Copel ("Company") to present our limited assurance report on the compilation of information related to the GRI "Standards" indicators, included in the Company's 2019 Integrated Report, for the year ended on December 31, 2019.

Responsibilities of the Company's Management

The Company's Management is responsible for the preparation and presentation, in an appropriate manner, of the information regarding the GRI indicators included in the 2019 Integrated Report, following the criteria defined by the "Global Reporting Initiative - GRI" in its "Standard" version and the internal controls that it has determined to be necessary to allow the preparation of this information free of relevant distortion, regardless of whether caused by fraud or mistake.

Responsibility of independent auditors

Our responsibility is to express a conclusion on the information related to the GRI indicators, contained in the 2019 Integrated Report, based on the limited assurance work conducted in accordance with the Technical Communique - CT No. 07/12, approved by the Federal Accounting Council - CFC, and prepared based on NBC-TO-3000 - Assurance Processes Different from Audit and Review, issued by the CFC, which is equivalent to the international standard ISAE 3000, issued by the "International Federation of Accountants - IFAC", applicable to non-historical information. These standards require compliance with ethical requirements, including independence requirements, and that the work is performed to obtain limited assurance that the information related to the GRI indicators, in the 2019 Integrated Report, considered as a whole, is free of relevant distortions.

A limited assurance work performed in accordance with NBC-TO-3000 (ISAE 3000) consists mainly of inquiries to the Company's Management and other professionals who are involved in the preparation of information related to the GRI indicators, included in the 2019 Integrated Report, as well as the application of analytical procedures to obtain evidence that enables us to conclude in the form of limited assurance on the information provided together. A limited assurance work also requires the execution of additional procedures when the independent auditor becomes aware of matters that lead them to believe that the information related to the GRI indicators in the 2019 Integrated Report, considered together, may present relevant distortions.

The procedures selected were based on our understanding of the aspects relating to the compilation and presentation of information related to the GRI indicators in the 2019 Integrated Report and other circumstances of the work and our consideration of areas where relevant distortions might exist.

The procedures included are the following:

- a) the planning of the work, considering the relevance, the volume of quantitative and qualitative information and the operational and internal control systems that served as the basis for the preparation of information related to the GRI indicators, included in the 2019 Integrated Report of the Company.
- b) the understanding of the calculation methodology and the procedures for the compilation of indicators through interviews with managers responsible for preparing the information.
- c) application of analytical procedures on quantitative information and inquiries into qualitative information and its correlation with the indicators disclosed in the information related to the GRI indicators in the 2019 Integrated Report; and
- d) comparison of indicators of a financial nature with the financial statements and/or accounting records.

The limited assurance work also included adherence to the guidelines and criteria of the GRI preparation structure in its "Standard" version, applicable to the preparation of the information related to the GRI indicators, contained in the 2019 Integrated Report.

We believe that the evidence obtained in our work is sufficient and appropriate to support our conclusion in the limited form.

Scope and limitations

The procedures applied in limited assurance work are substantially less extensive than those applied in an assurance work that aims to provide an opinion on the information related to the GRI indicators in the 2019 Integrated Report. Consequently, they do not provide us with the assurance that we are aware of all the issues that would be identified in an assurance work aimed at providing an opinion. If we had carried out a work aimed at issuing an opinion, we could have identified other issues and possible distortions that may exist in the information related to the GRI indicators in the 2019 Integrated Report. Therefore, we do not express an opinion on this information.

Non-financial data will be subject to more inherent limitations than financial data, given the nature and diversity of methods used to determine, calculate or estimate these data. Qualitative interpretations of materiality, relevance and accuracy of data are subject to individual assumptions and judgments. Also, we have not performed any work on reported data for prior periods, nor future projections and goals.

It is worth noting that the indicators subject to the above assurance procedures are those related to material issues obtained in the 2019 materiality study of Copel Holding.

Other topics

Scope of assurance

The criteria for defining the scope of assurance included the selection of indicators directly associated with the material aspects informed by the Company during the planning stage of the work, also excluding data and information on projects and initiatives included in the Annex to the Company's 2019 Integrated Report. We highlight below the indicators that were not the object of this assurance:

Indicators related to "Materials": 301-1, 301-2 and 301-3.

Indicators related to "Energy": 302-2, 302-3 and 302-5.

Indicators related to "Water": 303-2, 303-3, 303-4 and 303-5.

Indicators related to "Biodiversity": 304-1, 304-2, 304-3 and 304-4.

Indicators related to "Effluent and waste": 306-3 and 306-4.

Indicators related to "Environmental assessment of suppliers": 308-1.

Indicators related to "Emissions": 305-1, 305-2, 305-3, 305-4, 305-5, 305-6 and 305-7.

Indicators related to "Occupational Health and Safety": 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9 and 403-10.

Indicators related to "Training and Education": 404-2.

Indicators related to "Safety Practices": 410-1.

Indicators related to "Rights of indigenous peoples": 411-1.

Indicators related to “Assessment of Human Rights”: 412-3.

Indicators related to “Social assessment of suppliers”: 414-1, 414-1, 414-2 and 414-2.

Indicators related to “Public policies”: 416-1 and 416-2.

Indicators related to “Marketing”: 417-1, 417-2 and 417-3.

Indicators related to “Customer Privacy”: 418-1.

Indicators related to “Sectoral Supplement”: G4-EU2, G4-EU3, G4-EU4, G4-EU5, G4-EU08, G4-EU09, G4-EU11, G4-EU12, G4-EU13, G4-EU17, G4-EU20, DMA G4-EU21, G4-EU22, G4-EU 23 and DMA G4-EU24, G4-EU25, G4-EU26, G4-EU27, G4-EU28, G4-EU29 and G4-EU30.

Guidelines and specifications

In accordance with the GRI guidelines in its “STANDARDS” version, the Company declares that it is “in accordance” with the “Core/Essential” specifications in its Integrated Report for the year ended on December 31, 2019, which reports on core performance indicators and energy sector supplement indicators.

Conclusion

Based on the procedures performed, as described in this report, nothing came to the attention that leads us to believe that the information related to the GRI indicators, included in the 2019 Integrated Report, have not been compiled, in all relevant aspects, under the guidelines defined by the Global Reporting Initiative – GRI Standards.

Curitiba, May 14, 2020



DELOITTE TOUCHE TOHMATSU
Auditores Independentes
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Fernando de Souza Leite
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Credit - Photos in the Opening of Chapters

Copel Collection

Page 88 - UTF Solar Panels - PR
Page 148 - Lago Igapó, Londrina

Adilson Goncalves de Campos Junior

Page 103 - Wind Farm, RN

Carlos Borba

Page 20 - Governador Ney Braga HPP

Daniela Catisti

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Erika Yuriko Nishimura

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Guilherme Pupo

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Page 92 - Smart Copel, Curitiba - PR

Marcelo Rothen

Page 9 - Maintenance of the electric grid
Page 31 - Maintenance of the electric grid in rural areas
Page 71 - Governor José Richa HPP, Salto - Caxias
Page 111 - Substation
Page 125 - Wind Farm, RN

Writing and editorial Consulting

Visão Sustentável

Graphic design, layout and illustration of the business model

blendON

Selection, Collection and Analysis of Indicators

Visão Sustentável

Independent Auditors

Deloitte Touche Tohmatsu



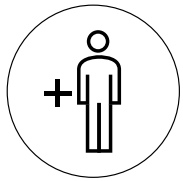
ANNEXES

16.1 Incorporation of Global Compact Principles and SDG

The Company ratifies its commitment to the United Nations Global Compact and the Sustainable Development Goals (SDGs), in accordance to its purpose of rising in the market in a sustainable way, prioritizing the principles that guide the Company’s mission, vision and values.

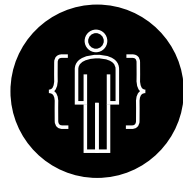
In this regard, the company presents, as an Annex to this publication, the Progress Communication (COP), where the initiatives developed to implement the Compact principles and SDGs in its operations are specified. Throughout this Integrated Report, the results of these initiatives and the progress of commitments assumed and started in 2019 can be seen. Such information can be found in GRI indicators’ reports made by Copel.

Global Compact Principles



1. RESPECT

and support internationally acknowledged human rights in the area of influence.



2. ENSURE

the non-participation of the company in violations of human rights.



3. SUPPORT

the freedom of association and recognize the right to collective bargaining.



4. ELIMINATE

all forms of forced or compulsory work.



5. ERADICATE

all forms of child labor from the production chain.



6. STIMULATE

practices that eliminate any type of discrimination at work.



7. ASSUME

practices that adopt preventive, responsible and proactive approaches to environmental challenges.



8. DEVELOP

initiatives and practices to promote and disseminate socio-environmental responsibility.



9. ENCOURAGE

the development and discussion of responsible environmental technologies.



10. FIGHT

against corruption in all its forms, including extortion and bribery.



Eliminate poverty in all its forms, everywhere.



Eliminate hunger, achieve food safety, improve nutrition and promote sustainable agriculture.



Ensure healthy life and promote the well-being for all, in all ages.



Ensure inclusive and equitable education, with quality, and promote learning opportunities in life for all.



Achieve gender equity and empower all women and girls.



Ensure water availability and sustainable management and sanitation to all.



Ensure reliable, sustainable, modern access to energy, at an affordable price to all.



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work to all.



Build resilient infrastructures, promote inclusive and sustainable industrialization and foment innovation.



Reduce inequality within countries and among them.



Make cities and human settlements inclusive, resilient and sustainable.



Ensure sustainable production and consumption standards.



Take urgent measures to fight climate change and their impacts.



Conserve and promote the sustainable use of oceans, seas, and marine resources for sustainable development.



Protect, recover and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, fight desertification, stop and reverse the earth's degradation and stop losses.



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, responsible and inclusive institutions at all levels.



Strengthen the means of implementation and revitalize the global partnership for sustainable development.

SUSTAINABLE DEVELOPMENT GOALS

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND GOALS		DATE START / END
	GLOBAL COMPACT	SDG	
Policies and management systems			
Embracing voluntary commitments in the effort to promote sustainability, ethical conduct and best practices of corporate governance: Global Compact; Business Pact for Integrity and against Corruption and Principles for Sustainable Executive Education (PRME).	1 to 10	16, 17	Various / Undetermined
Supply Chain Sustainability Management: aims to contribute to the development of suppliers, establishing parameters linked to sustainability, proposing actions that promote and strengthen good practices along the supply chain.	1 to 10	8, 16	2008 / Undetermined
Our Energy Program: includes the acquisition of new career opportunities, remuneration and personal development to performance.	6	8	2013 / Undetermined
Generation by renewable sources: compliance with the strategic and sustainability guidelines established for the generation business.	7, 8, 9	7, 9, 17	Undetermined
Ethical Guidance Board: Appreciates and issues guidance on processes related to ethical conduct in the Company.	1 to 10	8, 16	2003 / Undetermined
Moral Harassment Reporting Commission: aims to analyze reports of moral harassment in the Company, placing Copel as a pioneer company in the country in the implantation of a preventive process to guarantee human and sound practices in people management.	1 to 10	8, 16	2009 / Undetermined
Integrity Program and Compliance Portal: a set of internal mechanisms and procedures for integrity, auditing and incentive to reporting of irregularities, and effective application of codes of ethics and conduct, policies and guidelines to detect and correct deviations, fraud, irregularities and illicit acts committed against the public administration, national or foreign.	10	16	2015 / Undetermined
Copel's Transparency Portal: has the purpose of making information available in compliance with federal and state legislation.	10	16	2014 / Undetermined
Diversity Program: aims to raise awareness and mobilize the staff aiming at the promotion of equal rights, opportunities and recognition for all, as well as promoting and supporting internal actions in accordance with public policies and movements focused on diversity.	1, 2, 6,	4, 5, 8 10, 16	2014 / Undetermined
Internal Socio-environmental Commissions - CISAS: act as multipliers of sustainability concepts, enabling the identification of problematic situations in the socio-environmental aspect, strengthening the relationship with stakeholders.	1, 2, 7, 8, 9	12, 13	2012 / Undetermined
Copel Corporate University - UniCopel: implementation of Educational Planning and management of Leadership Development Programs, Graduate Courses (lato and strict sensu) and Languages.		4, 8	2007 / Undetermined

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND GOALS		DATE START / END
	GLOBAL COMPACT	SDG	
Corporate Climate Change Management Program: aims to discuss and deliberate actions related to the study of the effects of climate change, monitor actions resulting from the implantation of Copel's Climate Change Policy and voluntary commitments assumed.	1, 2, 7, 8, 9	11, 12, 13, 17	2011 / Undetermined
INOVA+ GeT Program: a program to promote innovation; started in 2015 to disseminate and acknowledge innovative initiatives. In 2019, the initiative was re-structured and started to use a permanent platform for the reception of innovative proposals that will generate value and bring management improvements.	1, 8, 9	9	2015 / Undetermined
Support for public policies and management improvement			
Participation in the Brazilian Committee of the Global Compact and the National Movement SDG Nós Podemos Paraná (SDG Movement We can Paraná)	1 to 10	16, 17	2016 / Undetermined
GT CLIMA – Working group that discusses climate change (including mitigation and adaptation) in Curitiba.	7, 8, 9	9, 11, 12, 13	
Rede Sustentá Paraná – Paraná network for the advance of sustainability in public management.	1 to 10	16, 17	
Participation in organizations that discuss and promote energy efficiency: Brazilian Association of Electric Energy Concessionaires, Energy Planning Company, Brazilian Association of Electricity Generating Companies, Brazilian Association of Electricity Distributors, Brazilian Association of Large Energy Transmission Companies, Brazilian Committee of Large Dams, Regional Council of Engineering, Architecture and Agronomy of PR, FUNCOGE, Brazilian Association for Clean Energy Generation, Electricity Trading Chamber, State Council of Water Resources, Brazilian Association of Photovoltaic Solar Energy, Brazilian Committee of Electricity, Electronic, Illumination and Telecommunications.	7, 8, 9	6, 7, 15	Various / Undetermined
Participation in associations that discuss and promote environmental improvements: Paraná State Basins Committees, Regional Council of Engineering, Architecture and Agronomy of the State of Paraná, PR Waste and Citizenship Forum, Environmental Committees of PR Public Prosecution Service.	7, 8, 9	6, 15, 17	Various / Undetermined
Voluntary participation in Paraná Competitive Movement and in examining boards of awards: National of Quality, MPE Brasil and Paraná Quality in Management.	1 to 10	12, 17	2000 / Undetermined
Social and environmental programs, project and initiatives			
Program for collection of donations to welfare entities and social service institutions, not for profit and of collective interest, through the invoicing of energy.	1, 2	1, 10, 17	1999 / Undetermined
Annual donation, through tax incentives, to the Fund for the Rights of Children and Adolescents - FIA, Rouanet Law, the Elderly Law, Sports Promotion Law, PROFICE, PAIC, PRONON and PRONAS.	1, 2, 5	1, 4, 16	2006 / Undetermined
Corporate Volunteer Program - Electriccitizenship: enables employees to use up to four hours per month for the execution of voluntary work.	1, 2, 4, 5, 7, 8	10, 16, 17	2001 / Undetermined
Copel's Choir: promotes the integration of employees, quality of life at work, development of culture and music education, as well as appreciation of Copel's brand in the community.	6		2010 / Undetermined

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND GOALS		DATE START / END
	GLOBAL COMPACT	SDG	
Support room for breastfeeding and reduction of working hours: a comfortable and cozy place where the mother can withdraw and store milk to timely offer to her child.	1, 2, 6	3, 5	2016 / Undetermined
Cultivar Energia (Cultivate Energy) Program: the objective is to implement community gardens in the safety bands of Copel's electrical grids, in partnership with municipal governments and residents' associations.	1, 7, 8, 9	2, 10, 11, 12, 17	2009 / Undetermined
Corporate Accessibility Program: aims to make the Company adaptable in issues of accessibility and inclusion of disabled persons (PwDs).	1, 2, 6	8, 10, 11, 16,	2007 / Undetermined
Eco-efficiency Program: concentrates the several eco-efficiency initiatives developed at Copel in a single program operating as a hub, interconnecting them, strengthening them, empowering them, and enabling new ways of doing business.	7, 8, 9	6, 8, 9, 12, 13	2014 / Undetermined
EducaODS Program: aims to train and develop Copel professionals, formal and informal leaders on issues related to sustainability.	1 a 10	4, 12	1998 / Undetermined
Susie Pontarolli Sustainability Award: aims to recognize and support initiatives that aim to contribute to the promotion of sustainable development and improvement of quality of life.	1 a 10	10 12,17	2012 / Undetermined
Luz Fraterna (Fraternal Light) Program: Government of Paraná Program that performs the payment of bills of consumers enrolled in the Social Tariff of Electric Energy, provided that the consumption does not exceed 120 kWh.	1, 2, 10	1, 7, 10, 11, 17	2003 / Undetermined
Morar Bem (Live Well) Paraná Program: in partnership with the Housing Company of Paraná - Cohapar - housing program for families with monthly income up to six national minimum wages.	1, 2, 10	1, 7, 10, 11, 17	2003 / Undetermined
Night Rural Tariff Program: incentive to increase agricultural production, for poultry farmers and swine farmers, by means of tariff discount for consumer units classified as rural, served in low voltage.	1, 2, 8	7, 11, 17	2007 / Undetermined
Night Irrigation Program: stimulation of the use of irrigation to increase agricultural and poultry production, as well as improvement of quality of life in rural areas, tariffs and equipment subsidized to rural consumers.	7,8, 9	2, 7, 8, 11, 12 17	2003 / Undetermined
Energy Efficiency Program: focused on the efficient use of electricity in residential, industrial, commercial and public facilities, located in the concession area of Copel.	7, 8, 9	7, 9, 11, 12	2000 / Undetermined
Paraná Cidadão (Paraná Citizen) Program: promoted by the Special Secretariat for Community Relations, to offer free services that promote citizenship and social inclusion. Copel participates in providing internet infrastructure, enabling connectivity with systems for service rendering. It also participates by rendering services and guidance on the safe and efficient use of electricity.	1, 2, 4, 5, 6, 10	1, 7, 9, 10, 17	2003 / Undetermined
Paraná Digital (Digital Paraná) Program: digital inclusion in public schools by the connection of state schools to the Internet, in partnership with the State Government and Education Department, with priority to low HDI localities.	1, 2, 6, 10	1, 4, 9, 10	2003 / Undetermined

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND GOALS		DATE START / END
	GLOBAL COMPACT	SDG	
Paraná Conectado (Paraná Connected) Program: the initiative provides access to optical fiber internet at popular prices and 1 Mbps speed, according to the Broad-band State Plan, despite not being commercialized since 2017, the customer base is maintained.	1, 2, 4,	1, 9, 10	2010 / Undetermined
Electricity Social Tariff: established by Law 10,438 / 2002, it offers discounts on electric power consumption, up to a limit of 220 kWh, to families enrolled in the Single Registry of Social Programs of the Federal Government, provided that the other criteria set forth in Aneel Resolution 414/2010 are observed.	1, 2	1, 7, 10, 11	2002 / Undetermined
Mais que Energia (More than Energy) Project: implantation, expansion and consolidation of social investment projects and programs for the community.	1, 2	1, 7, 10, 11, 16, 17	2014 / Undetermined
Smart grid project: installation of 2,000 telemetry points in the urban area of Curitiba and 1,000 points in the rural area of Colombo and Bocaiúva do Sul, the reading is done hourly making it possible to detect errors, lack of energy and obtention of reading for billing without displacements.	7, 8, 9	7, 9, 11, 12, 13, 17	2015 / Undetermined
Telemetry: enables automated collection of data in real-time (on time), optimizing the process given precision in the collection, treatment and availability of data, also for clients, via the Internet.	8, 9	7, 9, 13	2010 / Undetermined
Iluminando Gerações (Illuminating Generations) Project: lectures for students of the 4th year of Elementary School in public schools, with an informative and preventive nature regarding the conscious and safe use of electric energy, use of natural resources (energy and water) and correct disposal of waste.	1, 2	4, 11, 12	1970 / Undetermined
+Clic Rural Program: improvement of the quality of electricity supply in the rural area, focusing on agricultural activities integrated with production processes sensitive to interruptions.	1, 2, 7, 8, 9	7, 11, 12	2015 / Undetermined
Corporate Waste Management Program: aims to implement and systematize the best waste management practices, so that all waste generated is treated or disposed of correctly, so as not to harm the environment.	7, 8, 9	8, 11, 12	2006 / Undetermined
PrevenCÃO (Animal Prevention): public awareness about the importance of caring for pets to prevent accidents with meter readers.	1,7, 8,	12	2015 / Undetermined
Florestas Urbanas (Urban Forest) Program: works with municipalities to plan the afforestation of public roads, contributing to the environmental improvement of cities and reducing interruptions in energy supply caused by a conflict between vegetation and electric systems	7, 8, 9	11, 15, 17	2008 / Undetermined
Florestas Ciliares (Riparian Forest) Program: aims to recover natural environments surrounding the reservoirs of plants and other areas of interest of the Company.	7, 8, 9	6, 15	2006 / Undetermined
Ichthyofauna Monitoring and Resettlement Program: its objective is to monitor and repopulate the Company's reservoirs and rivers where Copel's ventures exercise some influence.	7, 8, 9	6, 15	1993 / Undetermined
Experimental Station of Ichthyology Studies: study and reproduce species suitable for repopulation of rivers and reservoirs in Paraná.	7, 8, 9	6, 15	1992 / Undetermined
Control of invasive and / or exotic species: monitoring and control of invasive and / or exotic species of fauna and flora.	7, 8, 9	15	2000 / Undetermined

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND GOALS		DATE START / END
	GLOBAL COMPACT	SDG	
Recovery of degraded areas: monitoring and recovery of degraded areas.	7, 8, 9	15	1999 / Undetermined
Forest farms: for production of appropriate seedlings to be used in the Company's other programs.	7, 8, 9	15	1973 / Undetermined
Botanical Garden: with exotic ornamental plant species, for conservation and research of vegetal species collections and also sheltering of exotic ornamental plants.	7, 8, 9	15	2010 / Undetermined
Iguaçu Regional Museum: presents the social, cultural and environmental characteristics of populations that have occupied Iguaçu River banks. It maintains a collection from the programs of Archaeological Salvage and Cultural Memory and Scientific Utilization of Flora and Fauna in the implantation of the HPP Governador Ney Braga.	7, 8, 9	4, 11	200 / Undetermined
Internet sem Bullying (Internet without Bullying) Program - the project aims to raise awareness of children and young people in the 7th, 8th and 9th grades of elementary schools in Paraná, to the problem of cyberbullying, through awareness lectures. It seeks to obtain the commitment of students not to practice and report cases of bullying, as well as instruct teachers to detect cases and know what to do. It won SDG 2019 Global Compact Brasil Award in Large Company Category, Peace axis.	1, 2	4	Undetermined
Optical fiber recycling: Seeks a sustainable approach to the treatment of waste typical of telecommunications operations. Optical fiber scrap produced by Copel Telecom is fully destined to recycling, the main method for waste destination according to Law No. 12,305/10 – National Solid Waste Policy (PNRS). Byproducts are generated that are valorized and will be re-introduced in the production chain, fomenting the Circular Economy. This initiative was acknowledged as “Good Practice” in Sesi SDG 2018 Award.	7, 8, 9	9, 12, 13, 17	2016/Undetermined
Zero Carbon: Neutralization of greenhouse gas emissions by acquiring carbon credits in the modality REDD+ - Reduction of emissions from deforestation and forest degradation avoided and sustainable management of forests. Copel Telecom was Zero Carbon for the second consecutive year. This initiative received an “Honorable Mention” in Sesi SDG 2019 Award.	7, 8, 9	13, 15, 17	2018/ Undetermined

16.2 GRI Annexes

GRI 102-22

CORPORATE GOVERNANCE BODY	NUMBER OF MEMBERS PER GENDER	AMOUNT OF MEMBERS PER AGE GROUP	TERM OF OFFICE
Shareholders' Meeting	The number of members complies with Art. 9 th of Copel Bylaws and legislation in force	-	Not applicable
Appointment and Assessment Committee (CIA)	4 men (80%)	1 member between 30 and 50 years old (20%)	Mandato unificado de 2 anos, a contar da data de sua eleição, sendo permitidas, no máximo, 2 reconduções consecutivas
	1 woman (20%)		
	Total – 5 members	4 members over 50 years old (80%)	
Supervisory Board (CF)	9 men (90%)	5 members between 30 and 50 years old (50%)	Two-year term, with 2 consecutive re-conductions allowed
	1 woman (10%)		
	Total – 10 members	5 members over 50 years old (50%)	
Board of Directors (CAD)	6 men (67%)	4 members between 30 and 50 years old (44%)	Two-year term, with 3 consecutive re-conductions allowed
	3 women (33%)		
	7 independent members	5 members over 50 years old (56%)	
	Total – 9 members		
Statutory Audit Committee (CAE)	3 men (60%)	2 members between 30 and 50 years old (40%)	Two-year term, with 3 consecutive re-conductions allowed
	2 women (40%)		
	Total – 5 members	3 members over 50 years old (60%)	
Executive Board	6 men (86%)	3 members between 30 and 50 years old (86%)	
	1 woman (14%)		
	Total – 7 members	1 member over 50 years old (14%)	

Notes: 1. The Shareholders' Meeting is composed of shareholders only.

2. There is no participation of stakeholders in the Supervisory Board (CF), Statutory Audit Committee (CAE) and Executive Board.

3. Stakeholders participate in the Appointment and Assessment Committee (CIA) and the Board of Directors (CAD), defined by representatives.

4. Each body assignment and competencies associated with economic, social and environmental themes can be consulted in the Company's Bylaws and Internal Regulations, available at the Company's website.

GRI 201-2

Risks to Copel resulting from climate change

RISKS			ASSOCIATED IMPACTS	OPPORTUNITIES
Physical nature	Extreme weather events	Studies indicate that in the coming years increase in maximum temperatures will occur in the Paraná state north region, which will impact energy transmission operation and maintenance in this location, which can generate fines for non-supply of energy.	There are regulatory limits established in module 8 of Aneel Electricity Distribution Procedures (Prodist), which determine the execution of sanctions or fines for concessionaires for violations in energy distribution quality requirements.	There is the expectation that in the coming years, extreme weather events associated to temperature will grow, generating an increase in energy consumption – chiefly in Brazil’s southern region – and consequent increase in demand for the services rendered by Copel
	Tropical cyclones	Studies indicate that, in the coming years, there will be an increase of windstorms in Paraná state north and west regions, causing fall of transmission towers, impacting energy transmission operation and maintenance in these locations	Energy maintenance and transmission operation quality are assessed by Normative Resolution N 729, of June 28, 2016. Non-compliance with this normative may incur in sanction and fines for violations of technical requirements	
Regulatory nature	Charge for emissions	The Brazilian government is advancing the study of charge model per emission rate. There is a concern with how this will be done since business models for the Brazilian electrical system conduct to increase in investment in thermal plants in the coming years	Business expansion with thermal plants driven by fossil fuels may bring financial impacts	
	Carbon Cap and Trade market mechanisms	Though the Brazilian electrical system presents a low level of emissions, the fact of being one of the most organized and due to its capillarity, lets us believe that there is a reasonable possibility that it is one of the sectors chosen to introduce this type of mechanism	The introduction of carbon trading mechanisms in Brazil, of the Cap and Trade type may cause an increase in costs to Copel	
Other nature	Reputation	The risk analysis with regard to climate parameters shows that there is a possibility in the coming years of the consumer suffer lack of electricity in case the system is not modernized or adaptation actions are not taken	The frequent occurrence of electricity shortage will lead to consumer dissatisfaction. Observance of energy supply availability and quality indicators are conditioned to the fulfillment of the concession contract	

GRI 201-4

Tax incentives

2019

INCENTIVE	GOVERNMENT	COPEL HOL	COPEL GET	COPEL DIS	COPEL CTE	TOTAL PER INCENTIVE
Rouanet and Audiovisual Law	Federal	-	3,358,250.00	2,270,669.63	-	5,628,919.63
Childhood and Adolescence Fund	Federal	-	796,539.99	617,719.52	-	1,414,259.51
Sports Incentive	Federal	-	796,536.33	617,719.00	-	1,414,255.33
Pronas – National Disabled Person Attention Program	Federal	-	796,536.00	617,719.91	-	1,414,255.91
National Elderly Fund	Federal	-	796,536.99	617,719.52	-	1,414,256.51
PROFICE	State	-	-	R\$ 15,919,699.68	1,026,768.00	16,946,467.68
PROESPORTE	State	-	-	-	-	-
Municipal Culture Foundation	Municipal	-	-	-	-	-
Total per company		-	6,544,399.31	20,661,247.26	1,026,768.00	28,232,414.57

2018

INCENTIVE	GOVERNMENT	COPEL HOL	COPEL GET	COPEL DIS	COPEL CTE	TOTAL PER INCENTIVE
Rouanet and Audiovisual Law	Federal	-	3,081,434.80	1,424,224.00	314,100.00	4,819,758.80
Childhood and Adolescence Fund	Federal	-	770,365.03	356,086.75	78,531.91	1,204,983.69
Sports Incentive	Federal	-	770,300.00	356,000.00	78,500.00	1,204,800.00
Pronon – National Oncological Attention Support Program	Federal	-	770,000.00	352,000.00	78,000.00	1,200,000.00
Pronas – National Disabled Person Attention Program	Federal	-	629,403.71	336,721.93	-	966,125.64
National Elderly Fund	Federal	-	770,365.03	356,086.75	78,531.91	1,204,983.69
PROFICE	State	-	-	7,018,110.00	207,350.00	7,225,460.00
PROESPORTE	State	-	-	1,468,000.00	34,000.00	1,502,000.00
Municipal Culture Foundation	Municipal	-	11,575.50	-	86,321.00	97,896.50
Total per company		-	6,803,444.07	11,667,229.43	955,334.82	19,426,008.32

2017

INCENTIVE	GOVERNMENT	COPEL HOL	COPEL GET	COPEL DIS	COPEL CTE	TOTAL PER INCENTIVE
Rouanet and Audiovisual Law	Federal	-	2,720,378.00	683,022.00	297,600.00	3,701,000.00
Childhood and Adolescence Fund	Federal	-	680,094.00	170,777.00	74,400.00	925,271.00
Sports Incentive	Federal	-	679,900.00	170,700.00	74,400.00	925,000.00
Pronon – National Oncological Attention Support Program	Federal	-	680,094.00	170,776.00	74,400.00	925,270.00
National Elderly Fund	Federal	-	680,094.00	170,777.00	74,400.00	925,271.00
PROFICE	State	-	-	12,299,020.90	232,126.00	12,531,146.90
Municipal Culture Foundation	Municipal	-	71,428.00	-	280,793.75	352,221.75
Total per company		-	5,511,988.00	13,665,072.90	1,108,119.75	20,285,180.65

2016

INCENTIVE	GOVERNMENT	COPEL HOL	COPEL GET	COPEL DIS	COPEL CTE	TOTAL PER INCENTIVE
Rouanet and Audiovisual Law	Federal	155,000.00	1,693,000.00	-	330,000.00	2,178,000.00
Childhood and Adolescence Fund	Federal	-	464,000.00	-	80,000.00	544,000.00
Sports Incentive	Federal	-	464,128.25	-	80,200.00	544,328.25
Pronon – National Oncological Attention Support Program	Federal	-	464,000.00	-	80,000.00	544,000.00
National Elderly Fund	Federal	-	464,000.00	-	80,000.00	544,000.00
PROFICE	State	-	-	8,581,409.30	-	8,581,409.30
Municipal Culture Foundation	Municipal	-	34,518.00	-	217,682.00	252,200.00
Total per company		155,000.00	3,583,646.25	8,581,409.30	867,882.00	13,187,937.55

GRI 304- 1

Copel GeT

AREA NAME	SIZE (KM²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
Estação Ecológica Rio Dos Touros	12.34	Campo Largo (PR)	Energy generation and transmission	<p>Full Protection Conservation Units destined to keep ecosystems free from changes caused by human intervention where Copel GeT's undertakings are located.</p> <p>Only indirect use of its natural resources is allowed.</p> <p>The limitation of use of these areas varies according to the CU category:</p> <ul style="list-style-type: none"> ● Estação Ecológica (Ecological Station): aims at preserving nature and conduction of scientific research; ● Parque (Park): Public ownership and domain. Private areas included in their borders will be expropriated, as provided by law. ● Refúgio da Vida Silvestre (Wildlife Refuge): Intended to protect natural environments where life conditions or conditions for reproduction of species or local flora and resident or migrating fauna communities.
Parque Estadual De Vila Velha		Carambeí (PR)		
Parque Estadual Do Guartela		Castro (PR)		
Parque Estadual Do Pau-Oco		Guaratuba (PR)		
Parque Estadual Do Pico Marumbi		Jaguariaíva (PR)		
Parque Estadual Do Rio Guarani		Morretes (PR)		
Parque Estadual Serra Da Baitaca		Piraquara (PR)		
Parque Estadual Vale Do Codo		Ponta Grossa (PR)		
Parque Nacional De Guaricana		Quatro Barras (PR)		
Parque Nacional Dos Campos Gerais		Reserva do Iguaçu (PR)		
Refúgio Da Vida Silvestre Do Rio Tibagi		São José dos Pinhais (PR)		
Refúgio De Vida Silvestre Mono Castro		Tibagi (PR)		
	Três Barras do Paraná (PR)			

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
Área de Proteção Ambiental Corumbatai, Botucatu e Tejupa Perímetro Corumbatai	70.05	Almirante Tamandaré (PR) Amparo (SP)	Energy generation and transmission	Sustainable use Conservation Units (CUs) where Copel GeT undertakings are located.
Área de Proteção Ambiental de Campinas		Analândia (SP)		<p>Environmental exploration is allowed in these Conservation Units, however in a way that will ensure environmental resources and ecological processes continuity, keeping biodiversity and other ecological attributes in a socially fair and economically feasible way.</p> <p>The limitation of use of these areas varies according to the CU category:</p> <ul style="list-style-type: none"> ● Área de Proteção Ambiental (Environmental Protection Area): Usually very long areas with some level of human occupation, with abiotic, biotic, esthetic or cultural attributes particularly important to life quality and well-being of human populations, whose basic objectives are to protect biological diversity, discipline the occupation process and ensure the sustainability of the use of natural resources. ● Reserva Particular Do Patrimônio Natural (Private Reserve of the Natural Heritage): Private area recorded with continuity, intended to conserve biological diversity.
Área de Proteção Ambiental Do Iguacu		Antonina (PR)		
Área de Proteção Ambiental Do Iraí		Araucária (PR)		
Área de Proteção Ambiental Do Passauna		Atibaia (SP)		
Área de Proteção Ambiental Do Pequeno		Balsa Nova (PR)		
Área de Proteção Ambiental do Rio Paraíba do Sul		Bragança Paulista (SP)		
Área de Proteção Ambiental Do Rio Verde		Campina Grande do Sul (PR)		
Área de Proteção Ambiental Estadual Da Escarpa Devoniana		Campinas (SP)		
Área de Proteção Ambiental Estadual Da Serra Da Esperanca		Campo Largo (PR)		
Área de Proteção Ambiental Estadual De Guaratuba		Campo Magro (PR)		
Área de Proteção Ambiental Estadual Do Piraquara		Carambeí (PR)		
Área de Proteção Ambiental Piracicaba Juqueri Mirim Área 1		Castro (PR)		
Área de Proteção Ambiental Piracicaba Juqueri Mirim Área 2		Colombo (PR)		
Área de Proteção Ambiental Sistema Cantareira		Corumbataí (SP)		
Reserva Particular Do Patrimônio Natural Morro Da Mina		Curitiba (PR)		
Reserva Particular Do Patrimônio Natural Perna Do Pirata		Guaratuba (PR)		
		Igaratá (SP)		
		Itirapina (SP)		
		Jaguariaíva (PR)		
		Jaguariúna (SP)		
		Morretes (PR)		
		Morungaba (SP)		
		Palmeira (PR)		
		Pedreira (SP)		
		Pinhais (PR)		
		Piracaia (SP)		
		Piraquara (PR)		
		Ponta Grossa (PR)		
		Rio Claro (SP)		
		São Carlos (SP)		
		São José dos Campos (SP)		
		São José dos Pinhais (PR)		
		Tibagi (PR)		
		Tijucas do Sul (PR)		
		União da Vitória (PR)		

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
Estação Ecológica De Assis	124.54	Antonina (PR)	Energy generation and transmission	<p>Full Protection Conservation Units (CUs) located close (up to 3 km) Copel GeT undertakings.</p> <p>These Conservation Units are destined to keep ecosystems free from changes caused by human intervention, and only indirect use of its natural resources is allowed.</p> <p>The limitation of use of these areas varies according to the CU category:</p> <ul style="list-style-type: none"> ● Estação Ecológica (Ecological Station): aims at preserving nature and conduction of scientific research; ● Parque Nacional/Estadual/Municipal (National/State/Municipal Park): Public ownership and domain, private areas included in their borders will be expropriated, as provided by law. ● Refúgio de Vida Silvestre (Wildlife Refuge): Intended to protect natural environments where life conditions or conditions for reproduction of species or local flora and resident or migrating fauna communities.
Parque Estadual Do Penhasco Verde		Assis (SP)		
Parque Estadual Pico Paraná		Campina Grande do Sul (PR)		
Parque Nacional De Saint-Hilaire/Lange		Céu Azul (PR)		
Parque Nacional Do Iguaçu		Paranaguá (PR)		
Parque Nacional Dos Campos Gerais		Ponta Grossa (PR)		
Parque Natural Municipal Augusto Ruschi		Santa Tereza do Oeste (PR)		
Refúgio Da Vida Silvestre Do Rio Tibagi		São Jerônimo da Serra (PR) São José dos Campos (SP)		

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
Área de Proteção Ambiental do Iguacu	160.54	Almirante Tamandaré (PR)	Energy generation and transmission	Sustainable use Conservation Units (Cus) located close (up to 3 km) to Copel GeT undertakings.
Área de Proteção Ambiental do Irai		Antonina (PR)		
Área de Proteção Ambiental do Passauna		Araucária (PR)		Environmental exploration is allowed in these Conservation Units, however in a way that will ensure renewable environmental resources and ecological processes continuity, keeping biodiversity and other ecological attributes in a socially fair and economically feasible way.
Área de Proteção Ambiental do Pequeno		Artur Nogueira (SP)		
Área de Proteção Ambiental do Rio Verde		Assis (SP)		
Área de Proteção Ambiental Estadual da Escarpa Devoniana		Campina Grande do Sul (PR)		
Área de Proteção Ambiental Estadual da Serra da Esperança		Campo Largo (PR)		
Área de Proteção Ambiental Estadual da Serra da Esperança		Colombo (PR)		
Área de Proteção Ambiental Estadual de Guaratuba		Cosmópolis (SP)		
Área de Proteção Ambiental Estadual do Piraquara		Cruz Machado (PR)		
Área de Proteção Ambiental Estadual Guaraquecaba		Curitiba (PR)		
Área de Relevante Interesse Ecológico Matão de Cosmópolis		Londrina (PR)		
Floresta Estadual de Assis		Medianeira (PR)		<p>The limitation of use of these areas varies according to the CU category:</p> <ul style="list-style-type: none"> ● Área de Proteção Ambiental (Environmental Protection Area): Usually very long areas with some level of human occupation, with abiotic, biotic, esthetic or cultural attributes particularly important to life quality and well-being of human populations, whose basic objectives are to protect biological diversity, discipline the occupation process and ensure the sustainability of the use of natural resources. ● Área de Relevante Interesse Ecológico (Area of Relevant Ecological Interest): Usually small area with little or no human occupation, with extraordinary natural characteristics or that houses rare specimen of the regional biota; and is intended to maintain regionally or locally important natural ecosystems, and regulate the permitted use of these areas, so as to make it compatible with nature conservation objectives. ● Floresta Nacional/Estadual (National/ State Forest): Area with forest coverage, predominantly of native species, whose basic objective it the multiple sustainable use
Reserva Particular do Patrimônio Natural Granja Perobal		Morretes (PR)		
Reserva Particular do Patrimônio Natural Mata Do Barao		Paranaguá (PR)		
Reserva Particular do Patrimônio Natural Narciso Luiz Vanini I		Piraquara (PR)		
		Ponta Grossa (PR)		
		São Jorge D'Oeste		
		São José dos Pinhais (PR)		
		União da Vitória (PR)		

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
				of forest resources and scientific research, with emphasis on methods for sustainable exploration of native forests.
				<ul style="list-style-type: none"> Reserva Particular Do Patrimônio Natural (Private Reserve of the Natural Heritage): Private area recorded with continuity, intended to conserve biological diversity.
MA063	801.55	Almirante Tamandaré (PR)	Energy generation and transmission	Areas classified as “Extremely High” with regard to their biological importance for biodiversity conservation in their area, where Copel GeT undertakings are located or cross.
MA062		Antonina (PR)		
MA065		Araucária (PR)		
MA068		Balsa Nova (PR)		
AMZ-816		Bituruna (PR)		
MA051		Bocaiúva do Sul (PR)		
		Campina Grande do Sul (PR)		
		Campo Largo (PR)		
		Campo Magro (PR)		
		Castro (PR)		
		Colíder (MT)		
		Colombo (PR)		
		Cruz Machado (PR)		
		Cruzeiro do Iguaçu (PR)		
		Curitiba (PR)		
		Itaúba (MT)		
		Morretes (PR)		
		Nova Canaã do Norte (MT)		
		Nova Santa Helena (MT)		
		Palmeira (PR)		
	Pinhais (PR)			
	Piraquara (PR)			
	Porto União (SC)			
	Porto Vitória (PR)			
	Quedas do Iguaçu (PR)			
	Rio Bonito do Iguaçu (PR)			
	Rio Branco do Sul (PR)			
	São João (PR)			
	São Jorge D’Oeste (PR)			
	São José dos Pinhais (PR)			
	Saudade do Iguaçu (PR)			
	Sulina (PR)			
	Três Barras do Paraná (PR)			
	União da Vitória (PR)			

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
MA064	459.45	Apucarana (PR)	Energy generation and transmission	Areas classified as “Very High” with regard to their biological importance for biodiversity conservation in their area, where Copel GeT undertakings are located or cross.
MA106		Arapongas (PR)		
292		Arapoti (PR)		
298		Araraquara (SP)		
MA067		Assaí (PR)		
MA058		Bituruna (PR)		
AMZ-529		Boa Esperança do Sul (SP)		
		Boa Vista da Aparecida (PR)		
		Cambira (PR)		
		Candói (PR)		
	Capitão Leônidas Marques (PR)			
	Cascavel (PR)			
	Catanduvas (PR)			
	Céu Azul (PR)			
	Colíder (MT)			
	Coronel Domingos Soares (PR)			
Foz do Jordão (PR)				
Ibaté (SP)				
Itaúba (MT)				
Jaguariaíva (PR)				
Lindoeste (PR)				
Londrina (PR)				
Mandaguari (PR)				
Mangueirinha (PR)				
Matelândia (PR)				
Nova Prata do Iguaçu (PR)				
Pinhão (PR)				
Reserva do Iguaçu (PR)				
Ribeirão Bonito (SP)				
Santa Lúcia (PR)				
Santa Tereza do Oeste (PR)				
São Jerônimo da Serra (PR)				
Tibagi (PR)				
Três Barras do Paraná (PR)				
Ventania (PR)				
Virmond (PR)				

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
MA092	32.11	Arapoti (PR)	Energy generation and transmission	These are areas classified as “High” in relation to their biological importance for the conservation of biodiversity in which Copel GeT undertakings are located or through which they pass.
MA099		Castro (PR)		
MA072		Ibaiti (PR)		
MA090		Ortigueira (PR)		
		Sapopema (PR)		
	Telêmaco Borba (PR)			

*It is worth mentioning that for this analysis Copel GeT’s own real estate properties considered as Protected Areas (PPAs) or destined almost exclusively to conservation were included, liked those located in Serra do Mar, which totalize 10,202,72 ha.

Copel DIS

AREA NAME	SIZE (KM ²)	GEOGRAPHICAL LOCATION	TYPE OF OPERATION	VALUE TO BIODIVERSITY
	0.93	Paraná state	High voltage transmission lines	Includes national and state parks, wildlife refuge, biological reserve and ecological station for the protection of terrestrial ecosystems.
Full protection conservation unit	5.00	Paraná state	Medium voltage distribution networks	Includes national and state parks, wildlife refuge, biological reserve and ecological station for the protection of terrestrial ecosystems.
Sítios RAMSAR - Área de Proteção Ambiental Estadual de Guaratuba	1.50	Guaratuba, Mandirituba, Tijucas do Sul, Matinhos, Pontal do Paraná, São José dos Pinhais, Morretes - PR	Vossoroca substation, Chaminé substation, Salto do Meio substation	Sítio Ramsar Guaratuba presents high biodiversity value, considering its high diversity of living beings and rich landscape comprising mountains, altitude fields, rivers, waterfalls, plains, mangrove forests. The Environmental Protection Area (APA) is the area of the natural distribution of bicudinho-do-brejo (<i>Formicivora acutirostris</i>), endangered species.
RAMSAR ESEC Guaraqueçaba	0.01	Guaraqueçaba - PR	Medium voltage distribution networks (RDs)	Guaraqueçaba ESEC is a full protection conservation unit, of public domain, formed by mangrove forests, sandbanks and coastal islands. It is an area of occurrence of papagaio-da-cara-roxa (parrot - <i>Amazona brasiliensis</i>).

GRI 304-3

NAME OF AREA WITH HABITAT PROTECTED OR RESTORED	SIZE (KM ²)	GEOGRAPHICAL LOCATION	NOTE
Forest Compensation Projects	175.28	Several in Paraná and São Paulo states	<p>In total, the actions of forest reposition developed by Copel GeT covers an area of 175.28 ha:</p> <ul style="list-style-type: none"> ● 86.57 ha were contemplated with compensatory plantation actions; ● 22.33 ha were contemplated with exotic species eradication actions; ● 66.38 ha was contemplated with the institution of environmental servitude. <p>It is worth mentioning that among these actions, some were already concluded for representing fully established areas, being object only of monitoring actions, while others are still object of maintenance actions and will be monitored until their full establishment.</p>
Paraná PPAs	2,174.72	Several in Paraná and São Paulo states	<p>In compliance with applicable legislation, Copel GeT maintains the respective Permanent Preservation Areas (PPAs) around the artificial reservoirs of its Hydroelectric Power Plants (HPPs).</p> <p>In addition to legal prerogative (Law No. 12,651/2012 and CONAMA Resolution No. 302/2002), in the technical aspect, the preservation of these areas also assists in the improvement of water quality and reduction of displacement of sediments to reservoirs interior, contributing to the conservation of their service life.</p>
Mato Grosso PPAs	4,592.00	Cláudia, Colíder, Itaúba and Nova Canaã (MT)	Colíder Plant Permanent Preservation Area.

NAME OF AREA WITH HABITAT PROTECTED OR RESTORED	SIZE (KM ²)	GEOGRAPHICAL LOCATION	NOTE
Serra do Mar Areas - PARANÁ Guaricana	6,003.83	Guaratuba (PR)	<p>Areas located at Serra do Mar have several areas destined environmental conservation of properties covered by Guaricana National Park.</p> <p>The areas are monitored by Copel GeT through Contract No. 4600014901/2018, all of them located in Guaratuba municipality (PR).</p>
Serra do Mar Areas – Chaminé HPP	3,513.36	Tijucas do sul (PR)	<p>Real estates acquired by Copel GeT, but are currently destined to environmental conservation alone.</p> <p>The areas are monitored by Copel GeT through Contract No. 4600014901/2018. Real estates near Chaminé HPP, all of them in Tijucas do Sul municipality (PR), are Araçatuba, Porto Bonito and São João.</p>
Serra do Mar Areas – Guaricana HPP	615.48	Several in Paraná state	<p>Real estates acquired by Copel GeT, but they are not and won't be used for operational purposes (they are considered unserviceable for this purpose), and are currently destined to environmental conservation alone.</p> <p>Part of them is also inserted in Guaricana PARANA, and are located in São José dos Pinhais, Morretes and Guaratuba municipalites, all in Paraná state.</p> <p>The areas are also monitored by Copel GeT through Contract No. 4600014901/2018.</p>
Serra do Mar Areas - Several	70.05	Sã José dos Pinhais (PR)	<p>Copel GeT real estates that today are destined to environmental conservation, namely, Osso Danta and Colônia Santos Andrade.</p> <p>Both areas are also monitored by Copel through Contract No. 4600014901/2018.</p>

NAME OF AREA WITH HABITAT PROTECTED OR RESTORED	SIZE (KM ²)	GEOGRAPHICAL LOCATION	NOTE
Estação Ecológica Tia Chica	423.12	Pinhão (PR)	<p>With 423.12 hectares, Estação Ecológica Tia Chica will be classified as Full Protection, aiming at nature preservation and scientific research.</p> <p>The area declared of Public Utility for purposes of expropriation was not yet decreed as Conservation Unit, and the process is in progress. It will be an environmental compensation for HPP Derivação do Rio Jordão.</p> <p>It is located in the Mixed Ombrophylous Forest or Araucaria Forest, in the backwaters of the reservoir of the Derivação do Rio Jordão HPP, in the municipality of Pinhão (PR).</p>
Parque Estadual do Rio Guarani	2,322.00	Três Barras do Paraná (PR)	<p>With 2,322.00 hectares, Rio Guarani State Park is classified as Full Protection and its objective is the preservation of natural ecosystems with ecological relevance and landscape beauty. It began to be studied by Copel in 1997, due to the implantation of the Governador José Richa HPP.</p> <p>On July 19, 2000, the creation of the Parque Estadual do Rio Guarani was decreed through State Decree 2322/2000, for environmental compensation for the Governador José Richa HPP.</p> <p>It is located in the Semi-Deciduous Seasonal Forest and Mixed Ombrophylous Forest or Araucaria Forest, on the right margin of the Governador José Richa HPP reservoir (Salto Caxias), in the municipality of Três Barras do Paraná (PR).</p>



Governador Bento Munhoz Power Plant Botanical Garden

NAME OF AREA WITH HABITAT PROTECTED OR RESTORED	SIZE (KM ²)	GEOGRAPHICAL LOCATION	NOTE
Estação Ecológica Rio dos Touros	1,231.06	Reserva do Iguaçu (PR)	<p>With 1,231.06 hectares, Estação Ecológica do Rio dos Touros is classified as Integral Protection and its objective is the preservation of nature and the conducting of scientific research.</p> <p>On June 5, 2001 the creation of this Ecological Station was decreed, to compensate the environment surrounding the Governador Ney Braga HPP.</p> <p>It is located in the Mixed Ombrophylous Forest or Araucaria Forest, on the right margin of the reservoir of the Governador Ney Braga HPP (Salto Segredo), Iguaçu Reserve municipality, in Paraná. Its creation is stated in State Decree 4,229/2001.</p>

GRI 403-9

Occupational Health and Safety indicators 2019 | Copel GeT

	OWN EMPLOYEES	OUTSOURCED EMPLOYEES
Number of deaths	0	1
Death rate	0	0.29
Number of work-related injuries with significant consequences	0	0
Rate of work-related injuries with significant consequences	0	0
Number of recordable work-related injuries	3	16
Rate of recordable work-related injuries	1.24	4.59

Occupational Health and Safety indicators 2019 – Copel DIS

	OWN EMPLOYEES	OUTSOURCED EMPLOYEES
Number of deaths	0	0
Death rate	0	0
Number of work-related injuries with significant consequences	0	1
Rate of work-related injuries with significant consequences	0	0.11
Number of recordable work-related injuries	38	90
Rate of recordable work-related injuries	4.04	7.19

Occupational Health and Safety indicators 2019 - Copel CTE

	OWN EMPLOYEES	OUTSOURCED EMPLOYEES
Number of deaths	0	0
Death rate	0	0
Number of work-related injuries with significant consequences	0	0
Rate of work-related injuries with significant consequences	0	0
Number of recordable work-related injuries	1	2
Rate of recordable work-related injuries	1.28	2.81

GRI 405-1

Diversity of own employees per functional category

	OPERATIONAL	TECHNICAL LEVEL PROFESSIONAL	SECONDARY LEVEL PROFESSIONAL	HIGHER EDUCATION PROFESSIONAL
Total	57	1,747	3,997	1,294
% per functional category	1%	25%	56%	18%
Men	57	1,631	2,886	950
Women	0	116	1,111	344
% of men	100%	93%	72%	73%
% of women	-	7%	28%	27%
Up to 30 years	0	85	330	30
Between 30 and 50 years old	12	1304	2673	961
Over 50 years old	45	358	994	303
% up to 30 years old	-	5%	8%	2%
% between 30 and 50 years old	21%	75%	67%	74%
% over 50 years old	79%	20%	25%	23%
Black and mixed-race	10	264	555	100
% black and mixed-race	18%	15%	14%	8%
Disabled persons (PwDs)	-	9	150	12
% PwDs	-	1%	4%	1%

Total of members per governance body

GOVERNANCE BODY	EXECUTIVE BOARD	BOARD OF DIRECTORS	SUPERVISORY BOARD	STATUTORY AUDIT COMMITTEE	APPOINTMENT AND ASSESSMENT COMMITTEE
Total	7	9	10	5	5
Men	6	6	9	3	4
Women	1	3	1	2	1
Up to 30 years old	0	0	0	0	0
Between 30 and 50 years old	6	4	5	2	1
Over 50 years old	1	5	5	3	4

Percent of governance bodies' members in the organization (against total members of each body)

GOVERNANCE BODY	EXECUTIVE BOARD	BOARD OF DIRECTORS	SUPERVISORY BOARD	STATUTORY AUDIT COMMITTEE	APPOINTMENT AND ASSESSMENT COMMITTEE
Men	85.71	66.67	90.00	60.00	80.00
Women	14.29	33.33	10.00	40.00	20.00
Up to 30 years old	0.00	0.00	0.00	0.00	0.00
Between 30 and 50 years old	85.71	44.44	50.00	40.00	20.00
Over 50 years old	14.29	55.56	50.00	60.00	80.00

Note: There are no members of corporate governance bodies below 30 years old, or belonging to under-represented groups.

GRI 405-2

Proportion of base salary and men and women remuneration

FUNCTIONAL CATEGORY ¹	BASE SALARY PER GENDER (R\$) ²		GENDER PAY GAP	REMUNERATION PER GENDER (R\$)		MEN/WOMEN REMUNERATION RATIO
	MEN	WOMEN		MEN	WOMEN	
Secondary level professional	1,888.42	1,888.42	1.00	3,254.58	2,407.34	0.74
Technical level professional	3,430.03	3,464.27	1.01	5,994.58	5,413.94	0.90
Higher education professional	5,367.00	5,313.87	0.99	6,226.64	6,229.30	1.00

Note: 1. The Operational category is not included because it only includes male employees.

2. The lowest salaries paid in December 2019 by career/gender were considered as the "Base salary". "Remuneration" considered the average remuneration paid to employees with the lowest salaries in December of the same year, by career, with the addition of 1/12 of the 2019 profit sharing amount.



GRI EU15

WORKERS ON LINES AND CONNECTIONS	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	139	0	0	0	139
Percentage	9.10	0	0	0	8.99
Eligible for retirement in up to ten years	352	1	0	0	353
Percentage	23.04	5.56	0	0	22.83
Total of employees	1,528	18	0	0	1,546

ELECTRIC PLANTS' OPERATORS	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	12	0	0	0	12
Percentage	12.12	0	0	0	10.81
Eligible for retirement in up to ten years	30	0	0	0	30
Percentage	30.30	0	0	0	27.03
Total of employees	99	0	12	0	111

ENGINEERS	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	53	0	0	0	53
Percentage	8.94	0	0	0	8.79
Eligible for retirement in up to ten years	109	0	0	1	110
Percentage	18.38	0	0	50	18.24
Total of employees	593	1	7	2	603

MAINTENANCE MECHANICS	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	64	0	1	0	65
Percentage	10.29	0	6.67	0	10.14
Eligible for retirement in up to ten years	135	0	3	0	138
Percentage	21.70	0	20	0	21.53
Total of employees	622	0	15	4	641

OTHER	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	640	0	1	3	644
Percentage	15.34	0	6.25	60	15.36
Eligible for retirement in up to ten years	1,135	0	2	3	1,140
Percentage	27.21	0	12.5	60	27.18
Total of employees	4,171	2	16	5	4,194

GENERAL SUMMARY	SOUTH	SOUTHEAST	MIDWEST	NORTHEAST	TOTAL
Eligible for retirement in up to five years	908	0	2	3	913
Percentage	12.95	0	4	27.27	12.87
Eligible for retirement in up to ten years	1761	1	5	4	1771
Percentage	25.11	4.76	10	36.36	24.96
Total of employees	7,013	21	50	11	7,095



Substation
Credit: Marcelo Rothen