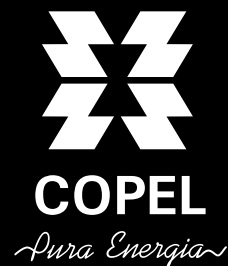


ANNUAL AND
SUSTAINABILITY REPORT
2017





COPEL IN NUMBERS 2017

102-7

NUMBER OF EMPLOYEES

8,245

PRODUCTS AND SERVICES:
Generation, Transmission,
Distribution and
Commercialization of Electric
Power, and Telecommunications

POWER TRANSMISSION:

150 km

lines delivered
(TL Assis-Londrina
delivered in 2017)

NUMBER OF OPERATIONS:

28 own power plants
and **3** participations,

7,025 km
transmission lines and

45 substations,

196,951.2 km
distribution lines and

369 substations

NET OPERATIONAL REVENUES:

BRL 14,024.6 million

POWER DISTRIBUTION:
Equivalent Interruption
Frequency (FEC): 6.79 and
Equivalent Interruption Duration
(DEC): 10.41

NET POWER GENERATION:

20,891 GWh

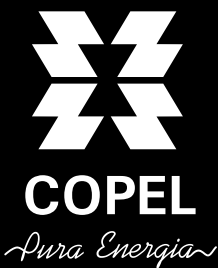
TELECOMMUNICATIONS:

32,422 km
optical fiber

RECOGNITIONS

Awards / Certifications	Certificating Entity
Recognition as the most transparent state owned company in Brazil	International Transparency (TRAC Brazil)
Abradee Award – Social Responsibility	Brazilian Electric Power Distributor Association
Abradee Customer Assessment Award – Best Distributor in Brazil	Brazilian Electric Power Distributor Association
Award – Best Distributor (gold category)	Comisión de Integración Energética Regional – CIER Latin America
Climate Seal Gold Paraná	Government of the State of Paraná
Award – 150 best company to work	Você S/A
Citizen Company Certificate – information presented in the social report	Regional Accounting Board of the State of Rio de Janeiro, FIRJAN System, FECOMÉRCIO
Award 500 Largest in the South – Best company in Paraná	Amanhã Magazine
Award 500 Largest in the South – Best net revenues power sector	Amanhã Magazine

Awards / Certifications	Certificating Entity
SESI SDG Seal – Recognition of the practices in favor of the Sustainable Development Goals	SESI Paraná
Recognition for the good practices related to SDG	United Nations – UN
IASC Brazil Award – Utility companies above 400 thousand	Aneel
IASC South Award – Utility companies above 400 thousand	Aneel
Award – Best companies to work (9th place)	Great Place to Work (GPTW)
Award – Best fixed line broadband operator in Paraná	Anatel
Recognition for fastest Internet in Brazil	Portal Minha Conexão
Copel Telecom among the most profitable in the sector	Telecom Yearbook
Innovation Projects	TeleSíntese Yearbook – Momento Editorial



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

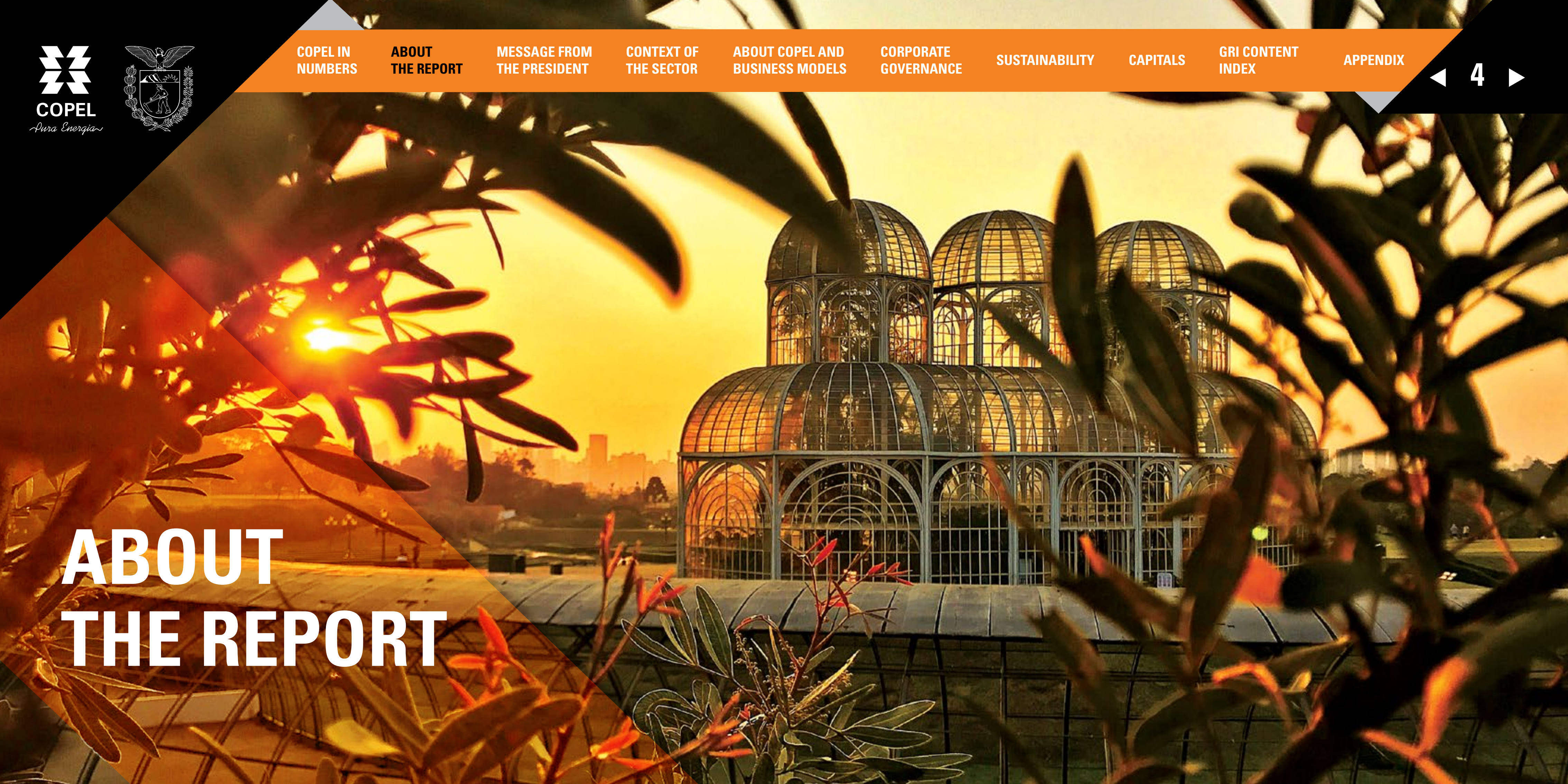
SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

ABOUT THE REPORT



Companhia Paranaense de Energia – Copel presents its Sustainability Report 2017, demonstrating performance associated to generation of value for its stakeholders in social, economic and environmental aspects. Published annually, the edition consolidates the information relevant for the fiscal period started in January 2017 and ended in December the same year. [102-1](#), [102-50](#), [102-52](#)

The accounting data presented in this report refer to the companies, where Copel hold corporate shares. The non-accounting data comprehend mainly Copel and its wholly-owned subsidiaries Copel Geração e Transmissão S.A. (GeT), Copel Distribuição S.A. (DIS), Copel Telecomunicações S.A. (CTE) and Copel Comercialização S.A., indicating inclusion or exclusion of any operation, when applicable. In 2017, the activities of Copel Renováveis S.A. were incorporated to Copel Geração e Transmissão S.A. Within the participations, Copel sold its shares in Sanepar, receiving BRL 489.1 million. [102-10](#), [102-45](#), [102-49](#)

The Sustainability Report 2017 meets the following assumptions:

- principles of Global Reporting Initiative (GRI). This report has been prepared according to

the GRI Standards methodology, report option “Essential”, including the set of indicators from the electric power sector supplement available in version G4. To assure the reliability of the content informed in the report, independent assurance of the material disclosures and the report principles was done by Deloitte Touche Tohmatsu Auditores Independentes. [102-54](#), [102-56](#)

- structure and guidelines of integrated report recommended by the International Integrated Reporting Council (IIRC), incorporating the representation of the business model of its wholly-owned subsidiaries and the report structure of its performance by means of capitals (Human, Intellectual, Social and Relationship, Natural, Infrastructure and Financial).
- normative guidelines defined by the International Financial Reporting Standards – IFRS, considered in the information coming from the Financial Statements and the Progress Communication in relation to the commitments undertaken with the Global Compact.
- provisions in Law No. 13.303 (Law of the State Companies) dated 06/30/2016¹, which sets forth annual disclosure of integrated or sustainability report in article 8, item IX.

The report is organized in two parts. The first presents an overview of Copel’s business, bringing together the main social and environmental impacts and the strategic risks of its operations. The second part describes the context and the performance of the Company’s capitals with a detailed approach to the relevant aspects of the business and its ability to create value.

Doubts, suggestions or clarifications about the content of Sustainability Report 2017 can be submitted to [Talk to Us](#) in the Copel’s site. [102-53](#)

See other Copel’s reports:

[ADMINISTRATION’S REPORT
AND FINANCIAL STATEMENTS](#)

[20F REPORT](#)

[ANEEL COPEL DIS AND COPEL GET
SOCIAL-ENVIRONMENTAL REPORTS](#)

[COPEL MATERIALITY REPORT](#)

¹ In Law No. 13.303/2016, art. 91, the deadline of June 30, 2018 is set forth for public companies and private-public corporations constituted before the enforcement of the Law to provide the necessary adaptations to comply with these provisions.

RELEVANT AND STRATEGIC TOPICS ¹⁰²⁻⁴⁶

In 2017, Copel reviewed materiality to define the social, environmental and economic topics to be reported. For this purpose, it considered the following methodology:

Identification of the subjects considered the most relevant for the electric sector by sources recognized on the market, such as **RobecoSAM** (conduct evaluation of companies for participation in the Dow Jones Sustainability Index (DJSI), **SASB** (defines the sustainability report standards for companies traded on the American stock exchange) and **RepRisk** (tool for media analysis used by RobecoSAM along the process of company evaluation for DJSI).

In addition to the survey carried out at the mentioned sources, benchmarking was prepared with ten companies from the sector, highlighting the material topics presented in the respective sustainability reports.

The identification of the main subjects approached by the wholly-owned subsidiaries (SIs) of the Company (Distribution, Generation and Transmission, Commercialization and Telecommunications). This process contemplated the survey of information at the following sources:

- Copel's Strategic Risks Plan (2018-2027);
- Interview with the high management of Copel and its wholly-owned subsidiaries and managers of the main processes in the value chain; and
- Channels for communication with stakeholders established by Copel and its wholly-owned subsidiaries, including: results from the ombudsman and employees' opinion survey². ¹⁰²⁻⁴³

The last activity of the topic prioritization stage contemplated the preparation of a matrix with correlation of the results obtained for Copel and its wholly-owned subsidiaries, and relevant topics for the sector (presented in the previous steps). The result from the materiality published in Sustainability Report 2016 was also inserted as criterion.

The process of validation of the material topics inserted in the Sustainability Report was carried out in two occasions:

MEETING OF THE MANAGEMENT – REDIR

The results from materiality analysis were submitted to approval by Copel's Executive

Management in a Meeting of the Management – Redir held on 02/06/2018. At that occasion, the methodology used for preparation of the materiality and the prioritized topics were presented. Finally, the prioritized topics were approved without remarks.

MEETING OF THE BOARD OF DIRECTORS – CAD

After validation of the material topics at Redir, the result was submitted to assessment by the Board of Directors – CAD in its ordinary meeting held on 02/21/2018. The prioritized topics in the previous stages were kept, and it was recommended to include the Diversity topic associated to the Human Capital.

Compared to the materiality presented in Copel's Sustainability Report 2016, the topics risk and crisis management, regulatory affairs management, access to capital and strategic planning and new assets were not considered material for not being related to general disclosures reported by the Company. For supply management, although not considered material topic, the disclosures reported for social and environmental assessment of suppliers and definition of the supply chain were kept.

²Copel did not adopt a specific process for inquiry to the stakeholders for preparation of materiality, scheduled to start again in 2018.

MATRIX OF MATERIAL TOPICS AND IMPACT LIMITS 102-47, 103-1

Copel's material topics	GRI material topics	In limits		Out limits				
		Employees	Copel (operations)	Government	Regulating Bodies	Suppliers	Customers	Communities
Climate changes	201_ Economic Performance / 305_Emissions	●	●	●	●	●	●	●
Governance, ethics, compliance	205_Anticorruption / 307_Environmental compliance / 419_Social-Environmental compliance	●	●	●	●	●	●	●
Human capital management	401_Employment / 404 Training and Education	●	●	●	●	●	●	●
Diversity	405_Diversity	●	●	●	●	●	●	●
Innovation Culture	Sector GRI	●	●	●	●	●	●	●
Economic Financial Performance	201_Economic performance	●	●	●	●	●	●	●
Relationship with Customers and Consumers	102_General Disclosures	●	●	●	●	●	●	●
Operational excellence and eco-efficiency	Sector GRI	●	●	●	●	●	●	●
	302_Power / 303_Water	●	●	●	●	●	●	●
Relationship with communities	413_Local communities / 414_Social assessment of suppliers	●	●	●	●	●	●	●
Impacts on eco-systems	304_Biodiversity / 308_Environmental assessment of suppliers	●	●	●	●	●	●	●
Health and Safety at Work	403_Health and Safety at Work	●	●	●	●	●	●	●
Human rights	411_Rights of Indigenous Tribes and traditional communities / 412_Assessment in human rights	●	●	●	●	●	●	●

● Direct impact ● Indirect impact ● No impact



MESSAGE FROM ADMINISTRATION

102-14

2017 imposed the need to keep resilient posture before the challenges of an economy that showed signs of a resumption of growth to the Brazilian companies. In addition to the macroeconomic scenario, which remained impacting several sectors in the country, in the specific case of the power market, other factors made the reestablishment of positive results difficult, highlighting the legalization of the sector and the difficulty in obtaining new financing in a period, when hydrology was also a problem for the operations and the generation of revenues.

However, for short-term difficulties, we succeeded to compensate the performance of Copel's strategic planning for the next ten years, a basis for a sustainable operation, which considers the decarbonization movement of the global economies, the permanence of technological innovation and the increasingly higher requirement of the citizens regarding the quality and the effectiveness of the public services.

In 2017, before the imposed challenges, we established a positive agenda based on financial discipline associated with the fulfillment of the commitments assumed with our stakeholders and looking towards the preparation of the Company for a future scenario. In this context, we progressed in the creation of the Strategic Management Cabi-

We progressed in the creation of the Strategic Management Cabinet (GGE), whose objective was to speed up the implementation of strategic projects for Copel.

net (GGE), whose objective was to speed up the implementation of strategic projects for Copel, with emphasis on the cost reduction in our operations, which is aligned with the guidelines set by Aneel. **103-3**

When it comes to new business, 2017 marked the formalization of the intention for partnership between Copel Holding (HOL) and Shell do Brasil for the development of a strategic plan for natural gas for the state of Paraná. The agreement seeks solutions for the supply of natural gas at competitive prices, the expansion of this market and better service to residential, commercial and industrial sectors – in this case, providing the replacement of more polluting fuels, such as diesel, in the production processes. The initiative is also in accordance with the Company's strategy for diversification of its generation park, with a portfolio of power plants that prioritize renewable sources without losing the robustness and the stability re-

quired by the national electricity sector, and which require the presence of non-interrupted sources in the energetic matrix to assure its sustainable development.

When it comes to our structure of wholly-owned subsidiaries, 2017 was marked for the incorporation of the Renewables business to Copel Geração e Transmissão. This initiative allowed us to reduce costs immediately and to gain objectivity and effectiveness in the negotiations with suppliers and partners associated with the implementation of farms in Cutia Wind Complex, in Rio Grande do Norte.

In a period focused on the delivery of works in progress and selective participation of the company in tenders with good commercial conditions within the captive market, Copel Comercialização redefined its operation strategy aiming at the potential growth of the Company in the free market.

For Copel Telecomunicações, the availability of the mobile application for our new residential customers and small and medium-sized company customers stood out in 2017, making access to our services easier. We also consolidated our presence in 399 municipalities of the state of Paraná, where

we reached the mark of 32,422 km in optical fiber cables at the end of the year.

Regarding Distribution, highlight was the confirmation of our presence in the market as the best distributor in Brazil and Latin America, through the Abradee Award (winner for the 6th consecutive year) and the award offered by the Regional Power Integration Committee (CIER).


In Governance, the closure of the first year of creation of the Governance, Risk and Compliance Office, made us confirm that pioneering assumed by Copel among the state-owned companies in the fulfillment of Law No. 1,303/2016, brought concrete results for the Company's day-to-day operations. The initiatives developed during the year were recognized by Fundação Getulio Vargas, which identified us as the state-owned company most aligned with the requirements in the new law.

In People Management, the highest result measured in 2017 was Copel's entry in the list prepared by Você S/A magazine with the 150 best companies to work. This recognition made us be sure that we are on the right way to guarantee better working conditions and quality of life for the "copelians". The maintenance of the Encouraged Retirement Program



2017
melhores
empresas
você s/a
para trabalhar





our employees' expectations, associated with the implementation of actions that guide the Company towards an environment of higher competitiveness and renewal of the human capital. For us it is clear that the development of work force also passes through valuation of diversity. We kept the Standing Diversity Committee active in order to reinforce the Company's commitment to the subject, being responsible for the implementation of an agenda focused on promotion of inclusive practices aligned with the Sustainable Development Goal (SDG 5).

Looking into the future of the power sector, we understand that investments in Research and Development and Innovation are essential for our market positioning within a long-term perspective. As we are holders of a recognized and valued brand in the state of Paraná, we know

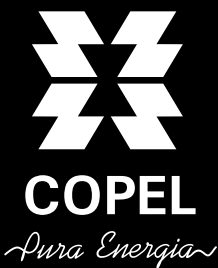
that our actions must progress together with the change in the behavior of the consumer market. Initiatives, such as distributed generation, electric mobility and power storage, indicate that the market is in constant transformation, directing to new forms of operation, especially regarding service provision. The transformation process in the sector is reflected in Public Inquiry 33, which proposes, in addition to the Eletrobras privatization process, creation of a new regulatory milestone, which provides structural and conjectural changes, highlighting the possibility to open the free market for all consumers.

Copel remains in the Portfolio of the B3 Corporate Sustainability Index (ISE) 2018. This is the 12th time the Company is a part of the portfolio since it was created by B3 in 2005. This recognition indicates that we are on the right way in relation to adoption

of good practices in corporate governance and sustainability. We know that the maintenance of the Company in the index passes through implementation of continuous improvement actions, which comprehend all areas of the Company. Still regarding the commitment assumed by the Company with the Global Compact, we also increased our support to the process of implementation of Sustainable Development Goals (SDG) in the south region of the Country, accepting the invitation to coordinate the regional office of the Global Compact Cities Program. It was another recognition of the alignment between our voluntary initiatives and the Company's mission and vision.

Have a good reading.

Executive Board



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX


APPENDIX

CONTEXT OF THE SECTOR



The year was marked by the end of recession period, although economy has still registered reflections from the crisis, with interruption of public services due to lack of resources and the critical situation of the public accounts in some states. The Brazilian economy, after accumulating 7.0% decrease in GDP between 2015 and 2016, showed signs of recovery as of the last quarter 2016, which was consolidated in the first half-year 2017.

Positive results were also recorded in power transmission and generation tenders carried out by the National Electric Power Agency (Aneel). The A-4 power generation tender held in December had higher demand than expected and ended with an investment forecast at BRL 13.9 billion in power plants for new energy, which will be provided as of 2021. Totally, 2.93 GW were contracted. In December, the second transmission tender of the year was carried out, which received offer for the 11 offered lots, with discount of up to 50%. The investment forecast is BRL 8.7 billion. In April, 31 out of the 35 lots offered by Aneel were sold, totaling an investment forecast at BRL 12.1 billion. The next tender scheduled by Aneel to April 2018 will be for purchase of electric power as of 2022 (A-4).



**BRL 13.9
billion**

IN POWER PLANTS FOR NEW
ENERGY, WHICH WILL BE
PROVIDED AS OF 2021



From the regulatory point of view, in 2016, with the change of ownership of the federal government, it was possible to see a change in the way of conducting the policies aimed at the electricity sector in the country, which was less interventionist and seeking to improve the business environment in order to attract new investments in the sector. An example of this new guideline was the approval of Law 13,303/2016, which comes from Provisional Measure No. 735/2016.

In general, the new law aims to facilitate the privatization processes, reduce bureaucracy in tenders and the Federation's costs for subsidies to utility companies, allowing privatization of state distributors, which were federalized. Totally, twelve standards in the industry were changed, including Law No. 10.848/2004, considered as the legal milestone of the "new model" of the Brazilian electricity sector. Generically, the new regulation shows to the market the intention of the federal government to reduce the judicial involvement in the sector and present mechanisms to solve problems.

In the progress of these changes, in 2017, Public Inquiry No. 33/2017 was

opened, aiming to improve the legal milestone in the sector. After a period for submission of contributions by the agents, the Ministry of Mines and Energy prepared a document with a set of proposals to be submitted to the National Congress. Among the issues submitted by the Ministry, there are improvements in pricing and functioning of the market, internalization of environmental externalities associated with emissions, separation of ballast and power, expansion of the free market and changes in the allocation of risks of dispatch decisions in regulated contracts.

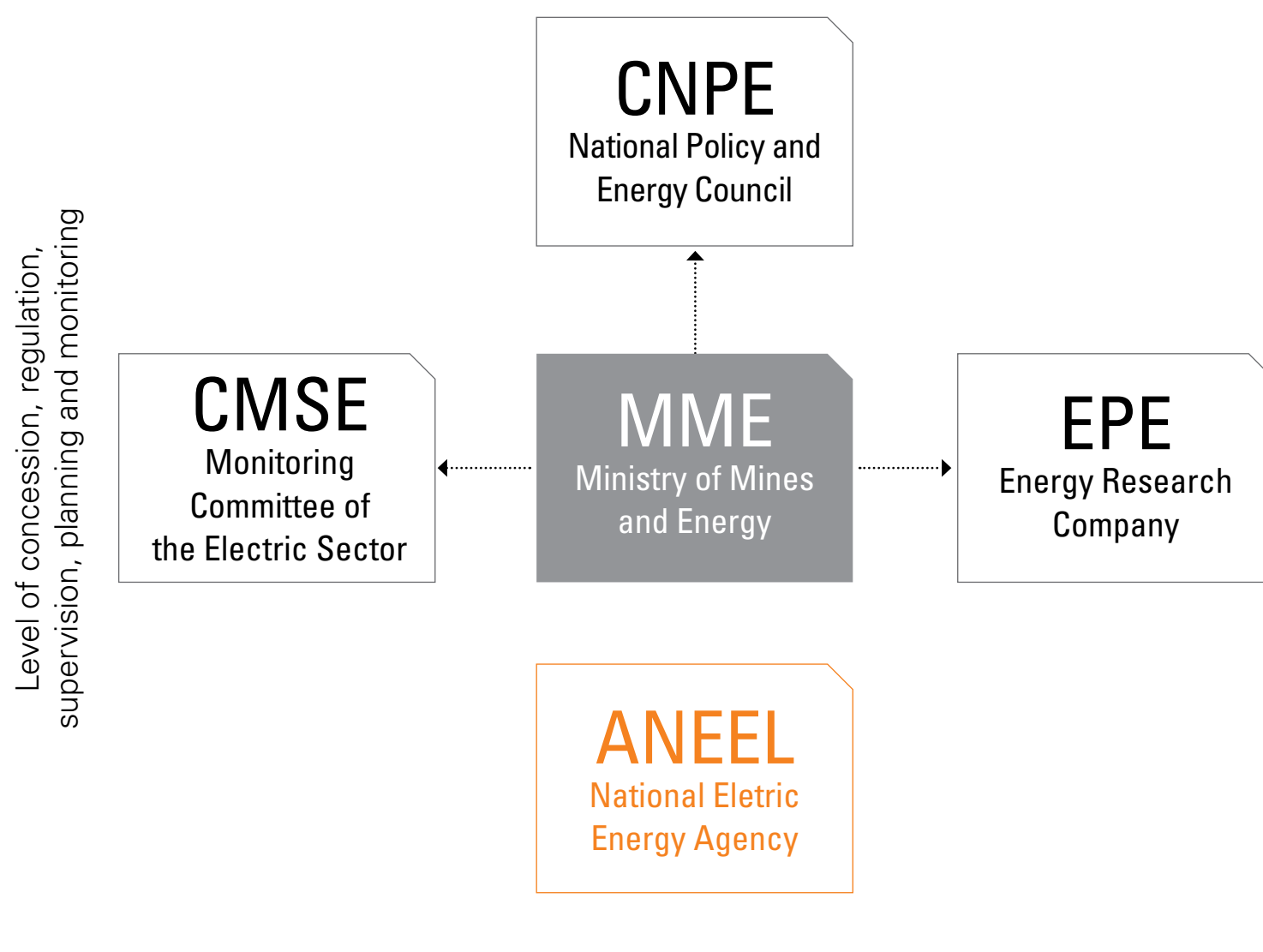
For consumers, in December, Aneel announced news for 2018: from January 1st, consumers with a monthly average above 500 kWh will be able to adhere to the new rate model. The purpose is to enable consumers to change the power consumption time and thus, reduce their costs.

The perspectives of the sector for 2018 indicate a new period with low volume of rain, which, with cost at about BRL 16 billion in subsidies, might generate increase in the rates. From 2014 to 2017, the power rate increased by 31.5% average.

CONTEXT – OPERATION OF THE BRAZILIAN ELECTRIC SECTOR

PLAYERS

Who are the major players on the market of electric power in Brazil.



CNPE: Defines the country's energy policy with the purpose of ensuring stability in energy supply.

MME: Responsible for planning, management and development of the legislation for the sector, as well as for supervision and control of execution of policies geared toward the country's energy development.

EPE: Plans expansion of generation and transmission, for the MME, and provides technical support for auctions.

CMSE: Supervises the continuity and reliability of electricity supply.

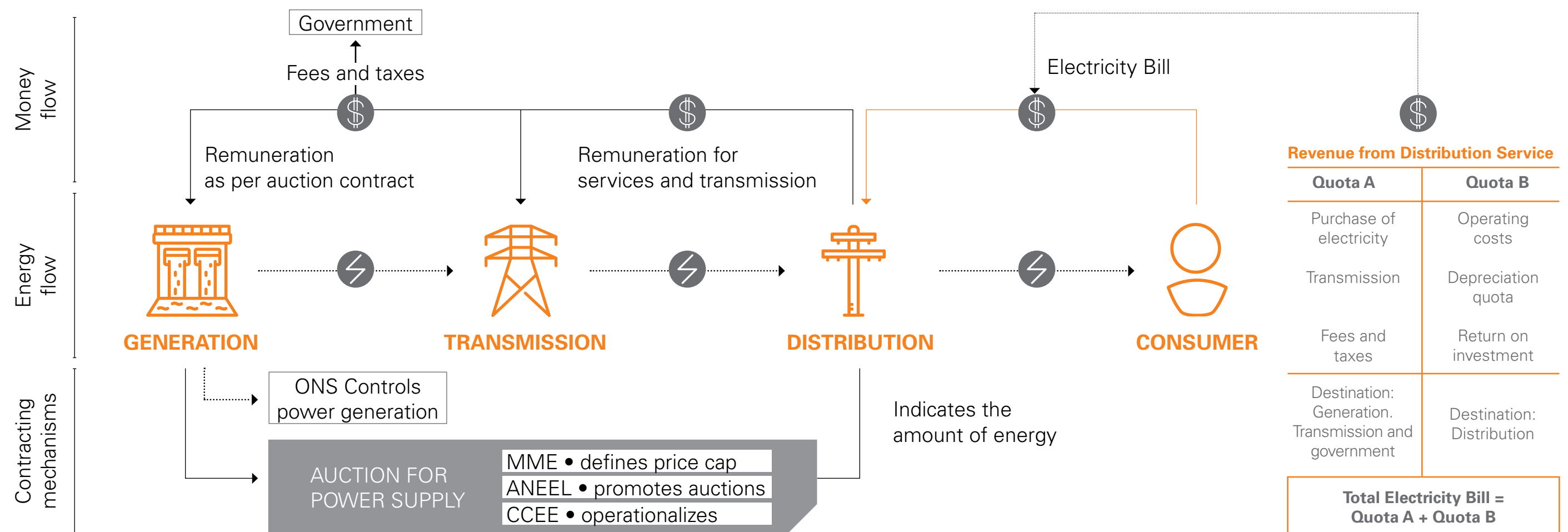
ANEEL: Regulates and supervises generation, transmission, distribution and marketing of electricity. It defines the transport and consumption rates and ensures economic and financial balance of the concessions.

ONS: Controls the operation of the National Interconnected System (SIN) so as to optimize energy resources.

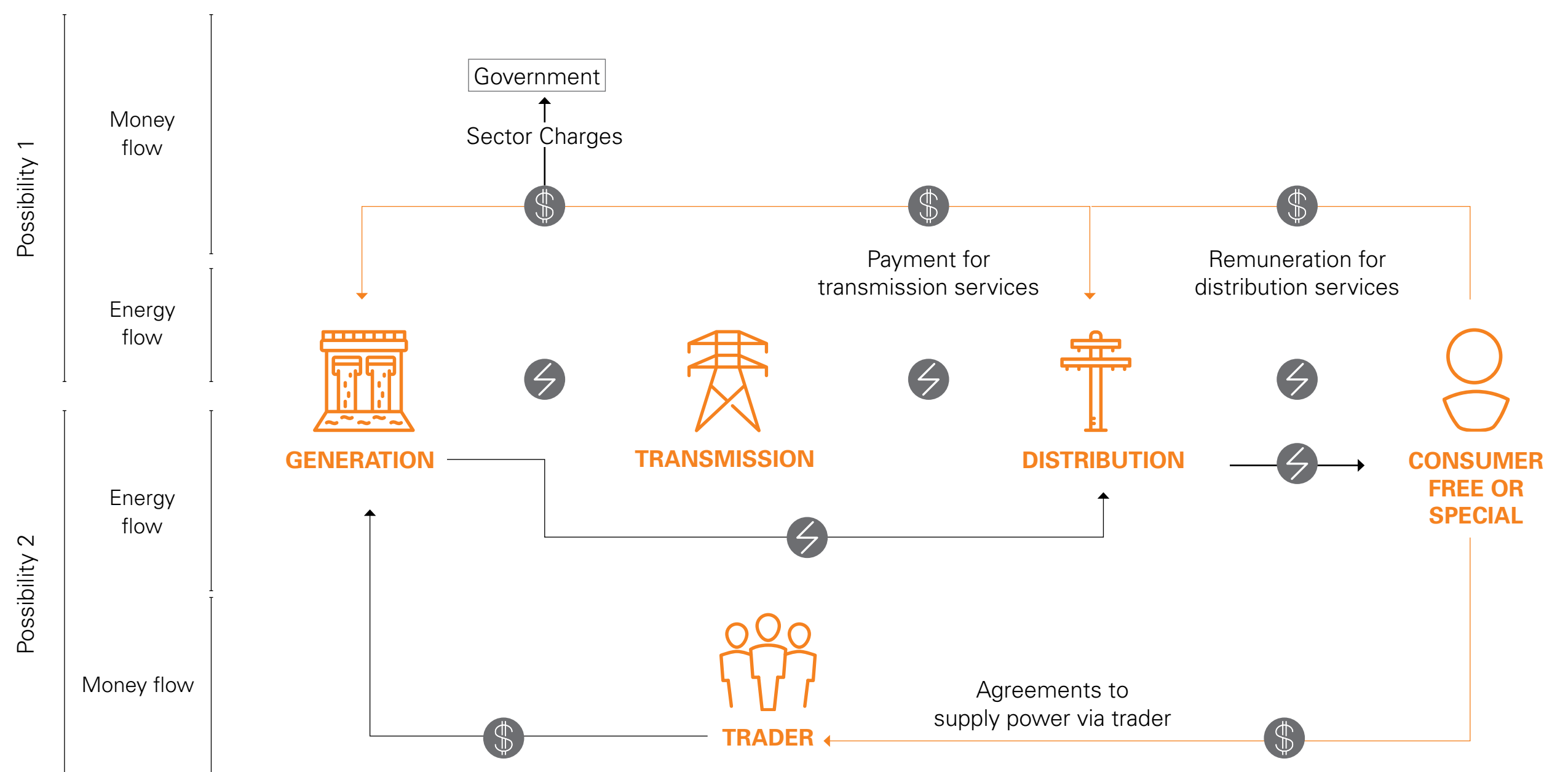
CCEE: Manages transactions of the energy market and conducts the official auctions.

HOW ENERGY SUPPLY WORKS

REGULATED MARKET: Captive consumers buy energy from the distribution concessionaries to which they are connected. Each consumer unit pays only a monthly electricity bill. Rates are regulated by the Government, and the price is the result of a mix of long-terms contracts.



FREE MARKET: Free consumers buy energy directly from generators or distributors through bilateral agreements with freely negotiated conditions, such as price, time, volume, etc. Each consumer unit pays the local utility a bill referring to distribution services (regulated rate) and one or more bills related to purchase of electricity (negotiated price agreement).



ABOUT COPEL AND BUSINESS MODELS

- DISTRIBUTION
- GENERATION AND TRANSMISSION
- COMMERCIALIZATION
- TELECOMMUNICATIONS









THE PRESENCE OF COPEL IN BRAZILIAN STATES

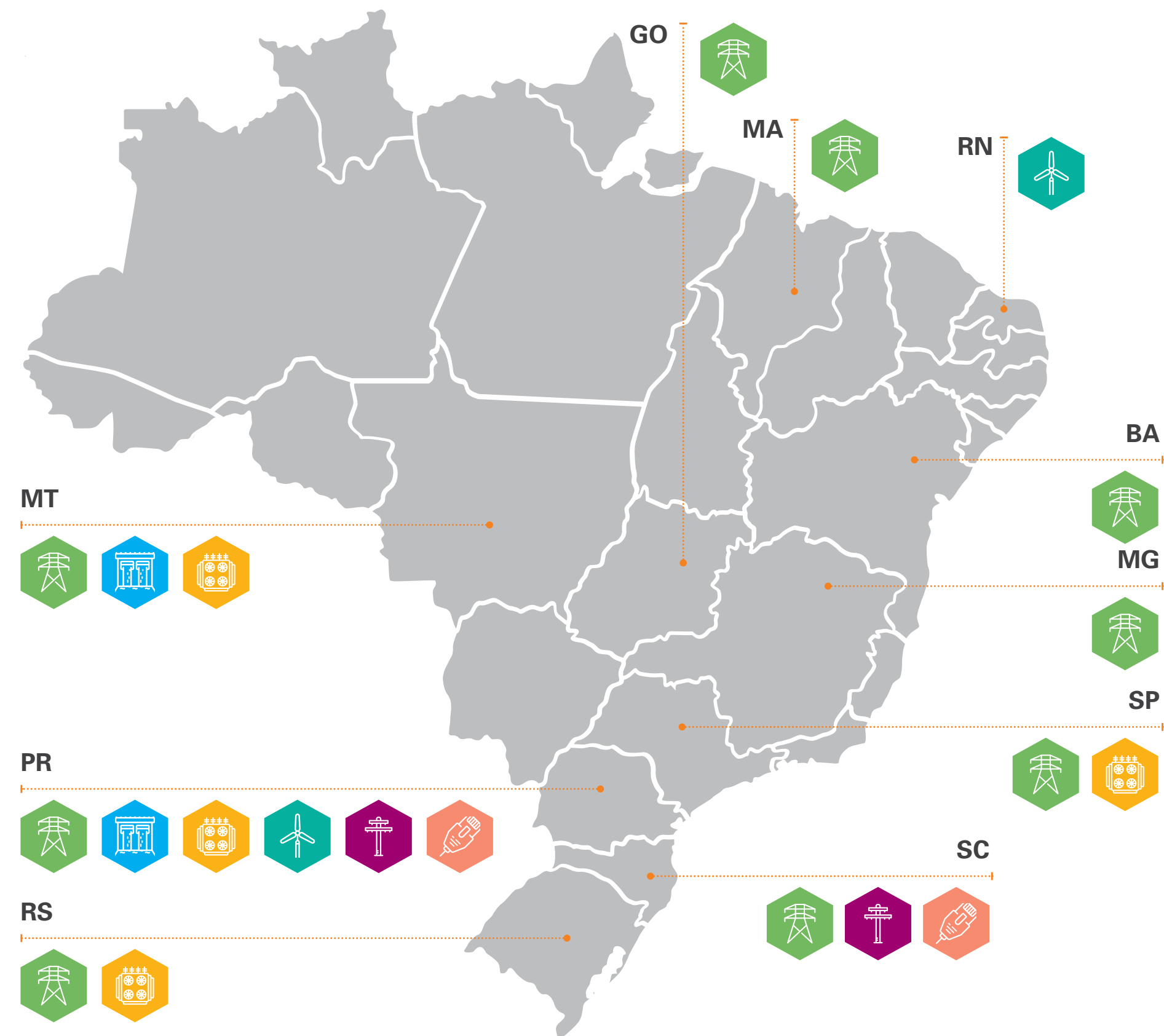
Copel was founded on 10/29/1954 in the form of a quasi-public company, controlled by the State of Paraná. Currently, Copel's shares are negotiated on B3 and the stock exchanges in New York and Madrid, [102-5](#)

Copel is the largest company in Paraná, with headquarters in Curitiba (PR), and operations in ten Brazilian states (See map beside). Its business is composed of power transmission, distribution, and sale, in addition to telecommunications and natural gas. The electrical system of the Company is composed of its own power generation complex of power

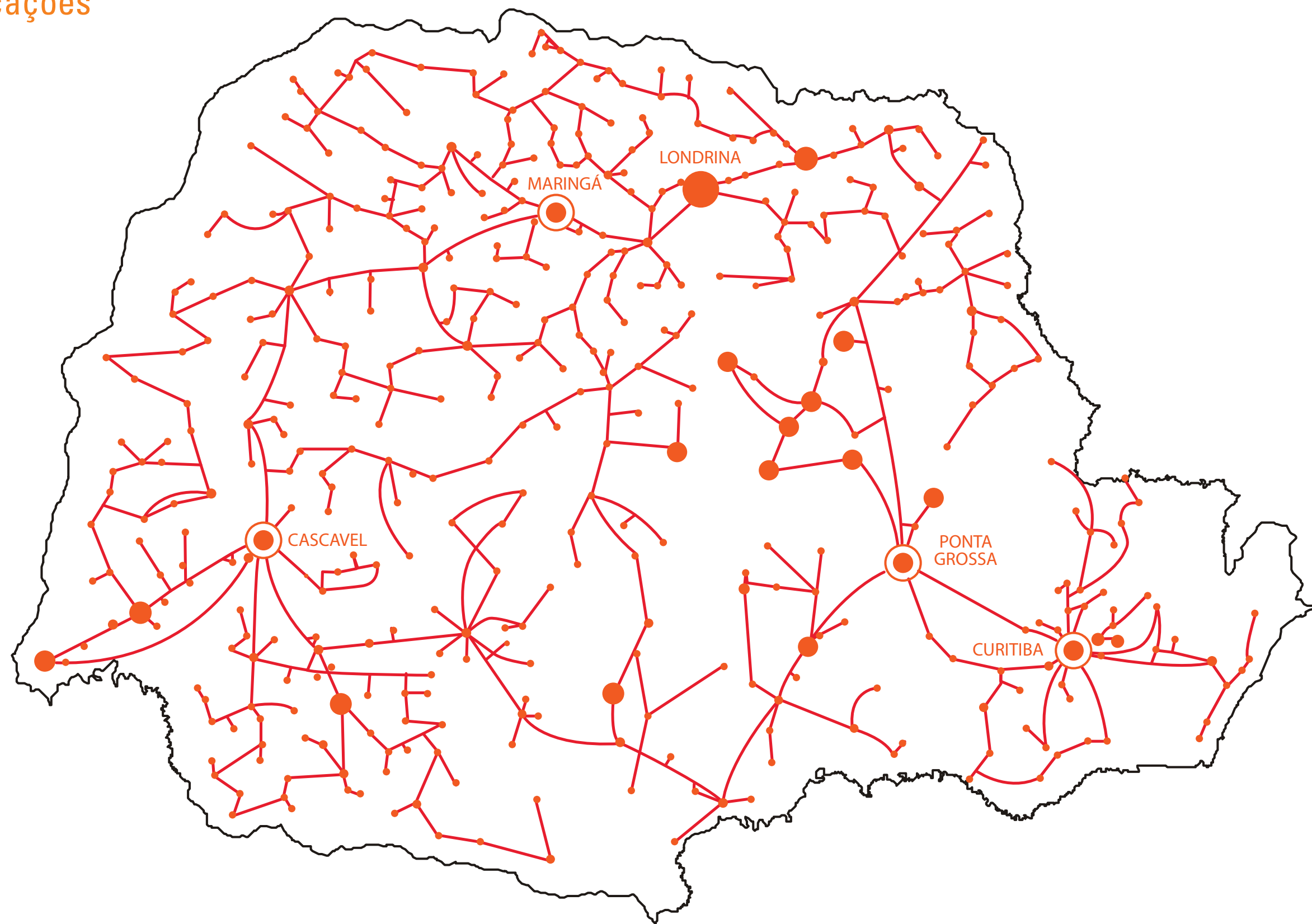
plants, transmission lines, substations, electrical lines and grids from the distribution system, and a modern optical telecommunication system, which integrates all cities in Paraná. In the power segment, the main customers are consumers from the regulated market (residences, industry and commerce) and consumers from the free market (industry and commerce), regulated and inspected by Aneel. Copel Telecomunicações works exclusively on retail (See operation map of Copel Telecomunicações on page 16). [102-2](#), [102-3](#), [102-4](#), [102-6](#)

Copel operation map [102-6](#)

-  TRANSMISSION LINE
-  HYDROELECTRIC PLANT
-  SUBSTATION
-  WIND FARM
-  DISTRIBUTION LINE
-  OPTICAL FIBER LOOP



Copel Telecomunicações operation map



STRATEGIC OBJECTIVES AND GUIDELINES

STRATEGIC OBJECTIVES AND GUIDELINES 102-16

Copel's management is based on the guidelines set in its mission, vision and values, which guide its actions and decision-making as follows:

Mission

To supply electricity and solutions to promote sustainable development

Vision

To be a benchmark in our business segments by generating sustainable value.

Core Values

A set of beliefs and premises underpinning Copel's strategic, organizational and people management, guiding all its internal and external decisions and the behavior of its members.

Ethics

Result of a collective agreement which sets aligned to a common goal individual behaviors.

Respect for People

Consideration of for others.

Dedication

Ability to engage in intense and completely at work contributes to the achievement of organizational goals.

Transparency

Accountability of decisions and accomplishments of the company to inform their positive or negative to all stakeholders aspects.

Safety

Healthy work environment in which employees and managers collaborate to use a process of continuous improvement of the protection and promotion of health, safety and welfare of all.

Accountability

Conduct of life sustainably company, respecting the rights of all stakeholders, including future generations and commitment to support all forms of life.

Innovation

Application of ideas in processes, products or services in order to improve something existing or build something different and better.

STRATEGIC OBJECTIVES 103-1, 103-2

In December 2017, the Board of Directors approved the Strategic Planning for the ten-year period 2018-2027. According to the strategic references, the planning was defined focused on sustainability of Copel's business and the trends of the national and the global electric sector, guiding the Company towards technological innovation and provision of new services.

The corporate strategic guidelines are presented in the chart below:

CORPORATE STRATEGIC GUIDELINES

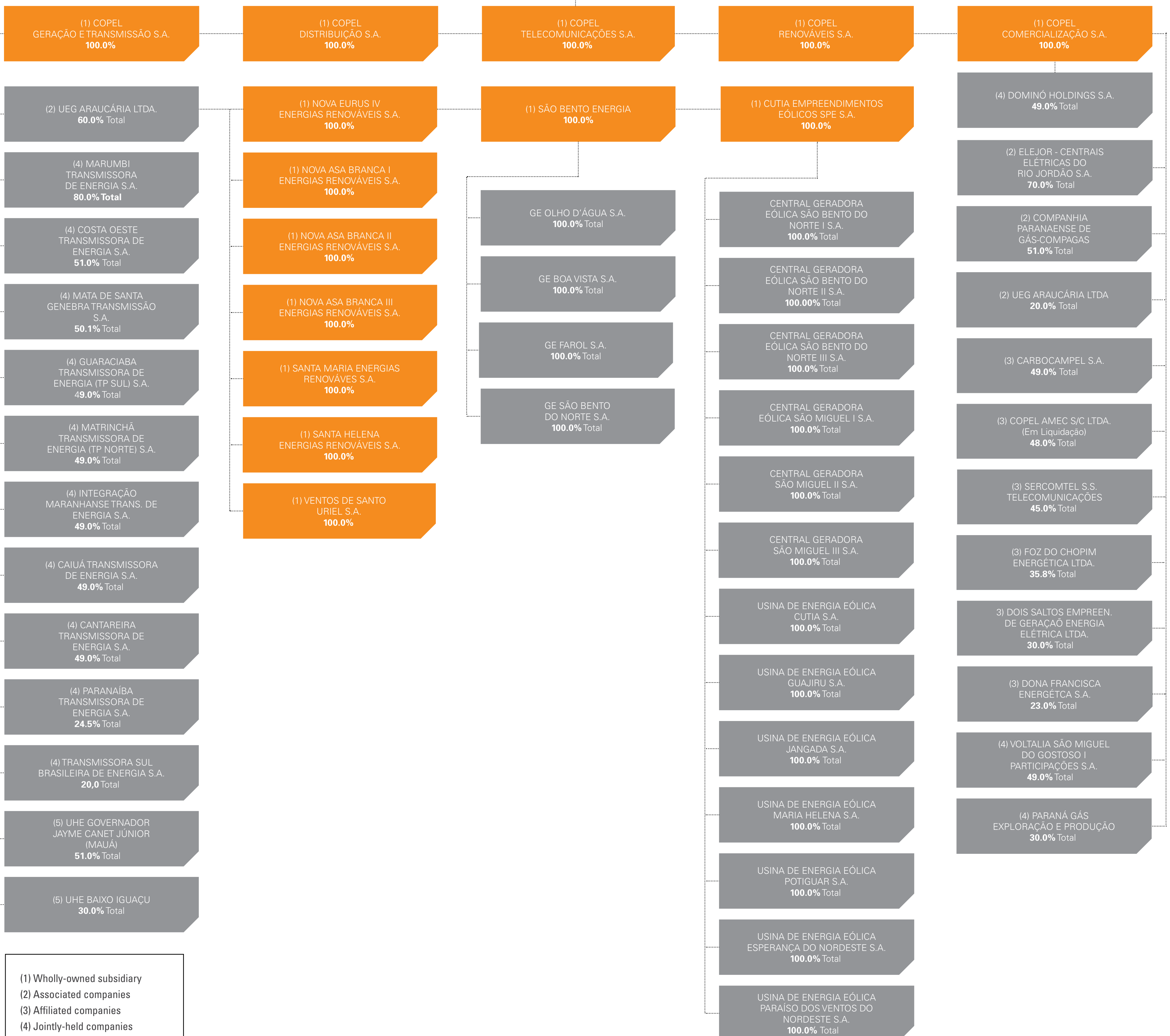
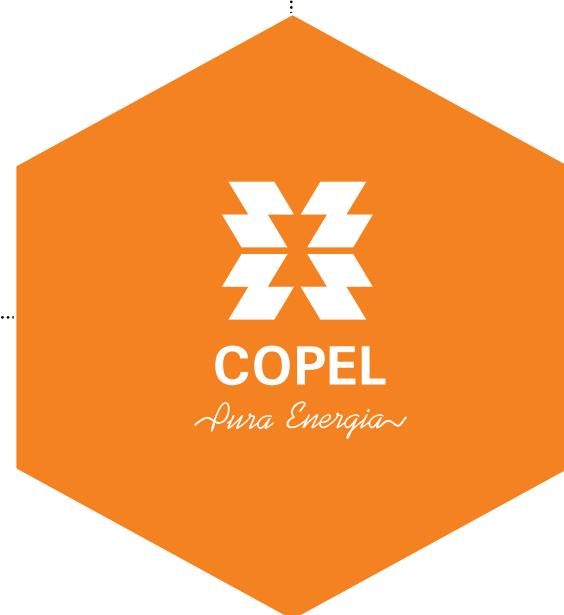
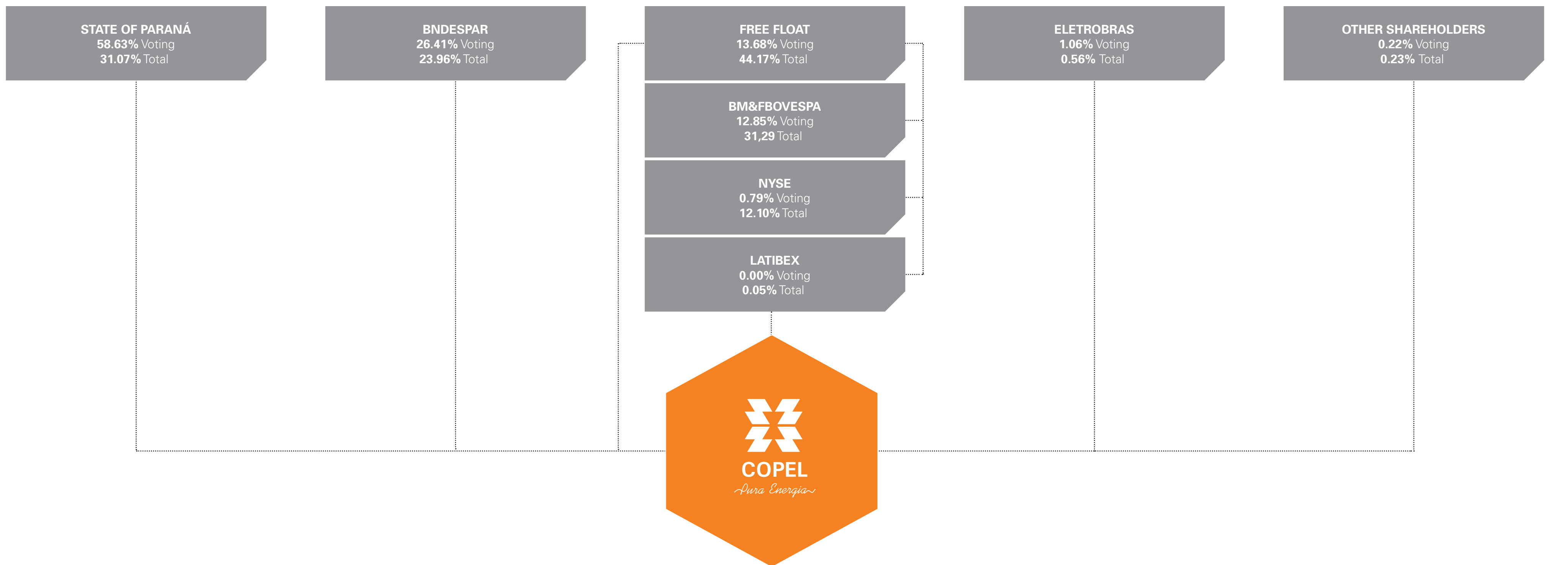
- Value the work force
- Retain talents and knowledge
- Expand the business in a sustainable and profitable way
- Obtain excellence in costs, processes and quality
- Promote synergy among the different areas of the Company
- Invest in research, development and innovation with value added

For wholly-owned subsidiaries, the guidelines are stated in the respective business models presented on page 20.



SHAREHOLDING STRUCTURE ³

102-45



- (1) Wholly-owned subsidiary
- (2) Associated companies
- (3) Affiliated companies
- (4) Jointly-held companies
- (5) Consortiums

³ Organizational chart of the shareholding structure on December 31, 2017

STRATEGIC RISKS OF COPEL'S BUSINESS 102-15

STRATEGIC RISKS

In addition to the Integrated Corporate Risk Management Policy and the legislation in force in the Country, the Company's risk management respects recognized structures and standards, such as Committee of Sponsoring Organizations of the Treadway Commission (COSO) and ISO 31000, applying them to the corporate areas, their wholly-owned subsidiaries and controlled, jointly controlled and colligated companies.

Aligning risk management and good social-environmental practices, the Company's principle is to conduct its actions with responsibility and contributing to the creation value for all stakeholders. In accordance with this principle, the risk management model adopted by the Company considers legal, regulatory, social-environmental and reputational aspects to support the decision process and the performance of operational activities. In the model, the criteria for risk classification, the possibility of occurrence and the generated impacts are equally defined, which provide tools for its preventive and mitigating handling. 102-11

At the end of 2017, Copel reviewed the strategic risks associated with its operations, linking them to the Strategic Planning 2018-2027. The work consisted in identification and analysis of the risks, definition of control and contingency plan, and establishment of monitoring actions.

The chart below demonstrates the risks Copel is exposed to:

CORPORATE RISKS:

- Judicial liabilities;
- Information security (cybersecurity);
- Fraud/corruption in the operations;
- Loss of knowledge;
- Credit and liquidity risk; and
- Innovation and technology.

The risks associated with the Copel's wholly-owned subsidiaries are reported in the business models presented on page 20.

Further information about the company's risks are available in Form 20-F and on [link](#).



BUSINESS MODEL

COPEL DISTRIBUIÇÃO

INPUTS PER CAPITAL



FINANCIAL

- R\$ 469 million invested
- R\$ 406 million cost



HUMAN

- 5,746 own employees
- 6,167 outsourced workers



SOCIAL AND RELATIONSHIP

- Customer satisfaction management
- Relationship channels (customers, suppliers, communities, body regulator and employees)



INFRASTRUCTURE

- 369 substations
- 196,951.2 km of distribution lines and grids
- 156 fixed assets
- 2,049 vehicles own fleet



NATURAL

- 5,239,850 liters of fuel
- 25,983.115 GWh of purchased power



INTELLECTUAL

- R\$ 18 million invested

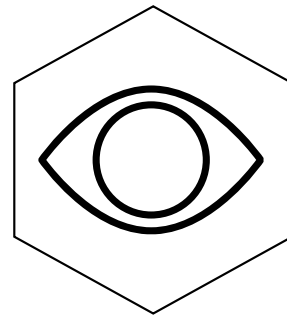
BUSINESS DEVELOPMENT

Copel Distribuição S.A is public service provider of electric power distribution, upon concession from the Federal Government and its activities are:

- Provide public service for electric power distribution and correlated services; and
- Study, plan, design, implement, operate and maintain electric power distribution systems.

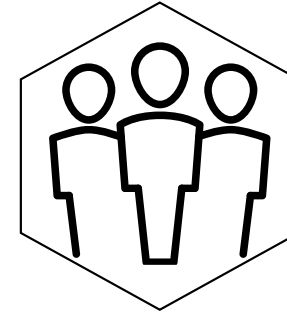
In 2017, 4,561,484 customers were served (residential, industrial, commercial, rural and others – public authorities, street lighting, public services and own).

STRATEGIC DIRECTIVES OF COPEL DISTRIBUIÇÃO



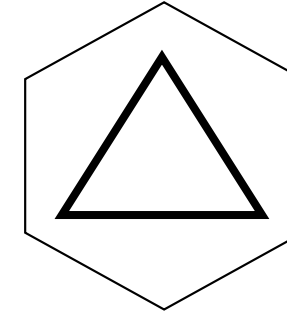
MAINTAIN THE CONCESSION

- Serve the customers with excellence
- Keep the economic-financial balance of the concession
- Renew and modernize the concession assets



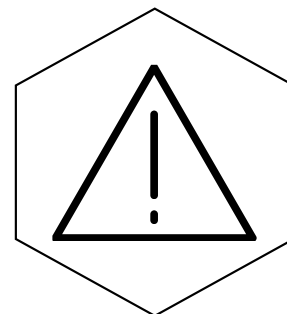
PRIORITIZE PEOPLE

- Develop talents and retain knowledge
- Promote actions to improve the quality of the employees' life
- Look after work safety



CONTRIBUTE TO SUSTAINABLE DEVELOPMENT OF THE STATE OF PARANÁ

- Guide about safe and rational use of electric power
- Promote actions of social interest aligned to our business
- Invest in innovation and new technologies



STRATEGIC RISKS:

- Loss of concession
- Regulatory instability
- Technological downgrade
- Severe weather adversity

- Failure to meet the quality criterion of the concession contract
- Failure to meet the economic-financial efficiency criterion of the concession contract.

GENERATING SHARED VALUE FOR:



HOLDING

- EBITDA R\$ 573.1 million



SUPPLIERS

- R\$ 198 million contracted volume



EMPLOYEES

- 81% satisfaction
- 191 thousand training hours
- 918 million salaries and benefits



CUSTOMERS

- Aneel satisfaction index – 80.69 (1st place)
- Perceived Quality Satisfaction Index (ISQP): 90.3 (1st place)



COMMUNITY

- 1.818 volunteer hours
- 95,910 beneficiaries in lectures at schools, associations and non-profit institutions
- 92.84 (1st place): Abradee Social Responsibility Award



REGULATING BODIES

- Equivalent Duration per Consumer – DEC: 10,46
- Equivalent Frequency per Consumer – FEC: 6.83

BUSINESS MODEL

COPEL GERAÇÃO E TRANSMISSÃO

INPUTS PER CAPITAL



HUMAN

- Generation: 880 own employees
- Transmission: 647 own employees



INFRASTRUCTURE

- 17 Hydroelectric
- 1 Thermoelectric Plant
- 11 Wind farms
- 2,699 Km transmission lines
- 36 Basic Grid substations



NATURAL

- 78,077 tons of coal
- Water: 1.26 m³/s per kWh



SOCIAL AND RELATIONSHIP

- R\$ 6.07 million invested



FINANCIAL

- R\$ 1,071.3 million invested



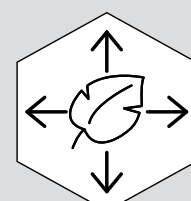
INTELLECTUAL

- R\$ 18.5 million invested and RD&I

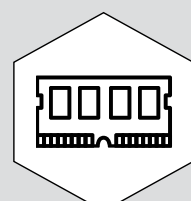
BUSINESS DEVELOPMENT

Copel Geração e Transmissão S.A. (Copel G&T) is a non-traded corporation, wholly-owned subsidiary of Companhia Paranaense de Energia (Copel), which works with state-of-art technology in the power generation and transmission areas. It operates an electric system with power plant generating park (Hydroelectric, Thermoelectric and wind power plants), transmission lines and substations, including in partnership with specific purpose companies.

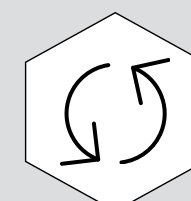
STRATEGIC DIRECTIVES OF COPEL GERAÇÃO E TRANSMISSÃO



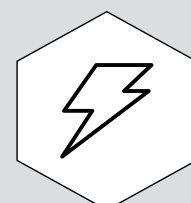
EXPAND THE SHARE ON THE GENERATION AND TRANSMISSION MARKET IN A SUSTAINABLE AND PROFITABLE WAY



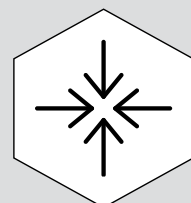
INVEST IN INNOVATION, SEEK THE BEST PRACTICES AND RESEARCH NEW TECHNOLOGIES



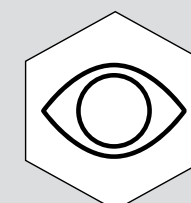
RENEW AND MODERNIZE THE ASSETS WITH LONG-TERM VISION



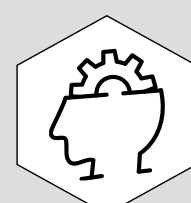
MAXIMIZE THE PROFITABILITY OF THE POWER COMMERCIALIZATION



OPTIMIZE THE CONCESSION RESOURCES



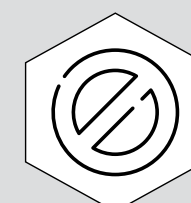
KEEP THE CONCESSIONS AND THE AUTHORIZATIONS



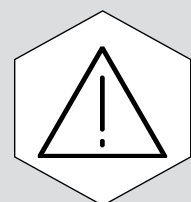
TRAIN AND QUALIFY THE EMPLOYEES CONTINUOUSLY



RETAIN KNOWLEDGE



LOOK AFTER LABOR SAFETY



STRATEGIC RISKS

- Loss of concession
- Insufficient level of expansion to assure the company's sustainability
- Hydrological Risk
- Regulatory instability
- Drop in the business profitability
- Drop in the project profitability (new business)

GENERATING SHARED VALUE FOR:



HOLDING

• EBITDA R\$ 1,816 million



SUPPLIERS

- ACB⁴ – Copel G&T – 122.8 million and Wind – 22.4 million
- AIB⁵ – Copel GeT – 696.3 million and Wind – 473.5 million
- AIB – Share – 248.2 million



EMPLOYEES

• 190,256 training hours



CUSTOMERS

• 19,866,907.902 MWh generated power



COMMUNITIES

• R\$ 22.2 million applied in social actions and cultural, sports projects, etc.

⁴ACB - Annual Cost Budget

⁵AIB - Annual Investment Budget

BUSINESS MODEL

COPEL COMERCIALIZAÇÃO

INPUTS PER CAPITAL



FINANCIAL

- R\$ 66.3 million subscribed and paid off capital stock



SOCIAL AND RELATIONSHIP

- Relationship with free customers, consumers, power sellers and generators



INTELLECTUAL

- Team with expertise in purchase and sale of power, competitive intelligence, price studies



HUMAN

- 38 own employees



INFRASTRUCTURE

- Commercialization management system
- Mobile app
- Measuring System (MEC)
- Commercialization website



NATURAL

- Consumption of water and power (administrative)
- Commercialization of incentive power (renewable sources)

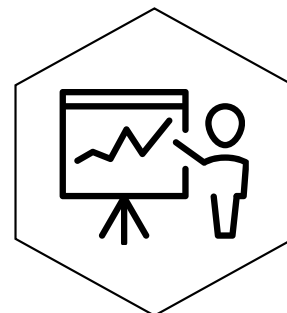
BUSINESS DEVELOPMENT

Copel Comercialização S.A is a wholly-owned subsidiary of Copel responsible for the power commercialization on the free market.

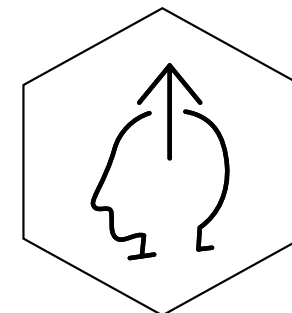
STRATEGIC DIRECTIVES OF COPEL COMERCIALIZAÇÃO



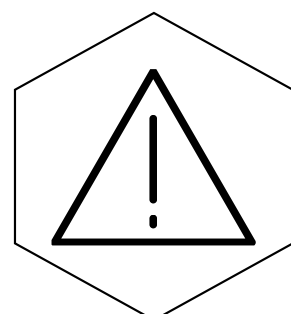
- Be among the 5 largest companies in Brazil in the operation branch until 2025



- Be recognized by the market (generators and purchases) for excellence in attending and provided services by 2025



- Have engaged and entrepreneur work force



STRATEGIC RISKS (RELATED TO PURCHASE AND SALE OF POWER)

- Financial exposure of the purchase and sale operations
- Default
- Increase of competition
- Non-involvement of a commercialization culture
- Regulatory
- Economic instability

GENERATING SHARED VALUE FOR:



HOLDING

- Net profit R\$ 13 million



CUSTOMERS

- 249 customers in 15 states
- 507 contracts for sale of power
- 206.44 MW average of incentive power (renewable sources) purchased and sold
- 401.15 MW average of conventional power purchased and sold



EMPLOYEES

- Collaborators Satisfaction

BUSINESS MODEL

COPEL TELECOMUNICAÇÕES

INPUTS BY CAPITAL



INTELLECTUAL

- Business knowledge
- Alignment to the best international Telecom practices
- Management Excellence Model - MEG
- Balanced Scored Card – BSC



SOCIAL AND RELATIONSHIP

- Recognition of the brand in the state of Paraná and Brazil
- Shareholders' trust
- Relationship with customers: development and maintenance of multiple relationship channels



NATURAL

- Water consumption: **665 m³**
- Power: **674.6 MWh**
- Fuel: **231 thousand liters** (alcohol + diesel + gasoline)
- Batteries: **7,300 individual** battery elements



FINANCIAL

- Result from the operations reinvested in the business
- Financing with External Resources



INFRASTRUCTURE

- Backbone
- Servers
- Operation network
- Operation center
- Specific systems, including data security and protection
- Posts and towers



HUMAN

- **649** own employees

BUSINESS DEVELOPMENT

The Copel Telecomunicações

Purpose:

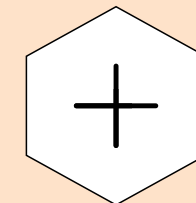
- To increase the market share with value added to the customer in an innovative and sustainable way
- To be a benchmark of Anatel's quality requirements until 2020

Business strategy:

- To maximize the Company's value in a Sustainable way through increase of sales of current products and services, and increase of value added, efficiency and integration of the processes with mass gain

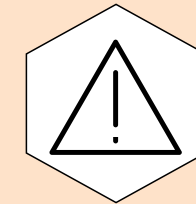
STRATEGIC DIRECTIVES OF COPEL TELECOMUNICAÇÕES

- Develop potential markets from service innovation and excellence;
- Innovation, synergy and value added to the customers from integration of telecommunication and information technology;
- Administer the supply chain and the relationship with suppliers, aligning values, quality and performance;
- Expand the provision of services with high value added and availability;
- Guarantee valuation and perspective professional to the Telecom employees with development of competences and motivation for high performance;
- Speed up the decision process and the service provision to the customers to increase the delivery of value and the business performance



POSITIVE IMPACTS:

- Increase of Sale Value Added Products and Services
- Assure the quality of the attendance and the provided service
- Assure the capacity of investment and liquidity for profitable expansion
- Contribution to the social and the economic development of Paraná
- Optimization of the costs and increase of productivity due to cost administration by process and guiding factor



RISKS ASSOCIATED TO THE DIFFERENT ACTIVITIES:

- Restriction of available funds for investment plan.
- Regulatory quality requirements.
- Technological obsolescence of the products.

GENERATING SHARED VALUE FOR:



HOLDING

- EBITDA Margin - **35.14%**
- Increase of the Gross Operational Revenues by 19%.
- Telecom Yearbook: ten most profitable in the sector for the fourth consecutive year and highlight in the data center and collocation segment (Fórum Editoria and FGV).



SUPPLIERS

- 38.35% of the contracted amounts are from suppliers in Paraná (66.27% of total suppliers).
- Involvement of suppliers and partners in sustainability programs.



EMPLOYEES

- **81%** satisfaction (survey 150 Best Companies to Work)
- **40,573** hours training
- SCM 4 - Contracted Guaranteed Instantaneous Speed (95%): **95.44%**
- SCM 5 - Contracted Guaranteed Average Speed: (95%): **100%**



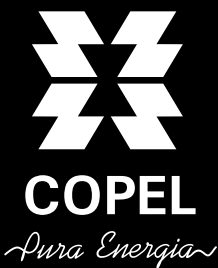
CUSTOMERS

- SCM 9 - Availability Rate (99%): **99.99%**
- SCM 10 - Service rate up to 20s (85%): **86.69%**
- SCM 14 - Subscriber response rate (95%): **98.52%**
- Telesynthesis Annual Award - Innovation category.
- Best fixed line broadband operator in Paraná 2016 (consumers' perception)
- Fastest Internet in Brazil (by Portal Minha Conexão).
- It is among the 10 Best Companies in Administration 2017 of FNO.



COMMUNITIES

- Availability of high-quality data link in all state schools (SDG 4)
- Maintenance of the customer base of the Connected Paraná Program (SDG 1, SDG 8, SDG 10)
- Social actions in network (SDG 16 and SDG 17) with suppliers, business partners, volunteers from Copel and other companies
- Internet Sem Bulling Project (SDG 4 and SDG 5)
- Social inclusion by means of availability of data and Internet infrastructure for governmental initiatives, such as Justice in the Neighborhood, Paraná Citizen, Mass Action for Civil Awareness, among others. (SDG 10, SDG 16 and SDG 17)



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

**CORPORATE
GOVERNANCE**

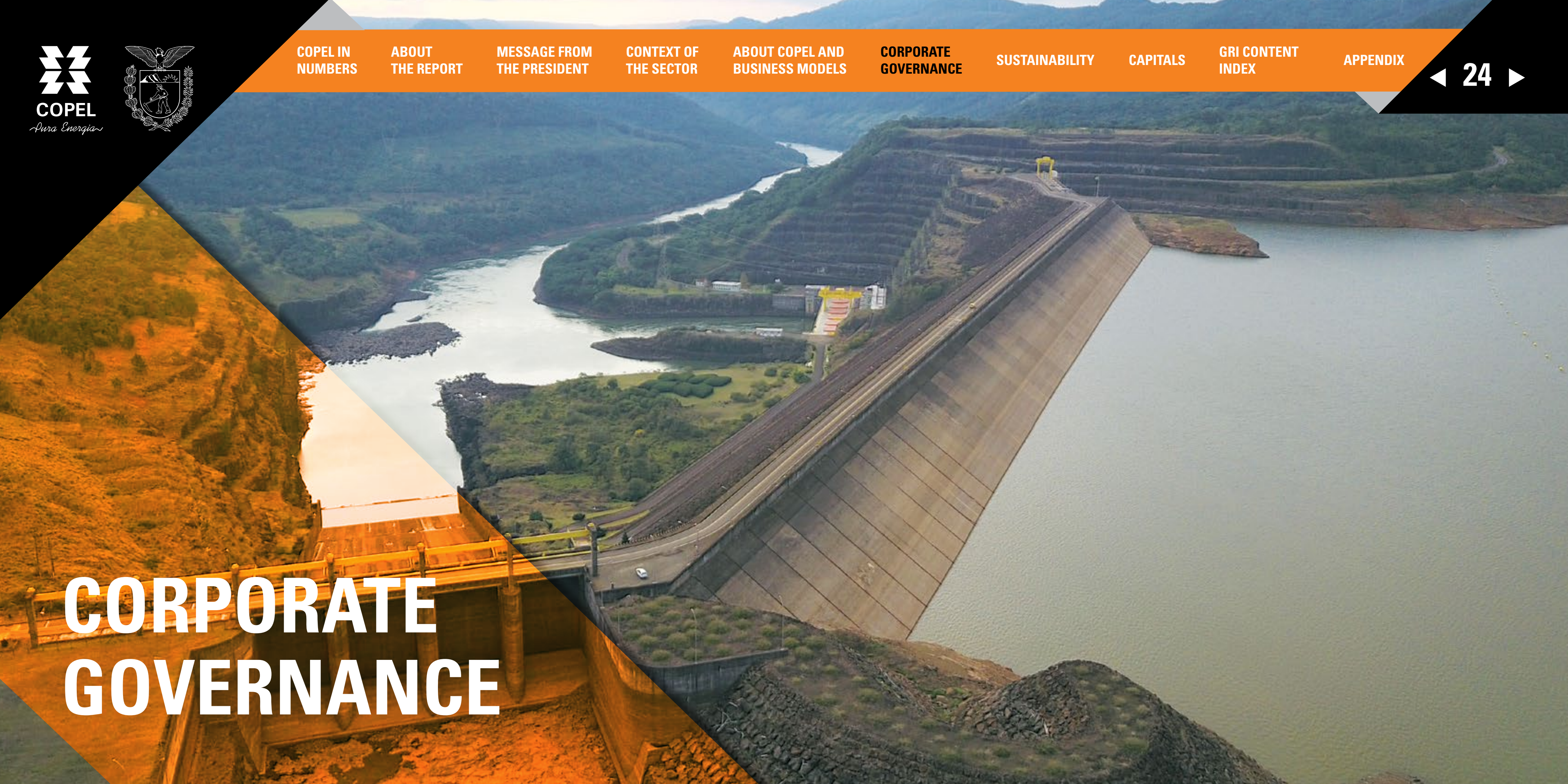
SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

CORPORATE GOVERNANCE



Copel's Corporate Governance model is based on the principles of transparency, equity, accountability and corporate responsibility, following the best market practices and seeking the best results for the stakeholders. The adopted corporate governance practices comply with the requirements established for companies listed at B3 Corporate Governance Level 1 and are referenced to the Code of Best Practices in Corporate Governance from the Brazilian Institute of Corporate Governance (IBGC), meeting the provisions in Law No. 13,303 dated 2016, CVM Instruction 586 dated 2017 and applicable legislation. [103-1](#)

For the Company to be permanently guided by ethical principles, all those working on its behalf are governed by a Code of Conduct developed according to Copel's values, the Principles of the Global Compact, and the Principles of Corporate Governance. [103-2](#)

Learn about the governance practices and policies that guide the Company's management:

CORPORATE GOVERNANCE POLICY

GOVERNANCE PRACTICES

CODE OF CONDUCT

GOVERNANCE, RISK AND COMPLIANCE MANAGEMENT

The Governance, Risk and Compliance Management (DRC) works with the Company's areas to improve the governance practices seeking the best results for the stakeholders. [103-2](#)

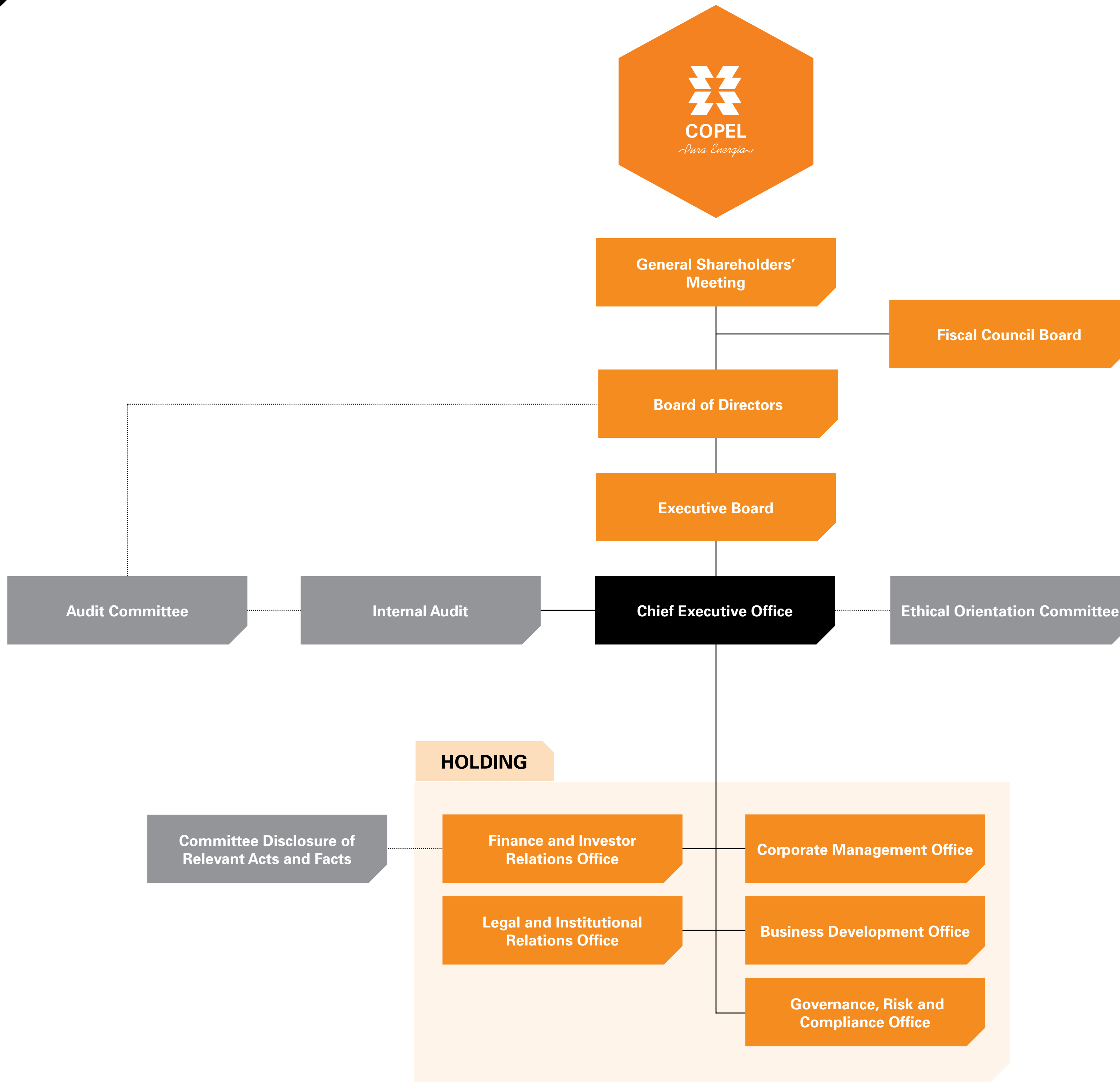
GOVERNANCE STRUCTURE

[103-2](#), [103-3](#)

In compliance with the Corporate Bylaws, Copel's administration is organized in a structure formed of four permanent decision-making bodies with different levels of responsibility, assisted by technical committees. [102-18](#)

The adopted corporate governance practices comply with the requirements established for companies listed at B3 Corporate Governance Level 1

COPEL'S GOVERNANCE STRUCTURE



GENERAL SHAREHOLDERS' ASSEMBLY MEETING

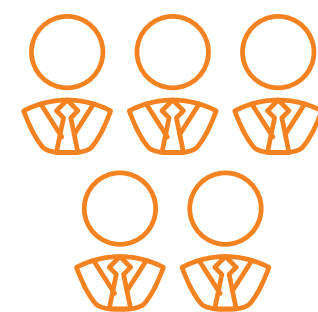
The General Shareholders' Assembly Meeting is responsible to define the guidelines of the Company's business and take strategic decisions. It is formed by shareholders with eligible to vote, gathering in an ordinary meeting in the first four months every year, and extraordinarily, on any date, whenever necessary.

BOARD OF DIRECTORS – CAD

The Board of Directors is deliberative body, responsible to define the general guideline of the Company in conformity with the competences set forth in Copel's Corporate Bylaws and in CAD Internal Regulation, which provides the actions in cases, involving conflicts of interest. In case any conflict situation is identified, the fact is publicly reported in the minutes of meeting of the Board of Directors. No cases of such nature were identified in 2017. [102-25, 102-26](#)

It is composed of nine members, seven of them independent, indicated and elected according to the rules provided in the legislation in force, Law No. 6,404/1976, Law No. 13,303/2016 and the normative deliberations of the State Company Control Council (CCEE), in addition to compliance with Rule 10A-3 of the Securities Exchange Act. The board members are elected for two-year mandate with possibility for re-election. The Company's Director President is forbidden to perform the function of President of the Board of Directors. [102-22, 102-23](#)

COMPOSITION OF THE BOARD OF DIRECTORS:



Five members representing the State of Paraná, majority shareholder of the Company;



Two members of BNDES Participações S.A. – BNDESPAR, as provided in the shareholders' agreement signed with the State of Paraná;



One member representing the employees, elected in the terms of the pertinent state legislation State Law 8,096/1985, regulated by Decree No. 6,343/1985 and State Law No. 8,681/1987; and



One member representing the majority shareholders, in the terms of article 239 of the Corporation Act.⁶

⁶Election is done separately (the controlling shareholders cannot vote), considering that shareholders of ordinary and preferential shares are entitled to vote, and the candidate, who obtains the highest percentage representation of the stock capital of the Company is considered elected, without minimum limit.

Profile of the members of the governance bodies according to criteria of diversity [405-1](#)

Percentage of representatives of the governance bodies (by gender)	2017	2016	2015
Men	84%	95%	97%
Women	16%	5%	3%
Total	100%	100%	100%

Percentage of representatives of the governance bodies (by age range)	2017	2016
Under 30 years old	0%	0%
Between 30-50 years old	28%	20%
Above 51 years old	72%	80%
Total	100%	100%



FISCAL COUNCIL

A permanent body, which analyzes and issues opinions on the financial statements and inspects the administrators' acts regarding their legal and statutory duties. It is formed by five members and the same number of deputies, elected by the Ordinary General Shareholders' Assembly Meeting for annual mandate with possibility to be re-elected. [102-22](#)

COPEL'S EXECUTIVE BOARD

The Executive Board is responsible for executive roles and has the responsibility to represent the Company. It is composed of six members, one director president and five directors, who are elected by the Board of Directors for a term of two years, considering that three consecutive elections are permitted. The directors' responsibilities are presented individually in the Internal Regulation of Copel's Executive Board, including the guidelines associated to social, environmental and economic issues. The Company may also have a Deputy Director. [102-20](#), [102-26](#)

STATUTORY AUDIT COMMITTEE

Independent consulting and permanent body that assists the Board of Directors, composed of five members, most of them independent, selected among the Administration Board members, as provided in Rule 10A-3 of the Securities Exchange Act, for two-year mandate. One of the members of the Audit Committee shall have recognized experience in corporate accounting subjects in compliance with Art. 25 of Law No. 13,303/2016.

PERMANENT COMMITTEE FOR DISCLOSURE OF RELEVANT ACTS AND FACTS

A body responsible to assist the Finance and Investor Relationship Office (DFI) in the application of Copel's Policy for Information Disclosure and Secrecy Preservation. Its members shall review and approve the information to be disclosed to the capital market by means of Quarterly Accounting Reports (ITR); Standardized Financial Statements (DFP); Reference Form (FRE); 20-F and 6-K Forms for file in the Securities and Exchange Commission (SEC); Relevant Factors, Notifications and press-releases; Other documents of the Relationship with Investor area.

INDICATION AND PERFORMANCE ASSESSMENT OF THE MEMBERS OF THE GOVERNANCE BODIES

INDICATION AND NOMINATION PROCESS

Copel observes the Corporate Governance principles and it is in process of adaptation to the provisions in Law No. 13,303/2016, State Decree No. 6,263/2017 and the normative deliberations of the State Company Control Council (CCEE). We highlight the improvement of the process of nomination and evaluation of the members of the governing bodies. In addition to the minimum requirements required by applicable legislation and the Company's Bylaws, the criteria and guidelines established in internal policies are observed. Applicants must submit the CVs and other relevant documents such as clearance certificate, based on Article 147, § 4, of Law 6,404/1976; declaration of professional experience and academic training compatible with the performance of the duties to be performed. In addition, they undergo compliance analysis performed by the Board of Governance, Risk and Compliance of Copel, after the background check, which verifies any elements that prevent the election of nominees. Currently, Copel does not adopt criteria to promote diversity in the nomination and election of members of the governing bodies.

ASSESSMENT OF THE ADMINISTRATORS' AND THE FISCAL COUNCILORS' PERFORMANCE

In accordance with the best corporate governance practices and adapting to Law No. 13,303/2016, Copel has evolved its process of assessment of the Administration's performance (Board of Directors and Executive Offices of the Holding and Wholly-owned subsidiaries), Statutory Audit Committee and Fiscal Council of the Holding and Wholly-owned subsidiaries.

In 2017, the assessment done by the consulting firm PricewaterhouseCoopers (PwC) considered the determinations of the Board of Directors to insert quantitative criteria, which represent the achievement of the strategic corporate goals in the assessment of the Executive Offices and the Board of Directors of the Wholly-owned subsidiaries, according to the strategic planning set by means of corporate management contract for the year. To enrich the process, assessment by peers (directors, board members and committee members) by means of a form was also incorporated thereto. [102-28](#)

DEVELOPMENT

The Governance, Risk and Compliance Office promoted cycles of lectures for all Administrators and councils at Copel and its participations, aiming to improve their performance and uniformize the comprehension of the risks and prevention options.

In 2017, the two Meetings of the Lecture Cycle destined to Copel's high administration shall be highlighted. The first about "compliance": "How to protect against New Risks", with brief contextualization about the Brazilian Anti-corruption Act (Federal Law No. 12,846/2013). The second approached the topic "Risk Management and Internal Controls".



2017 the highlight was the 1st Cycle Meeting of Governance, Risk and Compliance Office.





INTEGRITY PRACTICES

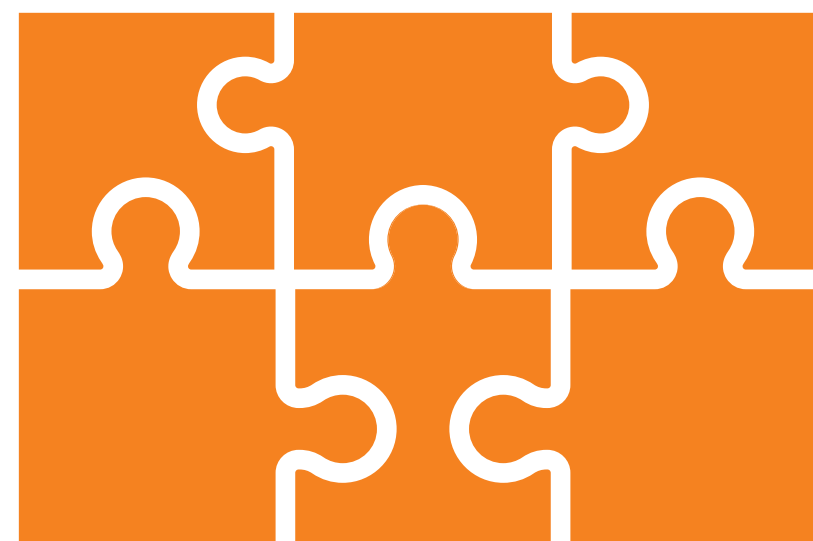
In 2017, the Company published its Integrity Program, a set of internal mechanisms for integrity, ethics, transparency, risk management, internal controls, compliance, internal audit and application of the Code of Conduct, which shall be complied with by all employees, administrators and fiscal board members. The purpose is to prevent, detect and remedy possible acts with impact on the Company. The initiative provides Copel's compliance with Law No. 13,303/2016, which will enter into force in June 2018. **103-3, 205-1**

INTEGRITY PROGRAM

The disclosure and the dissemination of the Integrity Program are done periodically by electronic means to the entire Company. Its

full content can be checked in Copel's internal and external online channels through the [Compliance Portal](#).

The following employees participated in the training available for dissemination of the Integrity Program in the period: **205-2**



Code of Conduct	Anti-Corruption Act	State Company Law, Corporate Governance, Business Strategy, Internal Control and Strategic Business Risk Management
8,200 employees	632 employees	97 employees

The Company's Administration participated in the in-person training on the Anti-Corruption Act, the State Company Law, Corporate Governance, Business Strategy, Internal Control and Strategic Business Risk Management, contemplating 25 members.

In 2017, 117 Copel's business partners were notified about the anti-corruption measures adopted by the Company, representing 10% of the total. **205-2**

CODE OF CONDUCT

Since 2003, Copel maintains its Code of Conduct, which is a guiding tool for the acts of all people, who perform activities on behalf of Copel, and who are responsible to comply with the provisions therein and apply, within their scope of responsibility, the content of

the Code and to promote its disclosure, understanding and inclusion in the daily practices.

CORRUPTION RISK ASSESSMENT

103-3, 205-1

Currently, the Code of Conduct is the most relevant guiding tool for preventing and fighting corruption, and additionally, the Company has policies and normative documents related to the topic.

In the same context, the operational processes are annually assessed regarding the risks related to errors or frauds, which might interfere in the results in the financial statements, and internal controls are established, submitted to tests by the Internal audit and the Independent Auditor, with the results reported to the Administration.

The tests carried out by the Internal audit on the internal controls are done annually as of October, and they are completed with assessment of the severity and the magnitude of the deficiencies upon filing Form 20-F in SEC (April every year).

In 2017, for the effects of number of establishments, business units Holding, Generation and Transmission, Distribution, Telecommunications and Commercialization were considered. In the previous years, the number of mapped processes to comply with the Sarbanes-Oxley Act, applicable to companies with shares listed on a US stock exchange, were taken into account. In such context, 100% of Copel's establishments were submitted to assessment of risks related to corruption. The Company identified 1 corruption case in the year 2017, which resulted in the dismissal of the employee. [103-3](#), [205-3](#)

For 2018, Copel's target is to implement the following initiatives:

- implementation of the outsourced reporting channel;
- background check (check of criminal records) for suppliers considered critical; and
- training on the update of the Code of Conduct.

REPORTING CHANNELS

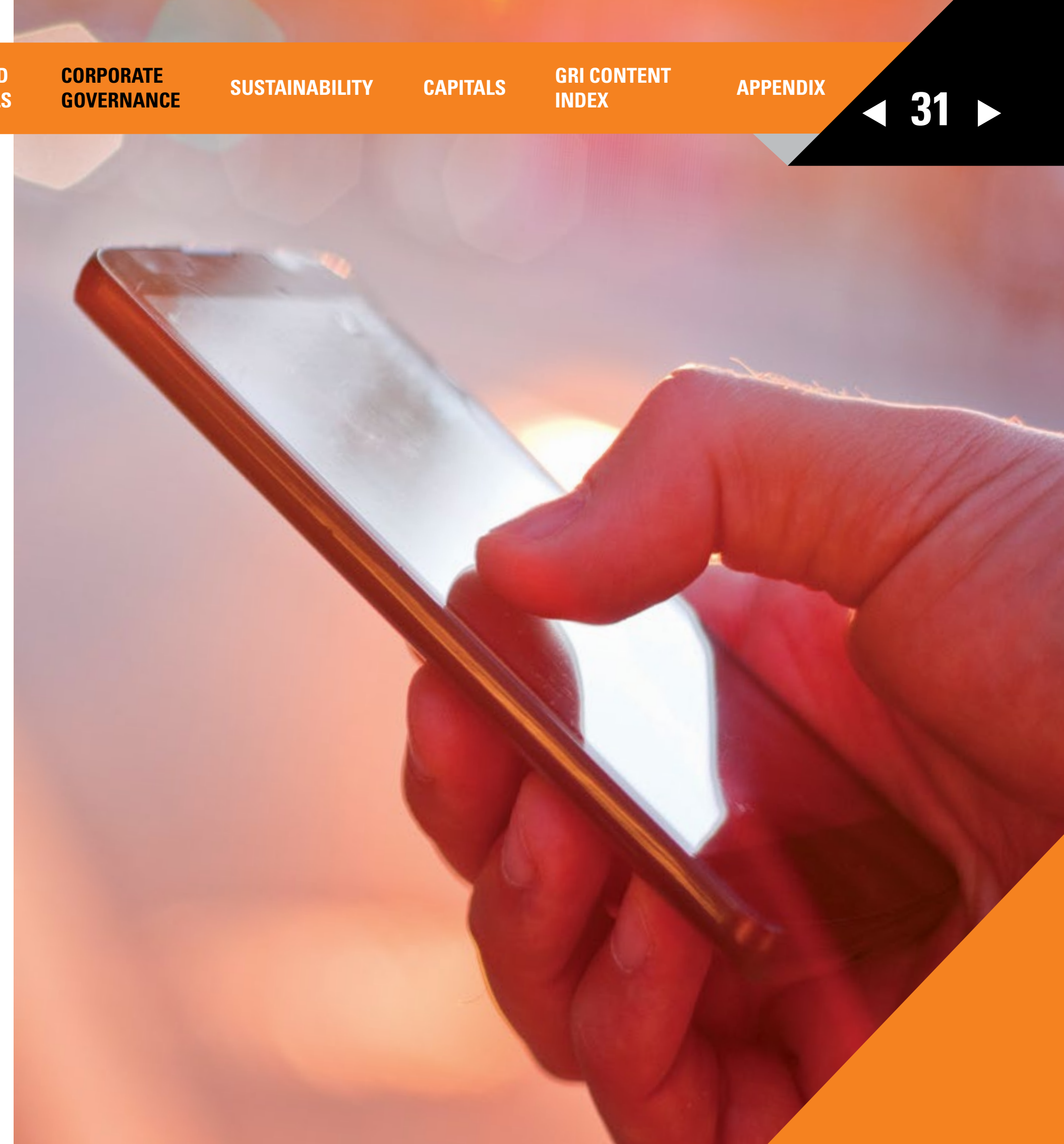
In order to gather opinions, criticism, complaints, claims, reports and personal consultation related to the business activities, Copel provides communication channels, presented below, which, in addition to fighting fraud and corruption, expand the organization's relationship with stakeholders. [102-17](#), [103-2](#), [103-3](#)

See the Reporting Channel chart:

Confidential Communication Channel

– This channel is intended to receive reports and notifications associated with non-compliance with standards and laws, especially those associated with frauds or irregularities involving financial, audit, or accounting issues.

The channel assures protection of the person's identity and answer to the report. It is available 24x7 through a toll-free number 0800 643-5665.



Ombudsman's Office – There are two channels open to all people, both internal and external, to receive suggestions, complaints and reports, which are available on business days, from 8 AM to 6 PM, via toll-free number:

- Ombudsman's Office Copel Distribuição, available on telephone number 0800-647-0606 and e-mail ouvidoria@copel.com, which is also prepared to receive complaints personally or through mail sent to address Rua Professor Brasília Ovídio da Costa, 1703, Santa Quitéria, in Curitiba - PR.
- Ombudsman's Office Copel Telecomunicações: available on telephone number 0800-649-3949 and e-mail ouvidoriatelecom@copel.com, which is also prepared to receive complaints personally or through mail sent to address Rua Emiliano Perнета, 756, Batel, in Curitiba – PR.

Committee to Investigate Claims of Mobbing (CADAM) – A Committee to attend and support all employees, victims of mobbing at work. The information is confidential, and both the reporting and the reported person have the preservation of their identity guaranteed. e-mail: cadam@copel.com

Ethics Guidance Committee (COE) – Consulting body, which assesses and offers guidance in processes associated with the ethical conduct within the Company and has up to 90 days to provide a final solution: conselho.etica@copel.com

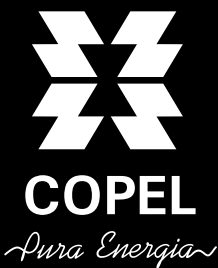
In addition to these channels, Copel is open to receive information demands, requests for services, criticism or suggestions for improvement, guidance and complaints from its audiences through different service channels.

Number of reporting channels:

- Demands handled by COE in 2017:
- Reports: 17
- Inquiries: 27

Reports received by the Confidential Communication Channel in 2017:

- Grounded: 42
- Non-grounded: 24
- Reports with lack of content or insufficient data: 9
- Pending: 7



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

SUSTAINABILITY

In the 13th B3 Corporate
Sustainability Index
(ISE) Portfolio 2018

SUSTAINABILITY MANAGEMENT

The sustainability challenges are part of Copel's strategic framework through mission, vision, values and strategic guidelines, and are aligned with business planning, linked to the strategic goal "Improve performance in governance and sustainability".

In its ongoing search to improve the Company's sustainability performance, in addition to managing aspects and indicators, Copel considers the expectations of the related parties and works to improve communication and relationship with them.

For this purpose, the Company adopts the main market practices focused on:

- Guide and assess performance, as well as compare practices to the global and national benchmarks: questionnaire from **RobecoSAM** (Dow Jones Sustainability Index – DJSI), **Ethos Indicators** for Sustainable and Responsible Business Models and the **Corporate Sustainability Index** (ISE – B3).
- Report Copel's performance and engage population: **Global Reporting Initiative** (GRI), **Integrated Reporting** (IR), **Carbon Disclosure Project** (CDP) and **Global Greenhouse Gas Protocol** (GHG).

Among the achieved results, Copel's permanence in the following stands out:

- In the 13th B3 **Corporate Sustainability Index (ISE) Portfolio** 2018;



- In Morgan Stanley Capital International Environmental, Social and Governance Rating (MSCI ESG Ratings)⁷;



- In the portfolio of FTSE 4 Good Emerging Index⁸.



⁷ It provides the institutional investors with a more solid tool for environmental, social and governance integration (ESG) to help them mitigate risks and increase long-term creation of value.

⁸ The series FTSE4Good is a tool for investors prepared by the independent index-production company FTSE, composed by The Financial Times and the London Stock Exchange. This index measures the performance of the companies in the environmental, social and governance aspects.



VOLUNTARY COMMITMENTS 102-12

Along its history, Copel has undertaken different voluntary commitments, which encourage generation of knowledge and sharing good practices. The main commitments undertaken by the Company are shown below:

- Global Compact
- National SDG We Can Movement
- Corporate Contribution to Promoting a Green and Inclusive Economy
- Statement: Call for Action for Governments in the Fight against Corruption
- Corporate Pact for Integrity and Fight Against Corruption
- Eradication of Child, Forced or Bonded Labor
- Fight against Sexual Exploitation of Children and Adolescents
- Fight against Discrimination and Valuation of Diversity
- Prevention of Mobbing and Sexual Harassment
- Respect for Free Association and the Right to Collective Bargaining
- Principles for Responsible Management Education (PRME)

Copel and its subsidiaries also participate in the following entities: [102-13](#)

Entities	Representing company
Brazilian Association of Electric Power Companies – ABCE	Companhia Paranaense de Energia – Copel
Brazilian Wind Power Association – ABEEÓLICA	Companhia Paranaense de Energia – Copel
Brazilian Telecommunication Resources Association – ABRTTELECOM	Copel Telecomunicações S.A.
Brazilian Association of Electric Power Distributors – ABRADEE	Copel Distribuição S.A.
Brazilian Association of Electric Power Generation Companies – ABRAGE	Copel Geração e Transmissão S.A.
Brazilian Association of Electric Power Transmission Companies – ABRATE	Copel Geração e Transmissão S.A.
Brazilian Association of Independent Electric Power Producers – APINE	Copel Geração e Transmissão S.A.
Brazilian Global Compact Committee	Companhia Paranaense de Energia – Copel
	Copel Distribuição S.A.
	Copel Geração e Transmissão S.A.
	Copel Renováveis S.A.
	Copel Comercialização S.A.
	Companhia Paranaense de Energia – Copel
	Copel Geração e Transmissão S.A.
Regional Engineering, Architecture and Agronomy Council of the State of Paraná – CREA/PR	Copel Distribuição S.A.
	Copel Telecomunicações S.A.
	Copel Renováveis S.A.
Regional Chemistry Council – CRQ	–
Brazilian Network Information Centre – NIC	Companhia Paranaense de Energia – Copel
National Electric System Operator – ONS	Companhia Paranaense de Energia – Copel



CAPITALS PERFORMANCE

■ HUMAN CAPITAL

■ INTELLECTUAL CAPITAL

■ SOCIAL AND RELATIONSHIP CAPITAL

■ NATURAL CAPITAL

■ INFRASTRUCTURE CAPITAL

■ FINANCIAL CAPITAL



HUMAN CAPITAL

HUMAN CAPITAL

Copel considers its human capital a determining factor both for the success in its business and to overcome the challenges generated by the recession in the Brazilian economy in the last three years. The human capital is also responsible for the transformations in the electric sector because of new technologies, with consequent demand for new services on the market. **103-1**

In the last year, one of the operation fronts was the modernization of the management with investment in the employees' professional development, increasing the individual productivity to work focused on the business sustainability and the increase of the Company's competitiveness. The front was promotion of healthy work environment, which reinforces the people's valuation and well-being, evidenced by Copel's entry in the ranking of the 150 Best Companies to Work of Guia Você S/A. **103-3**

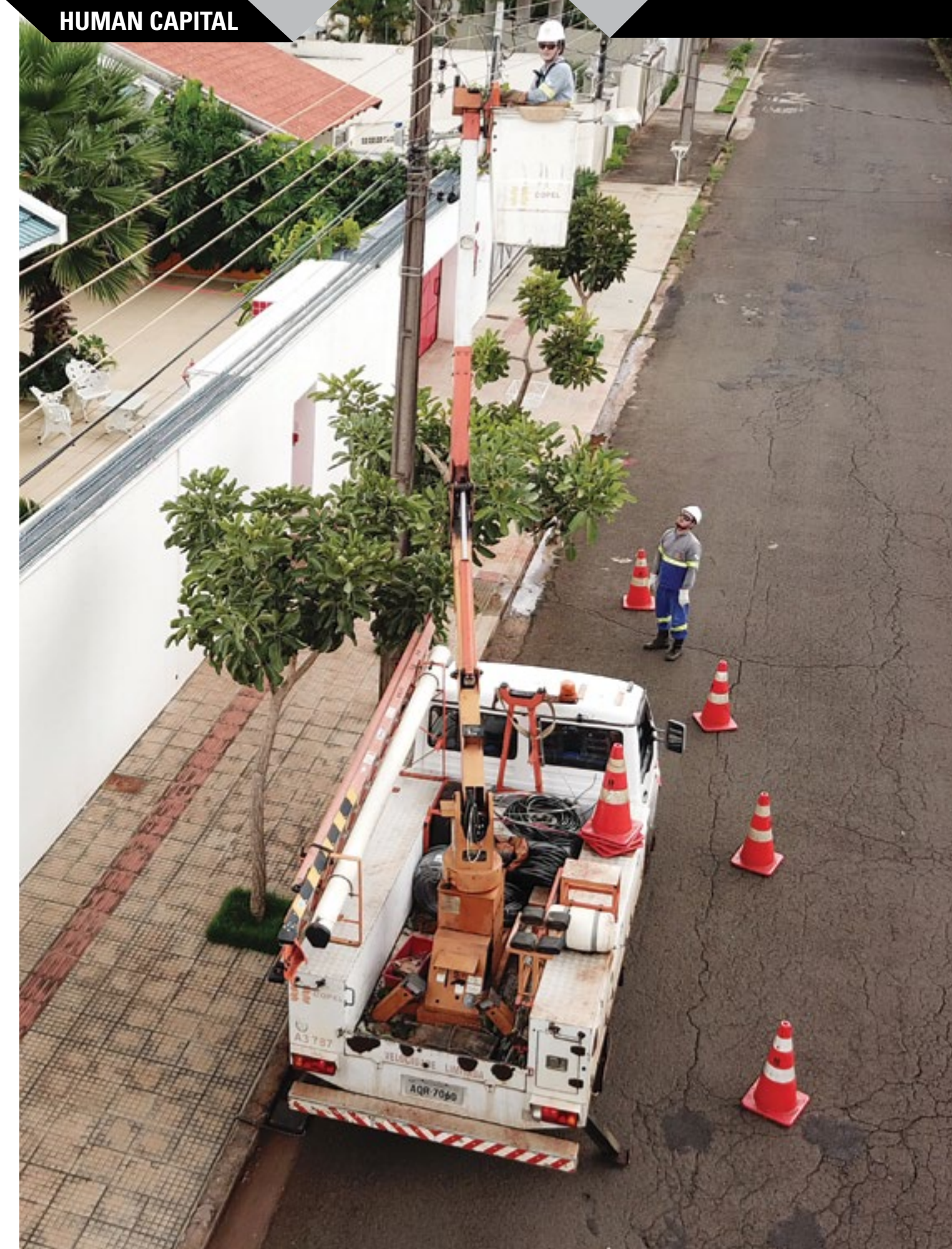
The relationship between Copel and its employees is guided by the People Management and the Labor Safety and Health Policies, by the Code of Conduct and by the Copelian's Manual. The Company's operation is equally aligned with the fundamental conventions of the International Labor Organization (ILO), the National Declaration of Human Rights and the legislation in force. **103-2**

Within the professional qualification, in partnership with UniCopel, trainings are carried out aimed both at specific skills required by the wholly-owned subsidiaries and skills demanded by the Company as a whole, such as, leadership aspects. The trainings have been carried out more in the format of Remote Studies (EAD), in conformity

with the need to reduce cost in force in the Company. **103-2**

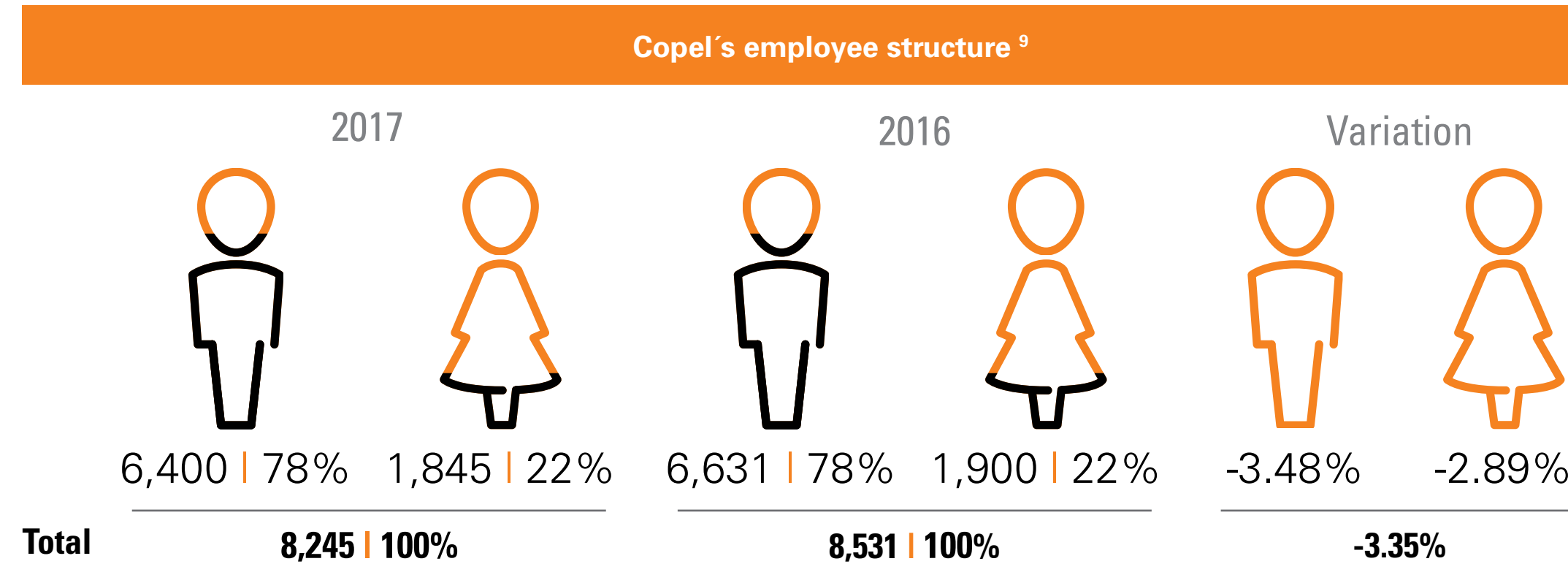
Also due to the cost-reduction program, the communication related to the Encouraged Dismissal Program (PDI) also reinforced, and in 2017, 248 professionals left based on this program. For the next ten years, the expectation for retirement at Copel is the following:

Percentage of employees, who can retire by functional category G4-EU15	5 years	10 years
By functional category	%	%
Employees	13.44	24.52
Managers	17.58	32.03
By region	%	%
South	13.78	25.11
Southeast	6.67	13.33
Center-West	1.82	7.27
Northeast	16.67	33.33
North	0	0

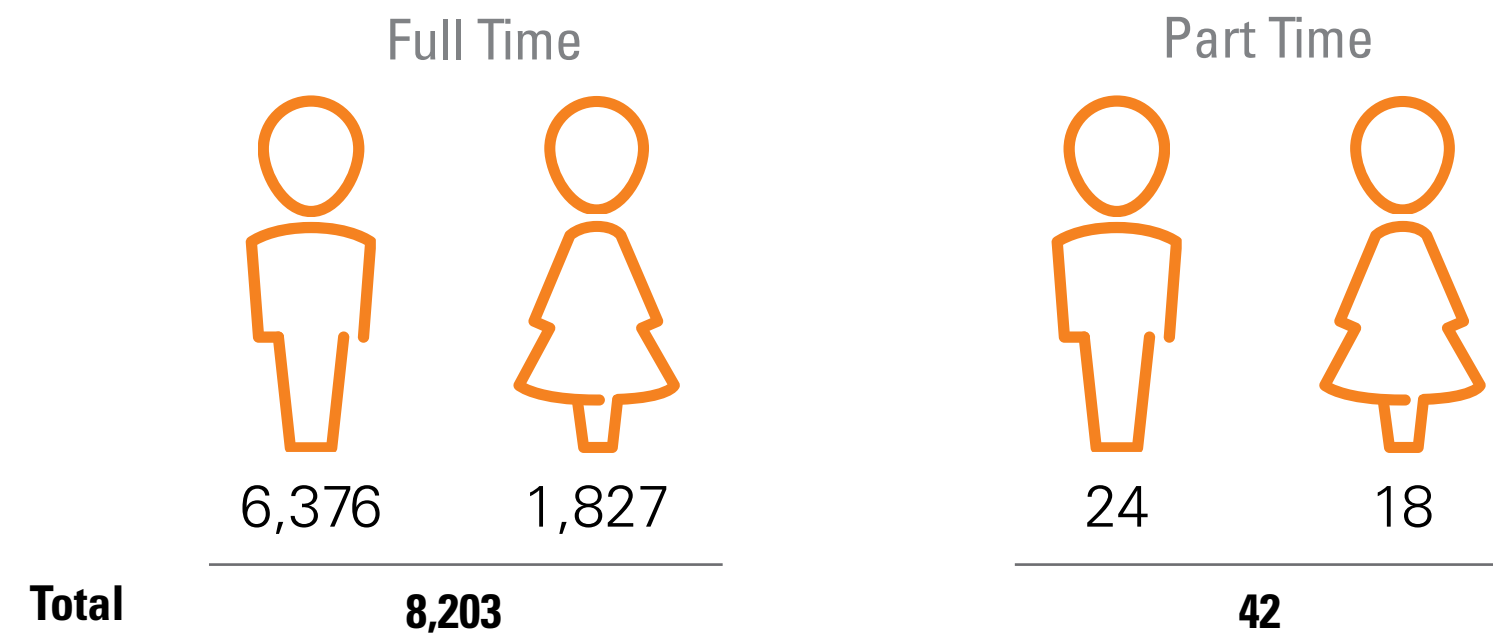


HUMAN CAPITAL PROFILE

Copel's employee structure by gender and type of contract [102-7, 102-8](#)

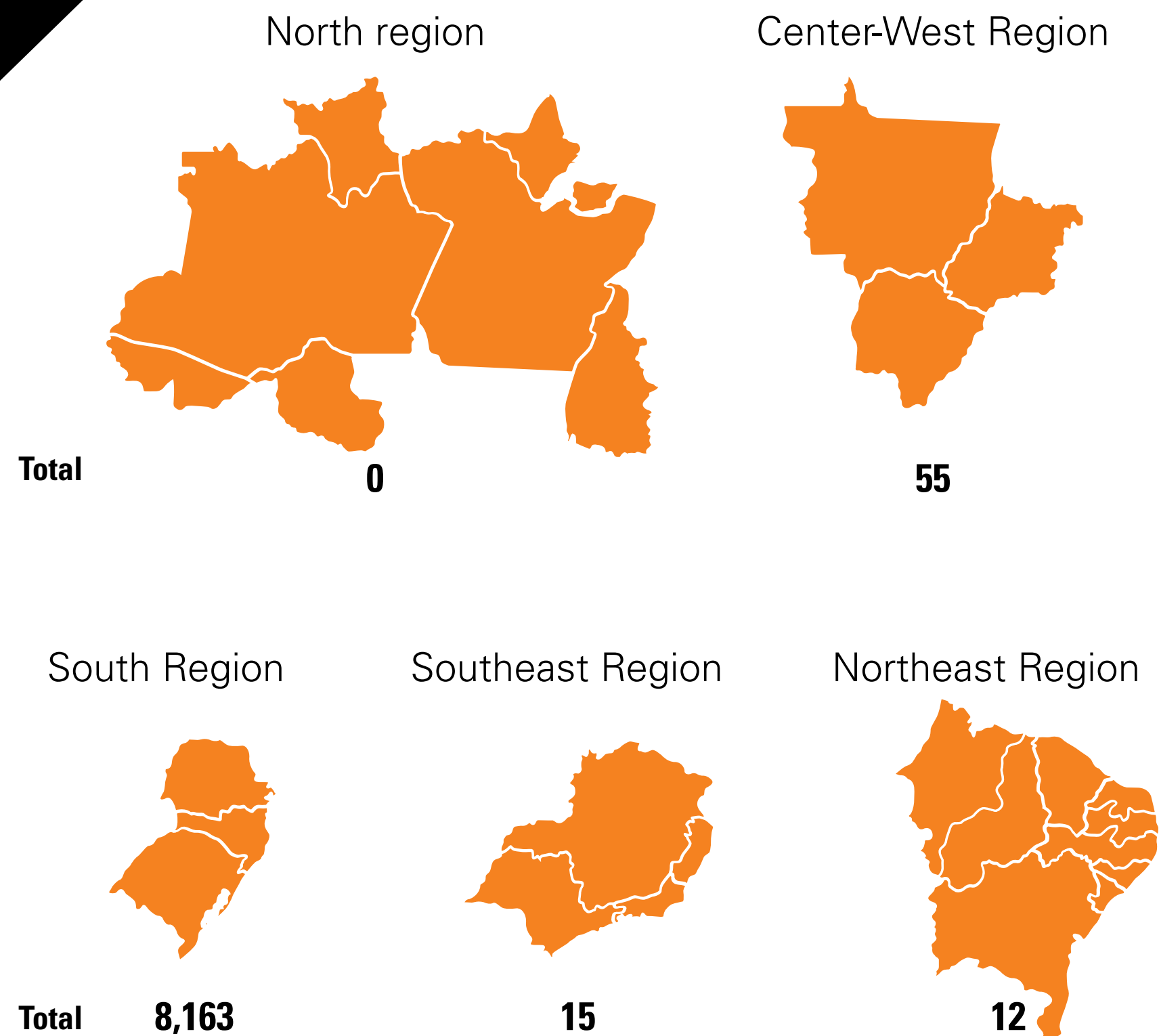


⁹ In addition to the aforementioned employees, there are directors, advisers, trainees and third-party.



Further information about Copel's People Management Policy is available on the [Sustainability](#) page on the Company's sit

HUMAN CAPITAL



Percentage of employees by age range	2017	2016
Under 30 years old	8.07%	10.05%
Between 30-50 years old	68.07%	67.78%
Above 51 years old	23.87%	22.15%
Total	100%	100%

Total employees by race and gender ⁴⁰⁵⁻¹	Female	Male
Yellow	74	204
White	1,589	5,279
Indigenous	0	9
Brown	126	671
Black	47	211
Not informed	9	26
Total	1,845	6,400

New hiring, dismissal and hiring and turnover rate [103-3, 401-1](#)

	Hiring	Hiring rate	Dismissal	Turnover rate
Under 30 years	24	2.80	22	2.68
30 to 50	42	0.73	79	1.05
Above 50	5	0.26	255	6.88
Men	56	0.84	287	2.59
Women	15	0.79	69	2.21
South Region	69	0.82	354	2.50
Northeast Region	2	22.2	0	11.11
Center-West Region	0	0	2	1.67



The most representative factor in the change of the functional structure was the Administration's decision not to fill vacancies of dismissed employees. Considering that, it was decided to optimize the structure by means of internal movement and release for replacement of vacancies only in exceptional or legally obligatory cases.

Copel keeps periodic meetings with the 19 trade unions representing the working classes that compose the structure. In these meetin-

gs, subjects of mutual interests are discussed. And in October of each year, the Company's base date, the meetings for negotiation of the Group Labor Agreement (ACT) are held.

All employees are covered by a Group Labor Agreement and have their contracts governed by the Consolidation of Labor Laws (CLT). In case of just-cause firing, the Company installs an administrative process, regulated by an internal administrative norm, which assures the employees' right to defense. [102-41](#)

HUMAN CAPITAL

DIVERSITY 405-1

Copel recognizes diversity as a relevant aspect in the valuation of its human capital, repudiating any form of discrimination involving its employees and partners. Considering the reference position of the Company in Paraná and in the energetic sector in the Country, Copel recognizes its impact on the community, as well as its legal limitations related to the implementation of actions to prioritize entry of minority representatives in the functional structure, which is provided by means of public service exam. 103-1

Copel maintains a Sustainability Policy that guides its actions; one of its pillars is respect to all stakeholders, with promotion of diversity and ethical precepts when conducting business. In 2015, the Company reaffirmed its commitment to such issue, transforming the Temporary Committee created in 2007 into a Permanent Committee for Promoting Diversity, constituted by the Holding, the wholly-owned subsidiaries and Fundação Copel, which gathers twice a month to follow up the implementation of discussed actions. Copel's communication channels also support the Committee in the management of the demands on the topic. Annually, a report with the activities during the year is published and the action plan for the following years is presented. 103-3

The Diversity Program is the main initiative of the Committee, and its role is planning, exe-

cution and follow-up of actions aimed to promotion of equal rights, opportunities and recognition for all.

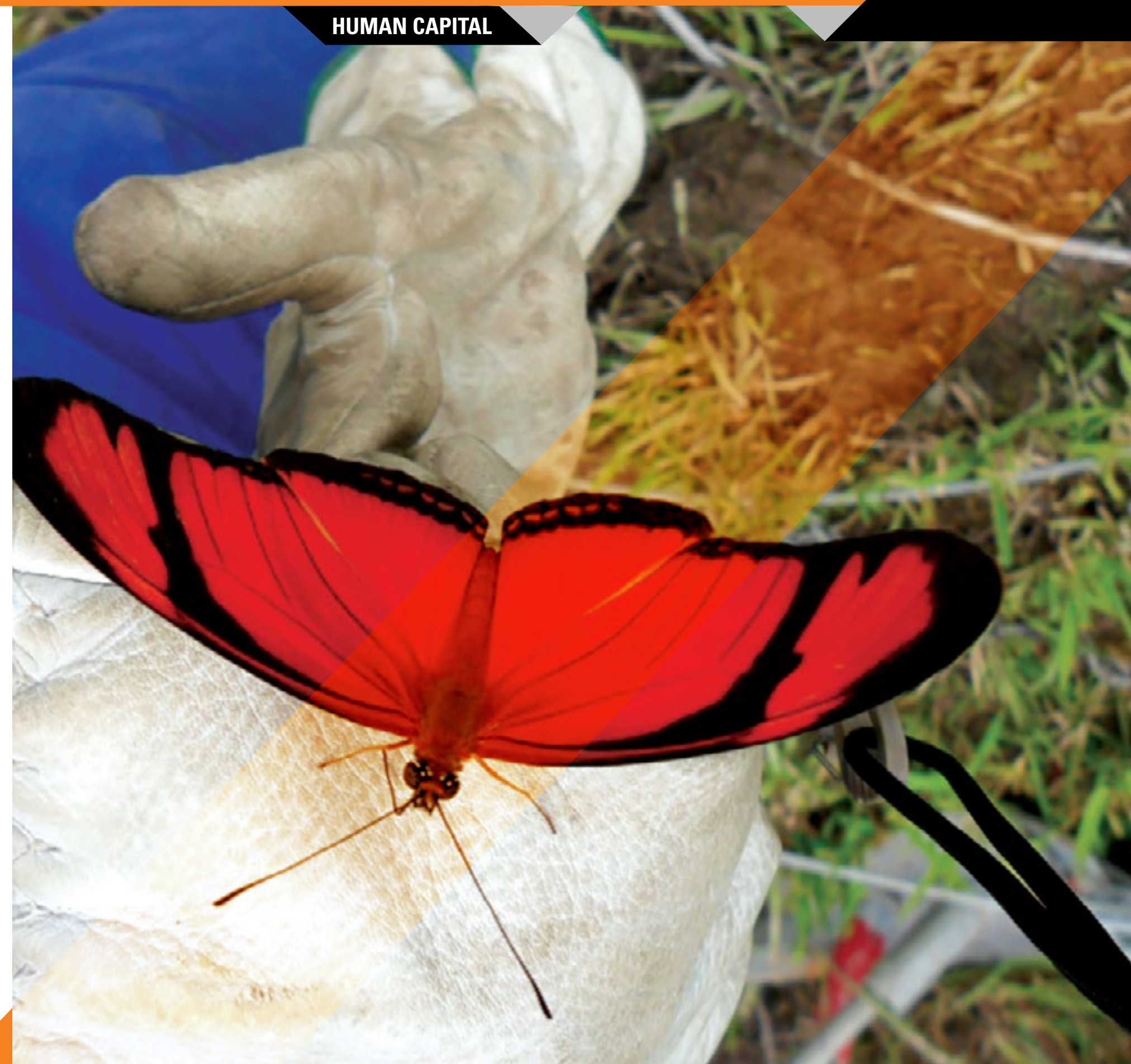
Its focus is on the vulnerable groups, subject to discrimination, especially gender, race, disability, sexual orientation, age and religion. It also seeks to promote and support internal actions aligned to the public policies and movements aimed at diversity, in accordance with Copel's values and policies. The program actions are implemented by means of partnerships with public bodies, non-governmental organizations, universities and specialists on the topic.

The entire initiative follows the Sustainable Development Goals (SDG) of the Global Compact, especially SDG 5, which provides about equality in gender and empowering women. 103-2

In 2017, ten actions were implemented by the Diversity Program, highlighting:

RECOGNITION OF THE SOCIAL NAME

A way to assure civic awareness, dignity of the human being, equality of the conditions for access and permanence in any social space. In May 2016, Copel set the administrative procedures necessary to use the social name upon edition of its NAC 040130 – Social Name. After the implementation of this initiative, four employees starting using the social name in just 18 months. 103-2



DISABLED PEOPLE (PCD)

Because it is a public company, private-public, conditioned to public service exams for hiring new employees, the Company is limited in relation to immediate compliance with Law No. 8.213/1991 (Aliquot Law). To comply with the legal obligations, Copel, upon opening of the invitations for public service exams, establishes distribution of differentiated percentage for entry of disabled people in positions, which assure accessibility and safety to the new employees. In 2017, the Company met 62% of the obligatory aliquot for disabled people. **103-2**

RELIGION

The corporate environment is composed by different groups from the society, and there, religious diversity manifests, among others. The Permanent Committee for Promoting Diversity elected religion as relevant topic to be approached within Civic Awareness. In this context, the intention is to promote discussions on the issue by means of lectures and other forums. **103-2**

For 2018, actions are scheduled in the following operation fronts:

- Course for Copel managers on gender and race and their inequality in the labor world (in person and/or EAD);
- Obtaining approval from the Administration (Executive Office and Board of Directors) to adopt criteria for selection aimed at raising women to the Company's high administration;
- Two lectures on topics related to Diversity;
- Obtaining the Seal of the Program Pro-Equity in Gender and Race of the Federal Government;
- Two new support rooms for breastfeeding at Copel's facilities; and
- Communication plan related to Prevention of Sexual Harassment in the Company.

BENEFITS AND REMUNERATION



The employees are provided with Position and Salary Plan, which sets careers with remuneration and benefits compatible to the values in force on the market according to the position, the title and the education and qualification level. **103-2**

The Human Resources area is responsible for the management of this process, which aims to:

- Identify positions and the roles necessary for the development of the Company's activities;
- Define the education level required for the performance of the activities at each position and role;
- Establish the levels of maturity and complexity of each position and role required to meet the demand of each job position;
- Establish rules for the functional (vertical) and salary (horizontal) movement of employees;
- Demonstrate opportunities for career growth and development.



Further information about the [Diversity Program](#) and [Accessibility at Copel](#) is available on the Sustainability page in the Company's site.

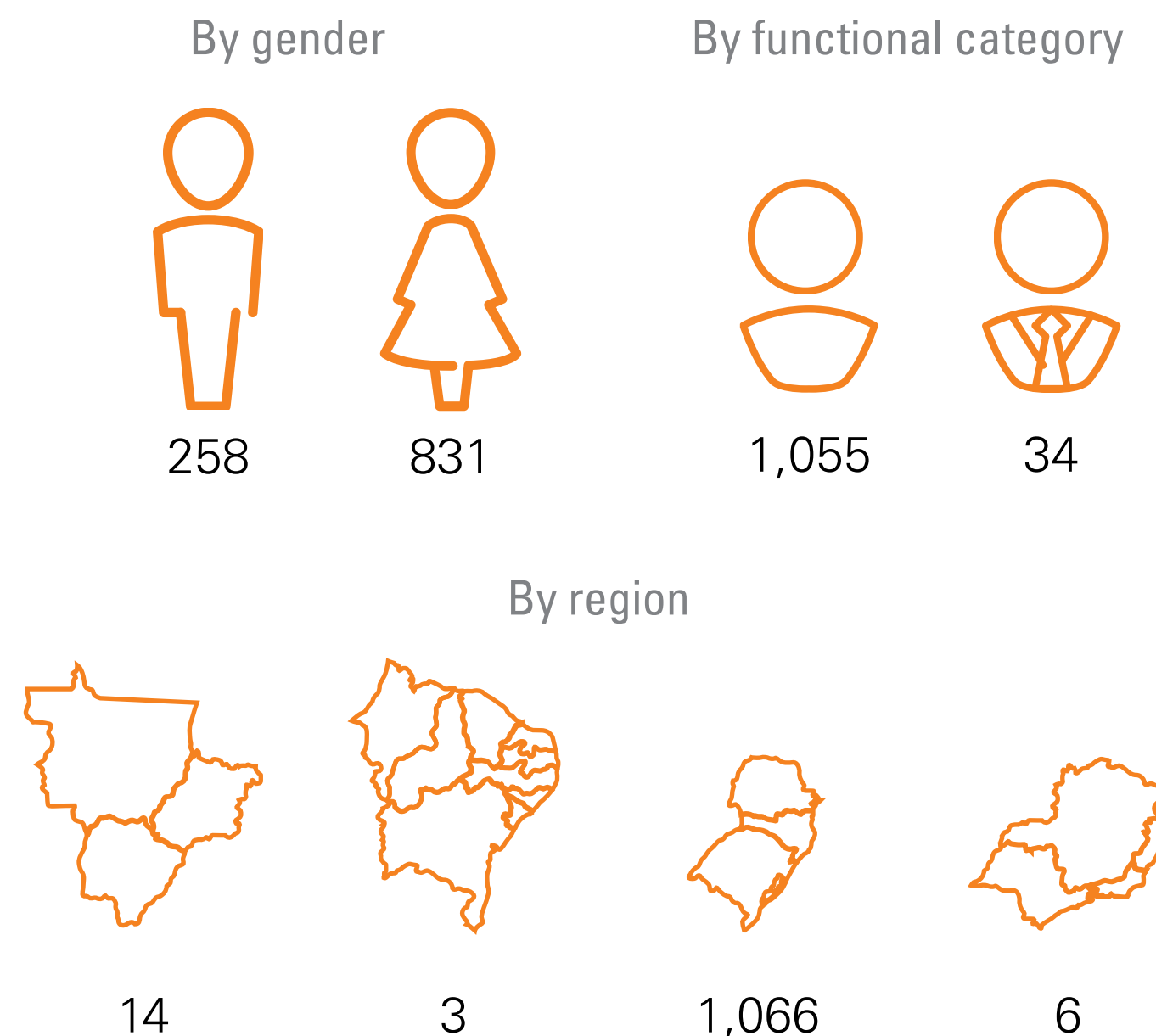
BENEFITS 401-2

O pacote de benefícios oferecidos pela Copel vai além do pre-The benefit pack offered by Copel is bigger than that provided in the legislation in force, and it is compatible to that of the best companies. The benefits are granted to all employees, regardless of their working hours.

To demonstrate the annual amounts received by the employees in financial and non-financial benefits, the Company implemented Copel's Benefit Balance (BBC), which lists the benefits of each employee at Copel and its wholly-owned subsidiaries in a stratified way, as follows: 103-3

Meal voucher, Snack voucher, Daycare allowance, Extended Maternity Leave, Extended Paternity Leave, Profit Share (PLR), Anticipated 13th Salary, Education allowance, Advanced Payment for Vacation, Vacation Allowance, Flexible Working Hours, Allowance to Disabled People, Allowance to employees with disabled dependents, Professional Rehabilitation and Re-adaptation Program, Award for Traffic Safety, Complemented Disease allowance, Chemical Dependency Program, Vaccination. Quality of Life benefits (Internal Games, Sesi Games, Pre-Retirement Program, Energy and Health Space, Copel's Choir, Working hours to practice volunteer activities, in addition to benefits provided through Fundação Copel (Private Social Security, Savings Plan, Medical, Hospital, Dental and Pharmaceutical Assistance Plans and Loans at lower interest rates than those on the market.

Education allowance is a highlight among the Company's benefits: 1,089 employees received that allowance in 2017, at the amount of BRL4,833,572.49, as follows:


PATERNITY LEAVE 401-3

All own employees at Copel have the right to paternity leave. The company adopts six-month benefit for women and up to 20 days for men. Furthermore, for women, when returning from the leave, the working time are reduced to six hours for sixty days for breastfeeding. In 2017, 263 men and 113 women used the leave, only one employee did not return after the leave period, which represents 100% and 99.12% return rate, respectively. In relation to the permanence at the Company twelve months after returning from leave, 278 men and 83 women remained, i.e., retention rate of 98.58% and 98.81%, respectively.

REMUNERATION 102-38, 102,39, 103-3, 202-1

Within remuneration, the proportion between the total annual remuneration of the best paid individual in the Company and the average total annual remuneration of all employees is 6.99. The variation between the lowest salary and the minimum salary¹⁰ is 1.88 for men and women¹¹.

The percentage of increased remuneration received in 2017 compared to the previous year was 9.15% for the best paid employee and 10.62% for the other employees, considering the salary, severance additional pay, group agreement, additional pay pursuant to the performed roles and integration of judicial meal allowance.

About the remuneration of the outsourced work force, Copel's suppliers shall sign Term of Awareness and Commitment, destined to assure minimum remuneration standards and observe the working hours provided in the labor legislation.

¹⁰ National minimum salary on 12/31/2017: 937.00. Copel does not use the minimum salary as a base to define salaries.

¹¹ The calculation of the proportion between the remunerations is done based on the salaries of the employees working full time.

PERFORMANCE MANAGEMENT

Since 2013, Copel's Performance Management is carried out through the Our Energy Program, which is improved annually following the best market practices, such as internal process learning, presented by the Holding and the wholly-owned subsidiaries. In 2017, 100% of the employees considered eligible were submitted to performance assessment. [103-2](#)

A formal document is issued for the assessment, which defines the assessment period and the procedures to be followed. The Human Resources area coordinates and monitors the application of the assessments, which is done through an electronic system, and discloses partial information about the process progress and general guidelines by e-mail. After the meeting for assessment of each employee, the manager registers in the assessment in the system, and a message is automatically sent to each employee by e-mail, informing about their process. At the end of the assessment, system reports inform the total number of assessed employees. [404-3](#)

PROFESSIONAL DEVELOPMENT [103-2](#)

The employees' professional development is a strategic factor for Copel, providing increase of productivity, gain in competitiveness and well-being and safety for all.

A set of norms and guidelines provided in the Corporate Education Policy defines what the training and development initiatives and targets will be. In this context, in 2017, Copel invested in trainings aimed at governance, risks and compliance, and mainly, in the execution of the leadership program, evidencing growth in the average training hours per employee when compared to 2016. Aligned to that, there is management to "Develop leaders focused on people management and value generation," whose indicators is the management training effectiveness rates stipulated at 85% for 2017 and with expressive result achieving 92%.

The trainings offered by the Company aim also to engage the employees to commit to strategic corporate targets and goals, which are broken down as follows:

- Corporate Programs: education actions aimed at the whole Company;
- Trainings for qualification: destined to basic qualification to perform the role;
- Compulsory trainings: courses destined to some activities;
- Trainings for professional improvements and events: seminars, lectures, workshops and congresses, among others.

In the business structure, UniCopel is superintendence responsible to coordinate the corporate education trainings, which encompass, among others, the Integrity, Sustainability, Leadership and Preparation for the Future Programs, highlighting the commitment undertaken to the UN Principles for Sustainable Executive Education (PRME), which involved conduction of equal training initiatives for the Company's executives, highlighted in this report on page 47.



Further information about Copel's Corporate Education Policy is available on the [Sustainability page](#) in the Company's site.



INVESTMENTS IN HUMAN CAPITAL

In 2017, BRL7.58 million were invested in people training and development. Totally, 2,781 short training events were held with 41,407 participants, totaling 459,782 training hours, with 53.35 average training hours per employee and 119 participations in long events (language and post-graduate courses). [103-3, 404-1](#)

Average training hours by gender and functional category*

Men	58.40
Women	39.64
Operational	114.46
High school level technician	73.31
High school level professional	31.18
Higher level professional	95.73

* The number of employees considered is different from that shown in the table of 12/31/2017. For training, it was considered the total of 8,618 employees, as we consider all employees who passed through the company in 2017

The difference between the average training hours per gender is pursuant to the fact that Copel has higher number of male employees, with a part of them allocated in roles, which require compulsory trainings. Women are mostly classified in high school level career, where the training hour load is lower than that of the legally obligatory or higher education courses.

EMPLOYEE QUALIFICATION AND TRAINING PROGRAMS

[G4-DMA-EU14, 404-2](#)



TRANSFORMATIONAL LEADERSHIP PROGRAM

Comprehensive program for qualification of the Company's management body by means of in-person and EAD trainings. In 2017, 453 managers were trained, 88% of the management population. Each participant had 96 training hours in person and 50 training hours EAD. The content approached topics, such as leadership, strategy, people and team management, management skills and elements from the management essence. Furthermore, Copel promoted two leader meetings, where all managers were gathered with the Company's Board of Directors to discuss the relevant subjects for the business.



TALENT BANK

Copel Distribuição has a talent bank, established by mapping professionals with potential for leadership positions according to criteria as performance, maturity and time to retirement. Such professionals get specific trainings, such as mentoring and coaching. In 2017, 27 out of the 210 employees in the talent bank were designated to management level positions.



TALENT MANAGEMENT PROGRAM

Instituted by Copel Geração e Transmissão, it seeks to improve the people management process to promote talent recognition and valuation. Through the Program, it is possible to identify talents for strategic positions, such as supervision and coordination of projects, identify successors and implement competency development actions.



CALIBRATION COMMITTEE

A committee destined to align the understanding of the people responsible for the employees' assessment regarding the management behavior, comprehension of the requirements for assessment and reduction of subjectivity in the performance assessment process. The cases selected by the committee are handled to provide the managers' professional development and growth.

HUMAN CAPITAL



ANIMA PROGRAM

With the challenge of building a new participatory management model in 2015, Copel launched Anima, an innovative program proposed by the Presidency to permeate throughout the groups closest to the business operations and constituted based on eight projects.

With this program, it is expected to intensify the production and the flow of ideas and action plans in all areas of the Company, where each of the 8.5 thousand employees is encouraged to imagine alternatives and solutions to aspects such as innovation, collaboration, proactivity, leadership, synergy between the Holding and the businesses, satisfaction, well-being, and labor safety, in addition to providing, in a pioneering spirit, occupation of empty spaces in the market and in the society.

This participative model shall be the source for projects, which aim revolutionize the way to work at the Company, granting higher satisfaction, productivity and dialog to the employees' work.



FOREIGN LANGUAGE PROGRAM

A program destined to employees, who perform activities requiring foreign language. Established in 2012, it reimburses part of the amount of the course as a compensation for performance and achievement of a knowledge target by the employee. In 2017, 94 employees participated in the Program in German, Spanish and English courses.



EDUCATION ALLOWANCE

Copel reimburses up to 70% of the monthly installments of post-graduate courses, with the amount limited to BRL 840.46. This credit can be renewed after a grace period, provided that the second post-graduate course is of interest to the Company's operation. In 2017, 1,064 employees were benefited, representing reimbursement of BRL 4.72 million.



BASIC QUALIFICATION COURSES

They qualify the employees – beginners or veterans – for a new activity. The main courses are Distribution Electricians Qualification Program (FBED), Basic Qualification Program for Transmission Operation and Maintenance (PFBOM) and Power Plant Technology (TECUS). In these courses, the recently-hired employees get initial training necessary for the adequate performance of the position, with approximate total load of 200 hours.

In 2017, 1,064 employees were benefited with education allowance



POWER GENERATION AND TRANSMISSION TECHNICAL MEETING (ETGET)

Technical Meetings related to Operation and Maintenance (O&M) are held by Copel Geração e Transmissão to promote exchange of technical experience and technical, administrative and management knowledge.



INOV+ GET PROJECT

An event of Copel Geração e Transmissão, which gathers innovative practices, which help optimizing processes and resources to improve the Company's results and avoid unnecessary costs, among other benefits. The Project started in 2015 and includes lectures about innovation.



PARTICIPATION IN EVENTS

Copel considers that the employees' participation in external events is a way to update and have access to knowledge. In October 2017, Copel Geração e Transmissão coordinated the XXIV National Seminar on Production and Transmission of Electric Power (SNPTEE). This event is promoted at every two years by Cigré-Brasil, which the largest electric power generation and transmission area in the country. There, topics considered by the sector as the most relevant for its development are discussed. About 500 Copel employees participated in the 2017 edition.



CONTRACTORS' EMPLOYEES

Copel offers training to contractors' employees as well, upon contract provision or because of the Company's interest, aimed at integration and specific activities to be carried out by the professionals during their service at the Company.



PRE-RETIREMENT

In 2017, no actions were carried out for employment continuity in case of retirement or termination of the employment contract. By 2020, approximately 750 employees shall file request for retirement. To attend these people and facilitate employment after retirement for those, who wish to work, a new edition of the qualification program will be started in 2018.

HEALTH AND SAFETY 103-3, 403-2

	2017				2016			
Frequency rate (injuries)	HOL	GeT	DIS	CTE	HOL	GeT	DIS	CTE
Men	-	1.9	6.69	0.86	-	3.26	7.48	0.88
Women								

	HOL	GeT	DIS	CTE	HOL	GeT	DIS	CTE
Occupational disease rate								
Men	-	-	0.51	-	-	-	0.86	-
Women	-	-		-	-	-		-

	HOL	GeT	DIS	CTE	HOL	GeT	DIS	CTE
Absenteeism rate								
Men	-	1.46	2.83	1.14	1.48	21	2.8	1.18
Women	0			1,13				

	2017				2016			
Number of fatalities	HOL	GeT	DIS	CTE	HOL	GeT	DIS	CTE
Men	0	0	0	0	0	0	0	0
Women	0	0	0	0	0	0	0	0

	HOL	GeT	DIS	CTE	HOL	GeT	DIS	CTE
Number of days lost								
Men	-	46	1,240	-	-	21	2,150	-
Women	-		50	-	-		5	-



For Copel, the workers' health and safety is a strategic subject included in the Labor Health and Safety Policy, which presents the guidelines to be followed by all employees and workers and guides on the fulfillment of legal requirements and dissemination of prevention culture to mitigate risks in its power generation, transmission and distribution operations and in the telecommunication activities. **103-1**

Copel's Labor Health and Safety Policy defines the operation guidelines for management and prevention of risks for its workers' safety and health. Such policy is prepared by the Labor Safety and Health Coordination (CSST), together with the labor safety departments of the wholly-owned subsidiaries, which identify risks, develop preventive actions and follow up the indicators associated with this aspect.

In addition to the guidelines in the policy, the Company has a specific Labor Health and Safety Manual for outsourced professionals, which is a part of all service provision contracts.

Under the contract, the outsourced companies shall also apply the guidelines provided in the Labor Safety and Health Instruction Guide for Contractors (available online) and demon-

strate satisfactory performance in relation to their employees' safety and health. **103-2**

A Copel provides lectures and trainings for its employees and the contractors' employees. The number of contractors, who have gotten any health and safety training in 2017 is shown in the chart below. **G4-EU18**

ACTIONS DONE:

Training and qualification: focused on prevention of diseases and work accidents, programs, such as Training of Field Inspectors and Training for Use of Preliminary Risk Analysis are carried out.

Health promotion: own occupation health service offered to the employees, complemented by Fundação Copel. It enables investigation and expanded medical follow-up, exceeding the legally provided assessments, with diagnostic and prevention exams for different diseases, including those that might affect capacity and productivity at work and others related to gender or age range to improve quality of life.

Total workers trained on labor health and safety	Number
Holding	325
Distribution	5,367
Generation and Transmission	2,319

Electricians Rodeo: an event, which gathers utility companies from all over the country with the purpose to promote labor safety culture and development in the performance of the electrician role. In the 2010 and 2014 editions, Copel Distribuição was champion of the national rodeo and in 2012 came in second place. In the last edition, in 2016, the teams of Copel Distribuição took the top three places on the podium.

Trainings and integration: all contractors participate Occupational Health and Safety Integration and exhibit about Risk Assessment carried out for the activities in question. Control of the minimum manda-

tory training for working with electricity is done through a proprietary application that contains information about the contractors' employees and the agreements.

Preserving Life (PPV) and Behavior Verification (VCO) Programs: Field inspection of employees and service providers hired by the Company, destined to monitor the fulfillment of the technical and the safety procedures during the execution of their activities. A labor safety technical or specialist from the area itself follows the teams up and issues a report indicating the found failures.

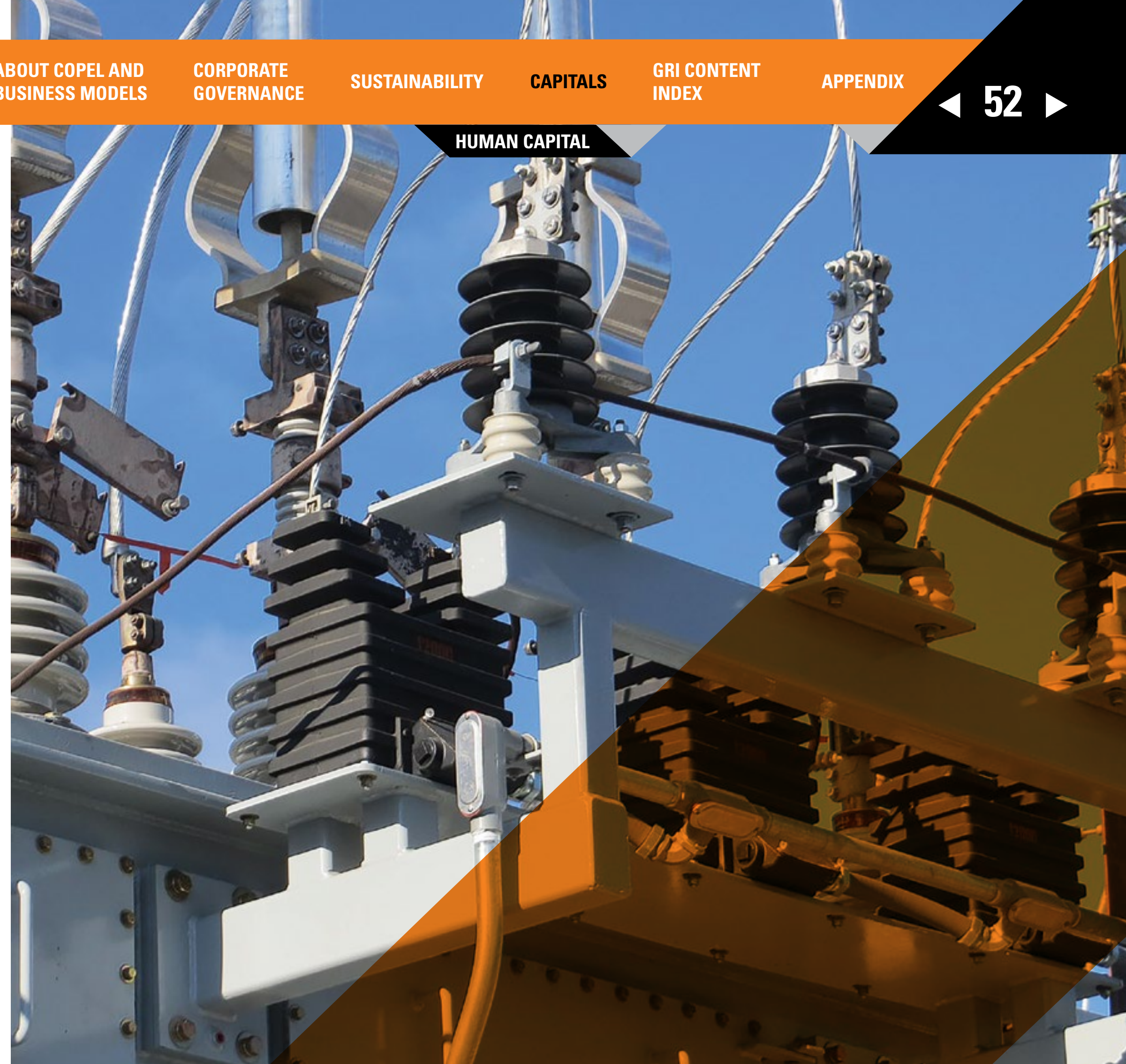
HUMAN CAPITAL

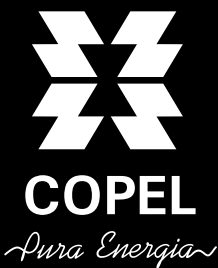
In relation to the power consumers of Copel Distribuição, the following numbers of accidents were recorded: **G4-EU25**

	2016	2017
Number of accidents with the population	38	45
Number of deaths with the population	14	19
Number of cases related to health and safety, including occupational diseases.	15	15

The main initiatives adopted to avoid occurrence of accidents with power are listed below:

- Lectures in schools, companies and the community in general, alerting on the main risks with electric power;
- Presence of Copel Distribuição in events with big flow of people, disclosing safe use of electric power;
- Disclosure of message through radio stations;
- Participation in the National Week for Prevention of Accidents with Electric Power promoted by Abradee
- Correction of situations with risk to the population found out by means of Risk Hunting actions.





COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

INTELLECTUAL CAPITAL

RESEARCH, DEVELOPMENT AND INNOVATION G4-DMA EU8

The Company's Innovation Coordination is responsible to establish policies to support the structured development of research, development and innovation in the Company, subordinated directly to the Presidency because of its strategic character for the future of the business. 103-1

Copel Distribuição and Copel Geração e Transmissão also maintain areas dedicated to Research and Development management and support in compliance with the guidelines set in Copel's Sustainability Policy and in conformity with Law No. 9,991/2000, which defines the rules for annual application of minimum percentage of the Net Operational Revenues (ROL) in RD&I projects by the utility and authorized companies from the electricity sector.

INNOVATION PROJECT MANAGEMENT

Innovation Portal

To follow up the development of the RD&I programs, the Innovation Coordination created the Innovation Portal, which gathers all information about the budget execution of the projects under development. In addition to enabling follow-up by the Coordination, the Portal is a support tool for the projects managers, who, based on the available information, can define investment adaptation measures for their projects. The purpose is the targets to be met 100% monthly. 103-2

The investment measurement is done by means of an accounting indicator and follow-up of the investment compared to the innovation goals

stipulated by Aneel and related to the concession contracts. All RD&I project shall be approved by Copel and Aneel to have their investments recognized as such, considering that Aneel is responsible for the definition of the procedures for evaluation of the initiatives and inspection of the application of the funds by the Company **103-3**

The Portal data is available on the intranet and can be checked throughout the Company.

INCENTIVE TO INNOVATION

As a policy for incentive to innovation, Copel gives awards to employees, who present proposals for innovative projects with potential to create value for the corporate business and the society, and which are aligned to the Company's Strategic Planning. Another incentive is giving extra time to employees, who participate in RD&I projects officially registered at Aneel.

The presentation of the projects is done by open model, where proposals for RD&I projects can be presented at any time (con-

tinuous flow). The interested people shall fill in the Initial Project Proposal - PIP form available on the internet for proposals presentation by employees, research institutions and the population in general. The proposals are evaluated according to parameters, which encompass Aneel criteria for originality, applicability, relevance and cost reasonability, as well as the economic and the social-environmental impacts, in addition to professional and technological qualification of the agents involved in the project.

Copel considers that the innovation impacts are evidenced by increase in productivity, improvement in the execution of the processes and increase in the quality of products and services. As a result from the RD&I projects, 15 petitions for product patents have already been filed at the National Industrial Property Institute (INPI). In addition to those, Copel has two more international petitions for patents in the United States and Europe through the Paris Convention of the Community (CUP).

INTELLECTUAL CAPITAL



INVESTMENTS IN RD&I

In 2017, Copel's RD&I program has provided BRL 36.9 million for projects divided in the following topics: energetic efficiency; alternative electric power generation sources; management of watershed and reservoirs; environment; measurement, billing and fighting commercial losses; electric power system operation; electric power system planning; supervision, control and protection of electric power systems; safety; quality and reliability of the electric power services; RD&I management and other important topics, since studies about nanotechnology applied to insulation oils, to smart grids and power storage. [103-2](#)

The RD&I projects developed by Copel present direct application of their results by means of new equipment or methodologies. Furthermore, they shall contribute to the qualification of professionals through post-graduate courses associated with the projects.

In 2017, the Company's funds in this area were:

Copel Geração e Transmissão: applied BRL 17.9 million in 29 RD&I projects, seven of which strategic, whose topics have been established by Aneel through Project Calls. The Company participated in 11 projects in cooperation with other companies, in addition to applying BRL 600 thou-

sand in management innovation projects, totaling BRL 18.5 million invested.

Copel Distribuição: in 2017, invested BRL 18.4 million in 37 RD&I projects, three of which were completed along the year, in addition to cooperating with other companies from the electric sector in eight other projects, two of which strategic, whose topics have been established by Aneel through Project Calls.

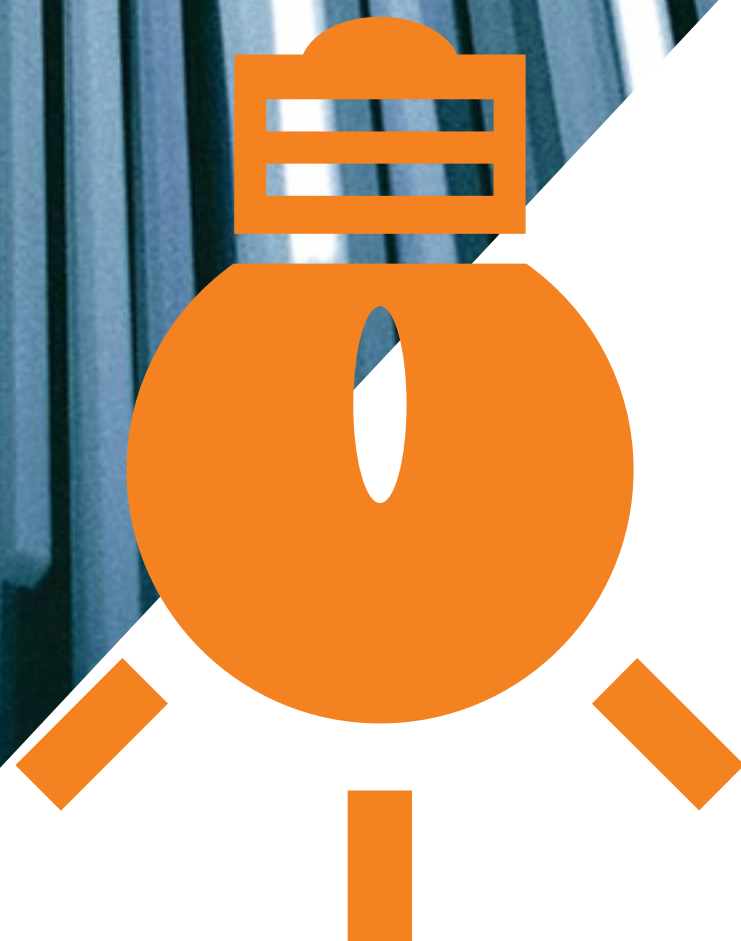
Copel Telecomunicações: in 2017, the Tech-Month event was held with the purpose to follow up the future trends in the sector at the biggest suppliers in the telecommunication area, stimulating the creation of new products and services.

During the next three years, Copel will invest BRL 52 million in innovating projects for renewable power generation and equipment replacement to make the use of electric power more efficient. The projects will be carried out in five university centers in Paraná approved in public call opened by Copel's Energetic Efficiency and Research and Development programs, regulated by Aneel. The institutions will have a year to carry the energetic efficiency projects out, followed by the period of one year to monitor the results. There will be three years to execute the research and development works.

DETAILS OF INVESTMENTS IN RD&I:

Investment in Research, Development (by topic)	GeT Value (BRL)	DIS Value (BRL)
Energetic Efficiency	532,572.24	-
Alternative sources for electric power generation	2,545,504.14	657,768.18
Watershed and Reservoir Management	1,346,063.64	-
Environment	1,997,399.46	1,095,404.17
Measurement, billing and fighting commercial loss	-	1,246,050.69
Electric Power System Operation	4,567,137.64	2,181,413.74
Electric Power System Planning	1,214,337.24	767,103.58
Supervision, Control and Protection of Electric Power Systems	2,979,309.77	4,967,831.14
Safety	2,207,447.55	5,240,957.57
Quality and Reliability of the Electric Power Services	53,541.12	72.00*
Others	454,227.12	1,438,980.23
RD&I Management	590,161.20	852,640.50
Total Invested	18,487,701.12	18,448,221.80

*A big project about "Quality and Reliability" with investment started in the end of 2017 at Copel DIS, and resulting in a low value for this period.



RD&I HIGHLIGHTS:

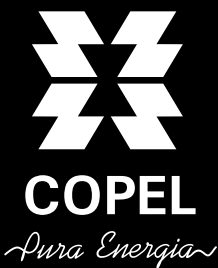
- The project for Technical and Commercial Arrangement of the Electric Power Distributed Generation from Biogas resulting from Residual Biomass from the pig farm properties in the municipality of Entre Rios do Oeste in Paraná. The proposal of this project is to drive electric power generation from biogas in Brazil, especially in the regions with high concentration of residual organic matter produced in a decentralized way and without adequate treatment. The project contributes to energetic efficiency and favors the mitigation of environmental liabilities and preservation of their water resources, energetic recovery of the pig farms, environmental and energetic sustainability of the agribusiness, adding value for the rural properties and stimulation to the creation of new rural economy, with income generation supported on biogas. The project also generates improvement in qua-

lity of life and strengthening of the pig farming, in addition to contributing to the dissemination of the culture to use distributed generation to complement power in unfavorable hydrological periods.

- Another example of success is the project Automated System for Distribution Protection Order Management (GEPROTEC), which enables checking the technical feasibility for implementation of an engineering network for access to equipment in electric power distribution substations, using wireless communication networks in case of equipment, which can be re-parameterized only through serial ports, or sharing of ethernet optical cables for newer equipment, or equipment, which already complies with the IEC 61850 standard. As a whole, the engineering network together with higher precision and agility in the process of definition of the

protection adjustment parameters for the use of the GEPROTEC system, will enable also reduction of the DEC, FEC indexes and the average service time (TMA) due to reduction of the size of the sections of feeders switched off at the time of failure in the power supply, and consequently, reducing the number of disconnected customers, which leads to increased billing and improvement of the Company's image before the society.

- System for analysis and diagnosis of HV capacitor banks AT – MEDICAP, which, in the first phase, enabled the development of equipment, which facilitates and speeds up the tests on capacitor banks, in addition to having lower cost than the similar systems existing on the market. In the second phase of the project, under contracting, the studies will be continued aiming at its insertion in the market.



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

SOCIAL AND RELATIONSHIP CAPITAL

SOCIAL AND RELATIONSHIP CAPITAL

Copel considers proactive and transparent relationship with the stakeholders fundamental for the development and the sustainability of its business, as provided in the Company's Sustainability Policy. Aligned to this assumption, the wholly-owned subsidiaries inserted the implementation of processes for identification of stakeholders and definition of the engagement ways to be adopted in the respective agendas. For working in markets regulated by Aneel and Anatel, Copel is directly impacted by the quality indicators of the provided services. [102-40](#), [102-42](#), [103-1](#)

In 2016, Copel Distribuição, by means of the methodology presented in the AA1000 Standards and benchmarking material, defined its stakeholders and the main indicators to be presented for each one. For 2017, the list of stakeholders was maintained as presented hereunder: [102-43](#)

Holding

Copel's subsidiaries are committed to the Holding to contribute to the maximization of the Company's value in a sustainable way. This commitment is signed in a Management Contract between the parties. This stakeholder's need and ex-

pectation are identified in the Strategic Planning, in the meetings of the Executive Office (Redir) and the meetings of the Board of Directors (CAD).

Employees

The Company adopts different communication channels with its employees¹², with the purpose to identify their needs and expectations, highlighting professional development, remuneration according to the market, transparency and equity in the actions developed by the Company.

Customers

The actions aimed at the customers intend to meet their main expectations: to have power and internet (Copel Telecom), free of errors bills and quality service. Periodically, satisfaction surveys are carried out with customers of Copel Distribuição and Copel Telecomunicações, presented in this chapter.

Suppliers

The alignment Copel's operation with the needs and the expectations of its suppliers is essential for the regularity and the quality of the provided services. Working on the contract management in an isonomic way, Copel keeps

regular contact with its suppliers, providing different relationship channels, such as e-mail, telephone and correspondence service, in addition to specific space for the suppliers in the [corporate site](#)

Regulatory Bodies

In the energy sector, Copel is legally obliged before the regulatory bodies to develop its actions in accordance with the standards, the regulations and the applicable legislation. In the telecommunication sector, the Company shall also carry its activities out in accordance with the respective regulatory frame. Regularly, the Company holds specific meetings with the regulating bodies, as well as public hearings and inquiries, exchanging documents, e-mails and inspection and guidance visits.

Comunidades

Power, Copel's main product, represents quality of life, health and development for the society. In order to identify needs and expectations, Copel pays visits and makes surveys in the communities around its new enterprises, keeping specific actions for communication with this population.



¹² Communications channels with the employees: Employee Opinion Survey (POE), Great Place To Work Survey (GPTW), Confidential Channels (CADAM, COE, Ombudsman, Confidential Communication Channel), Chat with the President, Anima Program)

CUSTOMERS AND CONSUMERS

Customers' Satisfaction Management

Customers' profile **G4-DMA EU3**

In 2017, Copel Telecomunicações carried out a process of identification of stakeholders as a stage for elaboration of its Management Excellence Model (MEG)¹³, which provides commitment to the stakeholders. As a result from this work, the following populations were listed¹⁴: majority shareholder/holding, employees, contractors, customers, suppliers and trade unions. .

For 2018, Copel GeT provides performance of a project for review and improvement to what refers to identification and prioritization of business stakeholders. Copel Comercialização does not perform a specific process for identification of its stakeholders, following the positioning of the holding.

In this chapter, the results achieved in 2017 will be presented, as well as the way the Company manages the relationship with the different populations.

¹³ Methodology for assessment, self-assessment and recognition of the good management practices elaborated by the National Quality Foundation (FNQ).

¹⁴ The listed stakeholders were classified according to their expressive relevance for Copel Telecomunicações.

Copel Distribuição customer profile ¹⁵	2015	2016	2017
Residential	3,527,126	3,597,105	3,682,009
Industrial	88,276	82,021	76,328
Commercial	376,959	382,121	389,844
Rural	368,297	360,066	354,829
Other (public authority, public lighting, public service, own)	57,404	57,454	57,483
Total number of customers	4,418,062	4,478,767	4,560,493

¹⁵ Captive and free consumers served by Copel Distribuição.

Copel Comercialização customer profile ¹⁶	2015	2016	2017
Bilateral sales (sellers)	NA	NA	50
Industrial	NA	NA	110
Commercial	NA	NA	29
Residential and Rural	NA	NA	NA
Total number of customers	NA	NA	189

¹⁶ Criterion used is CNPJ number not repeated in the year. There are many customers with more than one establishment and in different periods. For 2016, no survey was done because the establishments were on the free market at the beginning, and the values were too low. Copel Comercialização started activities in the beginning of 2016 and the first billing was done as of July 2016.

In 2017, Copel celebrated the recognitions of its service excellence by the customers once more.

Copel Distribuição was the best evaluated utility according to the customers' opinion, based on the Aneel Consumer Satisfaction Index, with score 80.69 among the utility companies with more than 400 thousand customers. In the award of the Brazilian Association of Electric Power Distributors (Abradee), the utility company took first place in the customer assessment category for the sixth out of seven years.

Internationally, it was recognized for the fifth time in seven years as the best distributor in Latin America and the Caribbean, a title granted by Comisión de Integración Energética Regional (CIER), competing with 57 companies from 13 countries.

To identify opportunities for improvement in service provision, Copel Distribuição makes its own survey with the rural customers at every four years and with the customers from the public authorities in the first and the last year of the mayors' mandates. **102-44, 103-3**

SOCIAL AND RELATIONSHIP CAPITAL

Survey category	2015	2016	2017
Residential customer (ISQP) - Abradee	88.6	88.8	90.3
Customer from group B (non-residential - ISQP – Abradee	86.5	84.8	- *
Industrial customer (ISQP) - Abradee	78.6	85.9	82.4
Residential customer IASC - Aneel	60.3	73.1	80.7
Rural customer**	77.9	-	-

* Copel did not participate in the 2017 survey with non-residential customers from group B.

** Survey not carried out in 2016 and 2017.

Complaint Management at Copel Distribuição	2015	2016	2017
Registered and processed grievances and complaints	17.592	20.668	24.460
Registered and solved grievances and complaints	17.835	20.668	24.460
Equivalent Complaint Frequency (FER)	7.21	6.77	9.01
Equivalent Complaint Duration (DER)	126.89	116.94	108.59

COPEL TELECOMUNICAÇÕES

Annually, Copel Telecomunicações makes consumer satisfaction surveys following the same data collection methodology as that used by the National Telecommunication Agency (Anatel) since 2015. The adoption of this methodology enables comparison of the results from the Company's quality indicators to the data from other companies in the sector.

In 2017, the General Satisfaction Index (ISG) based on the customers' experience with the Copel Telecom fixed line Internet was 93%. The results of the Multimedia Communication Service (SCM) indicators can be checked in the company's business model on page 23. [102-44](#)

Complaint Management [103-2, 103-3](#) COPEL DISTRIBUIÇÃO

The assessment of the products and the services offered by Copel Distribuição is done by means of two indicators: Equivalent Complaint Frequency (FER), which quantifies valid complaints in relation to the number of consumers, and the Equivalent Complaint Duration (DER), which shows the average time the utility takes to respond to complaints.

In 2017, the Company was re-certified on ISO 9001 for customer service. The customer service area at Copel Distribuição is composed of seven channels Level

1, those used by the consumer for first contact with the Company, and Ombudsman Office, which provides service Level 2. In addition to these own channels, Copel provides other channels, such as Complain Here.

Also focused on excellence in service provision, the Company performs annual survey of Satisfaction of Complaining Customers, which measures ease of contact, clarity of the provided information, friendly service, observance of the time to respond, and meeting of expectations.

COPEL DISTRIBUIÇÃO SERVICE CHANNELS

1st Level:

- Virtual Agency;
- Copel Mobile Application;
- Service in Person;
- Telephone Service - 0800 51 00 116;
- e-mails (copel@copel.com, atendimento@copel.com e comercial@copel.com);
- Talk to Us; and
- URAs¹⁷.

2nd Level:

- Ombudsman

¹⁷ Acronym for Audible Response Unit.

SOCIAL AND RELATIONSHIP CAPITAL

COPEL TELECOMUNICAÇÕES 103-2, 103-3

Relationship with the customers is promoted through the relationship channels, which are defined according to the characteristics of each segment, facility, agility and acceptance.

Segment	Channel
STFC, SMP and SCM operators	Site, self-service portal, exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.
SCM providers	Site, self-service porta, exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.
Corporate	Site, self-service porta, exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.
Copel	Exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.
Public Sector	Exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.
PMEs	Site, self-service portal, exclusive e-mail, telephone, Contact Center and Ombudsman.
Residences	Site, self-service portal, exclusive e-mail, telephone, Contact Center and Ombudsman.
Low income residences	Site, self-service portal, exclusive e-mail, telephone, Contact Center and Ombudsman.
Strategic customers	Site, self-service portal, exclusive e-mail, telephone, Contact Center, account manager and Ombudsman.

Copel Telecomunicações customers can use the Ombudsman as one of the customer service channels. The Ombudsman receives and follows up suggestions, complaints and reports received directly by the Company, the Ombudsman of the regulating agency, Anatel, and the platform of the National Consumer Department (Senacon) of the Ministry of Justice, in addition to the

demands presented by Procon and the General Ombudsman of the State.

The target of the Ombudsman is to answer the complaints within ten business days. In 2017, all processed complaints were solved. As a result, big part of the manifestations, which would be submitted to external entities, such as Procon, Senacon or even Anatel, were solved by the Company itself.

Telecommunication business performance	2015	2016	2017
Registered and processed grievances and complaints	1,178	4,474	7,461
Registered and solved grievances and complaints	1,171	4,434	7,461
Equivalent Complaint Frequency (FER)	3.1	5.4	5.4
Equivalent Complaint Duration (DER)	4.4	8.3	3.6

USE OF ENERGY

ACCESSIBLE ENERGY **G4-EU23, G4-EU24**

The energy rate has a direct impact upon the consumers' economy, regardless of their social status.

This understanding is the driving force behind the movement that 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 affordable for all.

- **Social Rate for Electric Power (TSEE)**

TSEE offers discounts for consumption of electricity up to a limit of 220 kWh to families registered in the Federal Government's Social Program Registry, as long as the other criteria set forth in ANEEL Resolution 414/2010 are met, resulting in savings for the consumer. In 2017, 299,709 consumer units with regular TSEE were served, or 8.2% total households served by Copel Distribuição, representing the amount of BRL 107.5 million.

- **Fraternal Light Program**

The Fraternal Light Program (Programa Luz Fraterna) of the Government of the State of Paraná, pays the bills for consumers registered in the Social Rate for Electric Power, provided that consumption does not exceed 120 kWh. In 2017, the total funds of the State Government for the program were at about BRL 37.3 million, benefiting an average of 158 thousand families per month.

- **Nighttime Irrigation Rate and Nighttime Rural Rate**

Result from the partnership involving Copel, the State Department of Agriculture and Supply, Instituto Paranaense de Assistência Técnica e Extensão Rural - Emater and the State Department of Environment and Water Resources, the initiative aims to encourage agricultural productivity upon discount of 60% to 70% in the rate for electricity used for production in the period between 9:30 PM and 6:00 AM, as well as subsidies for construction/reinforcement of networks to serve the irrigators. Until December 2017, there were 4,400 consumer units registered in the Social Rate for Electric Power and 12,000 registered in the Nighttime Rural Rate Program.

SOCIAL AND RELATIONSHIP CAPITAL

RESIDENTIAL DISCONNECTIONS G4-EU27

Compared to the previous year, it was verified that in 2017, there was significant increase in the volume of suspended power supply for lack of payment. This is pursuant to stra-

tegic business decision and need to reduce losses driven by default. The verified results are shown in the chart below:

Number of consumer units with time between disconnection and payment agreement	2016	2017
Less than 48 hours	269,812	495,230
Between 48 hours and 1 week	55,691	92,291
Between 1 week and 1 month	73,259	109,588
Between 1 month and 1 year	80,136	94,452
Above 1 year	28	0

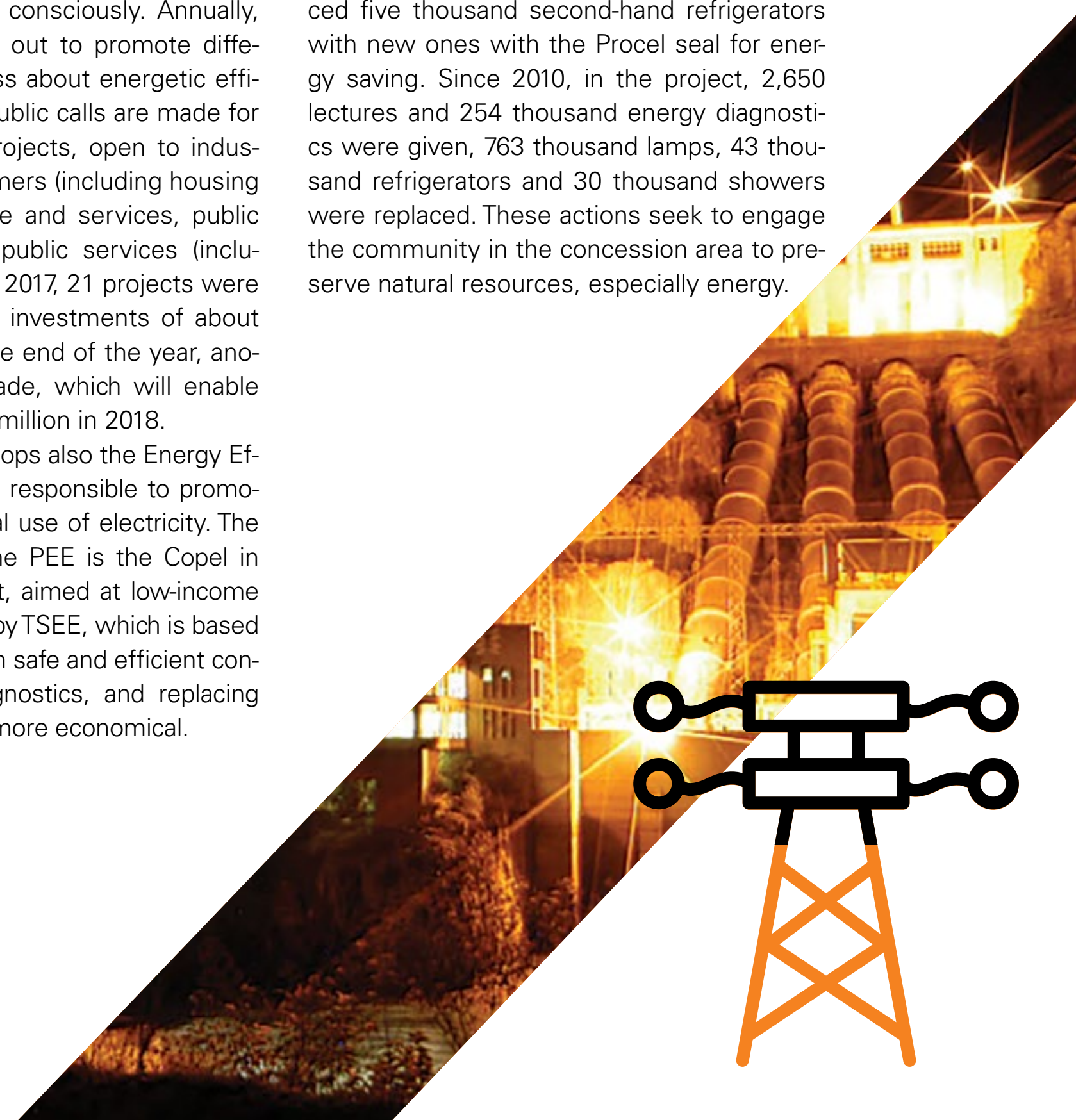
Number of consumer units with time between disconnection and payment agreement	2016	2017
Less than 24 hours	273,314	314,844
Between 24 hours and 48 hours	15,796	65,301
Between 48 hours and 72 hours	15,705	96,304
More than 1 week	41,853	188,628

EFFICIENT USE OF ENERGY G4-DMA EU7

Copel is committed to encourage its consumers to use power consciously. Annually, campaigns are carried out to promote different ways of awareness about energetic efficiency. Furthermore, public calls are made for energetic efficiency projects, open to industrial, residential consumers (including housing complexes), commerce and services, public authorities, rural and public services (including public lighting). In 2017, 21 projects were started, which totalize investments of about BRL 15.2 million. At the end of the year, another selection was made, which will enable investment of BRL 20 million in 2018.

The Company develops also the Energy Efficiency Program (PEE) responsible to promote efficiency in the final use of electricity. The main mechanism of the PEE is the Copel in the Community project, aimed at low-income consumers, benefited by TSEE, which is based giving lectures about on safe and efficient consumption, energy diagnostics, and replacing equipment with other more economical.

Along 2017, Copel in the Community replaced five thousand second-hand refrigerators with new ones with the Procel seal for energy saving. Since 2010, in the project, 2,650 lectures and 254 thousand energy diagnostics were given, 763 thousand lamps, 43 thousand refrigerators and 30 thousand showers were replaced. These actions seek to engage the community in the concession area to preserve natural resources, especially energy.



SUPPLIER MANAGEMENT 102-9

The rules for the supply chain management by the Holding and the wholly-owned subsidiaries are provided in documents Contract Management, Registry, Supplier Assessment, Material Acquisition, Contracting Services, Works and Engineering Services, as well as Company's the Code of Conduct and the Supplier's Manual.

Copel's supply chain has the following priority elements:

- Generation and Transmission: acquisition of safety materials and equipment maintenance services.
- Distribution: Power Generation/Transmission and commercialization companies, suppliers of material and equipment and engineering service providers.
- Telecommunications: suppliers for provision of activation and maintenance services, provision of call center services and supply of equipment for data transmission.

- Holding: IT infrastructure equipment, software acquisition and provision of building services.
- Commercialization: software development, software acquisition and provision of services for definition of forward market prices and risk.

In 2017, Copel had 9,455 active suppliers, which totalize BRL 8,916,794,453.79 paid amounts. Currently, the Company does not control second or third level suppliers¹⁸.

Geographic distribution of the Copel suppliers:

Region	Number of suppliers	Percentage
North region	25	0.26%
Northeast Region	170	1.80%
Center-West Region	225	2.38%
Southeast Region	990	10.47%
South Region	8,043	85.07%
Other (outside of Brazil)	2	0.02%
Total	9,455	100.00%

¹⁸ Suppliers, which are subcontracted by the direct suppliers.



SOCIAL AND RELATIONSHIP CAPITAL

Currently, Copel does not perform specific assessment for risk management in the supply chain. However, considering its impact within the Company, some sectors are considered critical for the operation, such as outsourcing the customer activation and maintenance service and the call center service provision for Copel Telecomunicações, software development at Copel Comercialização and IT equipment supply for the Holding.

In the assessment of its critical suppliers, Copel Distribuição considers legal, financial, environmental, labor health and safety, safety of the population, the Company's image, the perception of customers and the society and the process continuity aspects.

In the bidding processes done by Copel Geração e Transmissão, the contract requesting area defines the criticality of the object to be contracted, which serves to adjust the judgement criteria related to economic-financial qualification of the companies. The intention of this measure is to avoid interruption of the service provision and discontinuity of the material delivery, impeding possible financial impacts on the Company and risks associated with the safety of employees, communities and the environment.

Copel makes efforts to strengthen the relationship with its suppliers, in order to

contribute to the development of business in the whole chain.

In addition to following the legislation in force, the Company has internal guidelines and norms, which govern its relationship with business partners.

**QUALIFICATION, SELECTION,
CONTRACTING** 308-1, 414-1

Copel's suppliers shall comply with all aspects of the legislation in force in the country. The compliance requirement is expressed in the calls for bid, in contract clauses, supplier registration manuals and technical standards and manuals, permanently available online. Currently, Copel does not select or assess new suppliers based on environmental criteria.

In all labor cession agreements, the contractors undergo integration process, in which Copel highlights its contract requirements regarding social-environmental, human and labor rights, accessibility and inclusion and fighting against child work issues. Non-compliance leads to suspension of the contract and prohibition to participate in new bids of the Company for two years. Follow-up of the compliance with the contract clauses is done by contract managers and inspectors.

In 2009, Copel started including a standard social-environmental responsibility clause in its contracts, which in 2016 was com-

plemented with specific clauses for human rights. Contracts are accompanied by Statement of Good Standing and Social Responsibility. For 2018, a new model, which includes human rights aspects and will be used in new contracts and the contracts in force, will be introduced. 412-3

Depending on the object to be contracted, some specific clauses related to environmental requirements are inserted in the draft contracts, which accompany the call for bid upon publication.

In May 2017, Copel instituted an exclusive bid for Micro-companies and Small Com-

panies and reserve of aliquots (up to 25%) in tenders, whose object is acquisition of divisible goods, as defined in Complementary Law No. 147/2014. Furthermore, it launched the invitation for Public Call (SGT160415) for selection of projects aimed at increase of the family agriculture production activities and sustainable management in the municipalities of Cláudia, Colíder, Itaúba and Nova Canaã do Norte in Mato Grosso. The process is in progress, and completion is scheduled to 2018.

Number of companies contracted by means of exclusive bid:

Holding and subsidiaries	Number of exclusive contracts
GeT	25
DIS	88
CTE	8
HOL*	5
Total exclusive contracts	126
Total Copel's contracts in 2017	2,041
Percentage of exclusive contracts	6.1%

* Responsible for hiring for Copel Comercialization.

Local Communities

IMPACT MANAGEMENT 413-2

Power generation, transmission and distribution activities produce positive and negative social-economic impacts on the regions, where they are installed. Copel is aware of the impacts from its enterprises and develops actions for prevention and mitigation in accordance with the legislation in force and the guidelines set forth in its Sustainability Policy and its Code of Conduct, which contemplate the commitments undertaken within the UN Global Compact. 103-1

Copel manages the impact through dialog with the communities and the public bodies, trying to identify the best ways to prevent and mitigate the negative impacts and expand the benefits from the positive impacts. This dialog starts in the stage of Environmental Impact Studies (EIA) and the Simplified Environmental Reports (RAS), considering the nature and the size of the establishments to be installed.

The impact evaluation process is started by the Business Development Executive Office (DDN) already in the phase of analysis

of the business opportunities. In case Copel invests in the new business, the second evaluation stage is carried out including studies for the enterprise environmental licensing, which will define the project characteristics and will enable measuring the impacts for development of Social-environmental programs related to prevention, mitigation and compensation, and related to implementation of voluntary social initiatives.

Population displacement cases are evaluated through a social and economic registration, and when any social vulnerability situation is identified, Copel provides for the family relocation process and social compensation for the damages caused by installing its enterprises. Social compensation consists in providing for the affected family to be relocated to a better area or area similar to the existing area and to recover economic conditions existing before the enterprise. Furthermore, de-appropriated properties are indemnified.

G4 DMA EU20, G4 DMA EU22, 103-2

COLÍDER HPP

In 2017, the Local Production Arrangement Program was completed; it was related to the process of environmental licensing for implementation of hydroelectric power plant. By means of this initiative, one hundred family agriculture properties from the municipalities of Colíder, Itaúba, Nova Canaã do Norte and Cláudia received monthly technical visits by agronomist engineers, who guided the inhabitants on sustainable agriculture, priority to organic, trying to assure qualified production of food and better life conditions for the families. In addition to this total technical assistance service, qualification workshops were held on management processes, processing and sale of family agriculture products to improve the conditions of the agricultural workers for insertion in the local production chain. The performance of the program provided improvement in the productivity of the agricultural workers, who were contemplated in the program, and reduction of the costs of external consumables, which directly led



SOCIAL AND RELATIONSHIP CAPITAL



to increase of the family income. Another beneficial issue for the Company was the positive assessment by the public administrators of the four municipalities involved, which strengthens the relationship between the two spheres and expands the reliability of the Company in the region.

**TRANSMISSION LINES
ARARAQUARA – TAUBATÉ**

Copel mitigates the impacts caused by the installation of transmission lines. In general, properties and inhabitants record land and production losses established by the easement, as well as change in the local natural landscape aspects.

The Company implements the indemnity program with the purpose to mitigate the owners' loss and adopts series of programs, which meet the conditions for environmental licensing. Among the programs carried out by the Company in these cases are Social Communication, Social Integration or

Relationship with the Community and Environmental Education for Communities.

In the installation of transmission line TL 500 kV Araraquara – Taubaté, 356 km long, which passes through 28 municipalities in the State of São Paulo, the Company is carrying out the Social Compensation Program due to the loss of economic activities in some communities. In 2017, the last family living in Araras was relocated.

DISTRIBUTION NETWORK

Along 2017, 619 people were compensated for the institution of easement for the works on the High Voltage Distribution Line (HVDL), which do not lead to de-appropriation of areas, but set use restrictions, leading to payment of indemnities. **G4 DMA EU22**

In the implementation of new enterprises, Copel carries out actions for environmental awareness with the workers responsible for the installation of the works, as well as the Program Relationship with the Community, which

aims to provide favorable conditions for systematic conversation between the entrepreneur and the different segments of the involved communities, public authorities and representations of the organized civil society, which work in the area under direct and indirect influence of the enterprises to be installed.

Another action implemented by the Company in the installation of these enterprises is "Programa de Educação Patrimonial"; its methodology seeks to awaken the community's interest in knowing and comprehending its identity, history and culture. In place since 2014, through a contracted company (Fundação Aroeira), the target population of the Program is the local community directly affected by the installation of the enterprises, teachers at schools in the region, and construction workers at operational and management level. The program addresses issues, such as education on citizenship, valuing cultural identity, preserving heritage, educating multiplier agents, and disseminating scientific research.

SOCIAL AND RELATIONSHIP CAPITAL

TELECOMMUNICATIONS

Copel Telecom keeps the base of customers from Connected Paraná, a program for access to broadband internet with subsidies cost in cities with up to 10 thousand inhabitants and low HDI.

The project Internet without Bullying aims to make the society aware of the cyberbullying problem. Bullying is the main cause of depression and suicide among young people. The project provides awareness lectures seeking to commit students from state schools in the last years of elementary school, their parents and teachers. In 2017, two schools were contemplated, serving about 400 students. In 2018, the Project will be expanded and will be continued in Curitiba and in the State countryside.

The initiative is aligned with Copel's mission, the business guidelines of Copel Telecom (Copel Telecom DNA) and complies the UN Sustainable Development Goals (SDG 4, 16 and 17).

Other social initiatives of Copel Telecom are presented in the table on page 73.



INVESTMENT IN THE DEVELOPMENT OF THE COMMUNITIES 413-1

In 2017, 80% of Copel's establishment made investments in engagement, impact assessment and local development actions, which generated benefits for the communities, where it works.

In the period, Copel Telecomunicações invested in expansion of the telecommunication network infrastructure with the purpose to increase the data transmission capacity, the network capillarity and the quality of the services. The investments in telecommunication infrastructure help in the development of the municipalities in Paraná, assuring quality and reliability of communication, data transfer and access to information, providing social-economic progress of the municipalities and the communities.

To continue the Distribution Development Plan (PDD), in 2017, Copel Distribuição invested approximately BRL 55 million with the purpose to meet the demand of electric power consumers and contribute to the improvement of the quality and the reliability of the system. Furthermore, PDD funds were applied in programs of social interest and community projects for isolated and re-settled regions.

Copel Geração e Transmissão, on its turn, invested in infrastructure for the public authority and communities around its enterprises.

The main social initiatives of Copel in the year are presented below.

SOCIAL AND RELATIONSHIP CAPITAL

SOCIAL INITIATIVES 413-1

Subsidiary	Program/ Operation Name	Program / Operation description and goal	Impacted groups of Stakeholders	Number of Impacted people *	Is there environmental/ social impact evaluation?	SDG	Is there related target?
DIS	Environmental Awareness Program	To provide the workers from all hierarchy levels or technical specialization related to the works on the implementation of distribution lines, power substations and switching stations with adequate information about the enterprises and aspects from the regional environmental processes, thus, protecting against possibility of environmental and personal occurrences.	Contractors' employees	147 employees.	The Environmental Awareness Programs are carried out for all Copel Distribuição enterprises and integrate the social-economic environment of the environmental studies necessary to obtain Prior License (LP) and Installation License (LI)	SDG 3	Yes, to serve all Copel DIS enterprises.
DIS	Solidary Bill Project	The Project was launched in 2015 with the purpose to increase the number of consumers, who receive their bills on digital means and benefit the Associations of Parents and Friends of Exceptional People from the State of Paraná - APAEs. At every option on digital bill, Copel donated BRL 1,00 to APAEs. Since the launch of the project to its closure on 12/31/2017, 1,153,631 options on digital bill were recorded, which meant transfer of BRL 1,153,631.00 (One million, one hundred and fifty-three thousand, six hundred and thirty-one reais) to APAES associated with the APAE Federation of the State of Paraná - Feapaes.	Non-governmental organizations	No	No	SDG 5,8,10,11 and 16	No
DIS	Charge of Amounts from Third Parties (CVT)	It consists in provision of Charging Amounts from Third Parties (CVT) in the energy bills upon Contract or Agreement. The amounts to be donated shall be authorized in writing, or through voice recording, by the bill holders or their spouses. In 2017, BRL 26,048,336.08 (Twenty-six million, forty-eight thousand three hundred and thirty-six reais and eight cents) were collected and transferred to Institutions.	Non-governmental organizations	110 philanthropic organizations	No	SDG 1,10,11 and 16	No
DIS	Program for Relationship with the Community	The general purpose of the Program is to provide favorable conditions for systematic conversation with the involved communities, public authority and representations of the organized civil society, which work in the area under direct and indirect influence of the enterprises to be installed.	Local Community	120 professionals.	The Programs for Relationship with the Community are carried out for all Copel Distribuição enterprises and integrate the social-economic environment of the environmental studies which are obligatory in the stages of prior and installation licensing.	SDG 3	Yes, to serve all Copel DIS enterprises.
DIS	Good Neighborhood Program	It promotes improvement of the quality of life around the administrative headquarters of the Company in Ponta Grossa and Cascavel. The actions are carried out within 2 km from the buildings and were defined from studies, which identified needs, expectations and priorities.	Local community	No	Yes, for definition of the program priorities	SDG 11	No

* Segmentation of beneficiaries by gender is not done.

SOCIAL AND RELATIONSHIP CAPITAL

Subsidiary	Program/ Operation Name	Program / Operation description and goal	Impacted groups of Stakeholders	Number of Impacted people *	Is there environmental/ social impact evaluation?	SDG	Is there related target?
DIS	Illuminating Generations	The program aims to take to the communities in the municipalities from Copel's concession area informative and preventive guidelines on sustainability, conscious and safe use of electric power, use of natural resources (energy and water) and correct destination of residues. The program is sub-divided into projects and actions according to the different segments, populations, cultural differences, needs and expectations (stakeholders), as follows: <ul style="list-style-type: none"> Lecture in the schools Lecture in NGOs Fairs and external events Energetic Efficiency Van Lecture in companies Electrifying Stories Theater 	Community Customers Employees Suppliers	The Illuminating Generations Program attended about 63,500 students from the whole State of Paraná. Working also at institutions, companies, fairs and events in the communities, there were about 45 thousand participants	No	SDG 4, SDG 7, SDG 11	No
DIS	Eletricomunidade	A set of actions, programs and projects, which aim at sustainable development of the communities, where Copel is present: <ul style="list-style-type: none"> Copel in the Neighborhood Program More than Energy Project UPS Citizenship PNighttime Irrigation Rate and Nighttime Rural Rate Program Fraternal Light Program Electric Power Social Rate Live Well Paraná Program Calamity Benefit 	Community Customers Employees	<ul style="list-style-type: none"> More than Energy Project: Deaf and deaf-blind Community UPS Citizenship: 556 attendances Paraná Citizen: 2,000 people Citizenship Mass Event 1260 Nighttime Irrigation Rate and Nighttime Rural Rate Program: 16400 CUs Fraternal Light Program: 158.000 CUs Electric Power Social Rate: approx. 300,000 CUs Live Well Paraná Program: 1671 CUs Calamity Benefit: 147 CUs 	No	SDG 1, 2, 3, 4, 7, 8, 10, 11, 12,	No
DIS	EletriCidadania	It aims to encourage voluntary and spontaneous performance of community actions, which, much more than just assistance, lead to sustainable development of the society in all aspects, whether cultural, educational or professional. In 2017, 3,045 volunteer hours were performed.	Community Customers Employees	193 employees from Copel DIS registered volunteer hours	No	SDG 2, 3, 4, 7, 8, 10, 11	Yes. Percentage of volunteers in relation to the number of employees. In 2017, we achieved 3.96%, exceeding the target of 3.50%.
GeT	EIA and RAS	In 2017, the GeT carried out activities related to the Social-Economic Impact Assessment and Diagnostic Studies (EIA and RAS) for the following new installations of transmission lines: <ul style="list-style-type: none"> LTS 230kV Curitiba Center - Uberaba; SS Medianeira, TL 500kV Blumenau - Curitiba North; TL Baixo Iguaçu - Realeza Sul; SS Curitiba Center, TL Baixo Iguaçu - Realeza Sul; SS Andirá, TL Andirá Secc 1 e 2 Assis - Salto Grande. 	Local community	No	Yes, in accordance with the National Environment Policy and the environmental licensing	Not Applicable	No

* Segmentation of beneficiaries by gender is not done.

SOCIAL AND RELATIONSHIP CAPITAL

Subsidiary	Program/ Operation Name	Program / Operation description and goal	Impacted groups of Stakeholders	Number of Impacted people *	Is there environmental/ social impact evaluation?	SDG	Is there related target?
Holding and Subsidiaries	Cultivating Energy	The program encourages implementation and cultivation of community gardens in empty spaces under the Company's electric power distribution and transmission lines. Developed in partnership with the city halls and local communities, the Program promotes social inclusion, food safety and generation of income for socially vulnerable communities. The gardens also increase the population's safety, inhibiting occupation of the high-risk areas under the power lines.	Local community	140 families (560 people)	Yes, annually, standardized assessment is done through NAC.	SDG 1, 2, 3, 10, 11, 12, 17	No
GET	Audiências Públicas	Processos de consulta de comunidades locais amplos que incluem Grupos vulneráveis: LT 500kV Blumenau - Curitiba Centro - Foram realizadas duas audiências públicas para a apresentação do empreendimento para as populações locais.	Local community	No	No	Not Applicable	No
GET	Environmental Awareness Program	Environmental awareness of the workforce	Contractors' employees	147 employees.	No	SDG 3,5,7, 11,13, 15	Yes, serve all Copel GeT enterprises under construction
GET	Program for Relationship with the Community	Education and environmental awareness of the community	Local community	120 people	No	SDG 3,5,7, 11,13, 15	Yes, serve all Copel GeT enterprises under construction
GET	Free Line Program	Social treatment of the occupations (housing and economic activity purposes) in safety ranges of transmission lines. In addition to the social approach to the inhabitants, the program provides articulation with the public authority, mainly, the public policies for social assistance, health and housing.	Local community	108 people	Yes, the social approaches and the effectiveness of the social work through the displacement of the families, who occupy the area, are assessed.	SDG 10, 11 17	Serve all occupations in the safety ranges of the transmission lines involving vulnerable segments.
GET	Eletricidadania	It aims to encourage voluntary and spontaneous execution of community actions, which, much more than just assistance, lead to sustainable development of the society in all aspects, whether cultural, educational or professional.	Community Customers Employees	63 employees from Copel GET registered volunteer hours	No	SDG 2, 3, 4, 7, 8, 10, 11	Yes. Percentage of volunteers in relation to the number of
GET	Free Border Program	Social treatment of the occupations at the reservoir borders. In addition to the approach to the inhabitants, the program provides articulation with the public authority.	Local community	16 families (64 people)	Yes, the cases are monitored periodically.	SDG 10, 11, 17	No
GET	Action for prevention of social emergency in dams	Map the population, who lives in the risk area for disaster with the dams and promote registration and awareness for safety issues, escape route and effective communication channels.	Local community	34 families (134 people)	No	SDG 11 and 17	No
GET	Local Production Arrangement Program	Rural Extension Technical Assistance in 100 family production units and Workshops for qualification in processes for production management, processing and sale for the municipalities around WPP Colíder (Colíder, Cláudia, Itaúba and Nova Canaã do Norte).	Local community	100 families (400 people)	Legal requirement, condition for environmental licensing	SDG 1, 2, 3 10, 12, 17	No

* Segmentation of beneficiaries by gender is not done.

SOCIAL AND RELATIONSHIP CAPITAL

Subsidiary	Program/ Operation Name	Program / Operation description and goal	Impacted groups of Stakeholders	Number of Impacted people *	Is there environmental/ social impact evaluation?	SDG	Is there related target?
CTE	Internet without Bullying	The Project Internet without Bullying aims at the society awareness about the cyberbullying problem. Bullying the main cause of depression and suicide amount young people. The Project aims to take awareness lectures seeking to commit the students from the state schools in the last years of elementary school. The project is a partnership between Copel Telecom and Abrace Programas Preventivos. It involves employees and volunteers from all Copel subsidiaries, as well as the main suppliers and business partners of CTE.	Employees, suppliers, customers, society, government	24 volunteers from the 3 SIs , 430 students (51.2% women and 48.8% men) and their respective parents, 22 teachers, 8 business partners and suppliers.	Yes, survey with participants – including by gender	SDG 4, 5, 10, 11, 16 and 17	Yes. 8 schools in 2018.
CTE	Technical support in social actions of the Government of the State of Paraná	Copel Telecom provides internet access in events sponsored by the State Government focused on social inclusion and development. The services provided in these events use the connectivity made available by CTE. Thus, the initiatives Justice in the Neighborhood, UPS Citizenship, Paraná Citizen, Protected Child and Adolescent, Citizenship Mass Event are served, which are held in low-income cities or neighborhoods, whose population has poor access to social services, such as issuance of identity documents, legal assistance, among others.	Community Customers	No	No	SDG 8,10, 16 and 17	No
CTE	EletriCidadania	It aims to encourage voluntary and spontaneous execution of community actions, which, much more than just assistance, lead to sustainable development of the society in all aspects, whether cultural, educational or professional.	Community Customers Employees	38 employees from Copel Telecom registered volunteer hours: 5.86% of the CTE structure	No	SDG 4, 5, 8, 10, 11, 16, 17	Yes. Percentage of volunteers in relation to the number of employees. In 2017 we achieved 5.86%. Target 2018 - 10% increase
CTE	LAISA	In 2017, CTE applied the tool LAISA – Social-environmental Aspect and Impact Survey – in the macro-processes of the value chain.		Not Applicable	Not Applicable	Not Applicable	Carry out annual review
CTE	Connected Paraná	Copel Telecom maintains the customer base of Connected Paraná, access to broadband internet in cities with up to 10 thousand inhabitants and low HDI per subsidized cost (BRL 29.90 - 1 MB). According to the World Bank, availability of internet access to the population provides increase in GDP.	Low-income customers	In 2017, there were 4,183 customers in 24 municipalities	No	SDG 1, 4, 8, 10, 11, 16 and 17	Maintenance of the beneficiary base
CTE	Digital Paraná	Digital Paraná: meeting a Celepar demand, Copel Telecom provides data link to the whole state education network (more than 2200 schools).	Community – state schools	Universe of students registered in the state public education network	No	SDG 4, 10	Maintenance of the links in the schools
CTE	CTE Ombudsman	CTE Ombudsman is a formally established channel, which can be accessed by the community to submit grievances and complaints related to the Copel Telecom operation.	Community and Customers	No	No	Not Applicable	No

HUMAN RIGHTS 103-1, 103-2

Human rights issues are inherent in developed by Copel in all its subsidiaries. Since the prospecting of New Business, human rights issues are considered in the feasibility assessments. This process extends in the stage of carrying out the environmental impact studies and / or Reports Simplified Environmental Services. During the process of implementation of the projects, Copel seeks to comply with all applicable legal requirements, as well as in meeting the constraints of each project. Failure to comply with human rights laws can impact the project's standstill, the loss of the company's image, and the receipt of sanctions monetary and fines.

Since its foundation, Copel undertook commitment to defense of the human rights. These are six decades in compliance with the principles of the Universal Statement of Human Rights, which are annually reaffirmed and detailed through other platforms coordinated by UN, such as the Global Com-

pact, which Copel has signed since its creation, and the Sustainable Development Goals. These are commitment, which guide policies, norms and strategies of the Company and aim to protect the rights of all populations influenced by its activities.

Copel does not have centralized management of the issues related to Human rights. Management of the impacts generated by Copel's operation is carried out by the Environment and the Social Responsibility areas of each subsidiary. Aspects associated with Human rights, such as diversity and accessibility are handled by the Environment Coordination of the Holding. Regarding the activities carried out by suppliers, Copel requires fulfillment of the legal obligations in the process of approval of the contractor and during the performance of the contracts by means of requirement of obligatory certificates.

INDIGENOUS COMMUNITIES

The Company develops projects to assure the access of indigenous villages to power. Communities located in environmental preservation units or areas, where it is not possible to take the power distribution grid, receive, for example, photovoltaic panels and training on efficient use of power. 411-1

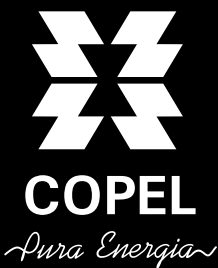
In 2017, 911 indigenous consumer units were enrolled in the Social Rate of Electric Energy (Low Income) and there were no cases of violation of the rights of indigenous tribes.



Further information about Copel's operation in Human rights is available on the [Sustainability page of the Company](#).

SOCIAL AND RELATIONSHIP CAPITAL





COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

NATURAL CAPITAL



CLIMATE CHANGES 103-1, 103-2

Climate changes may generate impacts on the power generation, transmission and distribution activities in the sector. For power generation, the predominance of a dependent matrix of water power plants with growth in the participation of renewable sources (wind and solar), considered intermittent, the effects from the climate change may impact the generation capacity directly. In relation to transmission and distribution, extreme climate events impact directly the operation and the maintenance of the systems, and consequently, the power supply.

Copel's commitment to sustainable development of its business is reflected in its structure for administration of climate change impacts. Incentive to renewable sources of generation of clean energy and contribution to the diversification of the energetic matrix in the country is present in the expansion projects in the Company.

Its Climate Change Policy, implemented in 2016, provides guidelines to support the Management Committee's functions and actions, for example, in addition to those already mentioned above, it promotes incentive to innovation for reduction of Greenhouse Gases (GHG) and adoption of low-carbon technology.

Copel instituted a Management Committee responsible for the Corporate Climate Change Management Program, which assures that all employees and the Administration work in compliance with the assumed commitments.

This Committee is composed of all executive offices and subsidiaries and there are three sub-committees: Emission Management and Mitigation, Adaptation and Carbon Valuation. Among its activities, the following stand out: follow up the fulfillment of the commitments approved by the Administration, encourage actions that promote reduction of GHG, assess risks and opportunities and actions for adaptation of the business to the climate change. The Committee shall equally participate and contribute with debates and external events, which seek new ways and solutions for the society to handle the new climate scenario.



Further information about the Climate Change Program and the commitments and the targets undertaken by Copel is available on the [program page](#)

Upon implementation of the Policy, the climate changes were included in the risk analysis, the financial evaluation and the opportunities for the Company's business, in addition to encouraging low-carbon technologies. The risks associated with the climate changes, the respective factors and financial impacts are presented below 201-2

RISKS AND OPPORTUNITIES ASSOCIATED WITH CLIMATE CHANGES

Risks:	Factors	Description	Financial impacts (qualitative and quantitative)
Physical Nature	Extreme weather	Increase of the maximum temperatures in the North of Paraná	Estimated fine pursuant to non-supply of energy is about US\$ 2,000/MWh non-distributed.
	Tropical thunderstorm	Increase of thunders in the North and West of Paraná	No financial impacts were estimated related to replacement of towers in operation or use of more resistant towers in new projects.
Regulatory	Charge for emission	Charge of emission rate may impact part of the sector, which invests in thermal power plants	Amount under 1% of the net operational revenues is estimated, considering that the current thermal generation is not significant.
	Carbon Market Mechanisms <i>Cap and Trade</i>	The power sector can be one of the selected to introduce this kind of mechanism.	Copel participates in carbon simulation initiative, which estimates BRL 30.00 per ton of equivalent CO2 emitted. Considering this assumption, Copel would pay 3.6 million for compensation of the GHG emission
Other nature	Reputation	Interruption of the power supply generates consumers non-satisfaction	The financial impacts of this risk were not estimated.

Incentive to renewable sources of generation of clean energy and contribution to the diversification of the energetic matrix in the country is present in the expansion projects in the Company.

NATURAL CAPITAL

Opportunities	Factors	Description	Financial impacts (qualitative and quantitative)
Physical Nature	Extreme weather	Temperature increase may generate increase of the consumption demand	Non-measurable. The adaptation studies have not been spread for market analysis yet, and for the time being, they are focused on operational analysis.
Regulatory	Carbon Market Mechanisms Cap and Trade	Option to purchase carbon credits or change its processes or buy clean renewable power.	Impact study under development.
Regulatory	Carbon Market Mechanisms Cap and Trade	Option to purchase carbon credits or change its processes or buy clean renewable power.	Impact study under development.

GREEN GAS (GHG) EMISSION MANAGEMENT

305-1, 305-2, 305-3

Since 2009, Copel has invested in preparation of annual inventory of GHG emissions following the methodology of the Brazilian GHG Protocol program. The management of the emissions from its establishments focused on reduction is one of the commitments undertaken by the Company in the Corporate

Climate Change Management Program. For this purpose, the Company invests in research and development actions, provides incentive to renewable sources in the expansion plan and implements initiatives aimed at emission reduction in the Eco-efficiency Program (see more on page 80). 103-2

NATURAL CAPITAL

In 2017, the emissions of the Holding and its wholly-owned subsidiaries were considered, as presented in the table below:

By type of gas (tCO ₂ e)	Scope 1	Scope 2	Scope 3
CO ₂	223,554.301	319,791.701	2,641.853
CH ₄	118.525	0	3,442.325
N ₂ O	1,068.628	0	91.486
HFCs	46.270	0	0
SF6	2,234.400	0	0
Total	227,022.124	319,791.701	6,175.664
CO ₂ biogenic (t)	2,820.974	-	281.174

Since the emission report 2017, it is mandatory to report the source – change in the use of soil, for calculation of scope 1, impacting the results from the last year. The emissions asso-

ciated with this source are pursuant to the building of WPP Colider. Upon the completion of the vegetation suppression, the emissions from this source dropped, which led to reduction in the last inventory.

Scope 1 considered its own sources of emissions from stationary and mobile combustion, fugitive emissions, industrial effluents and soil changes. In 2017, 2.86% emission reduction was verified, considering the reduction in the consumption of coal and the completion of the vegetation suppression activities in Generation and Transmission.

Scope 2 considered emissions from consumption and loss of energy. Compared to 2016, there was 7.71% increase in emissions, due to the increase of the grid emission factor, despite of the reduction in energy consumption and pursuant to the increase of the losses in power transmission and distribution.

Scope 3 emissions were considered to be transport of employees, air travel, transport and distribution (upstream), and waste from the company. In relation to suppliers, Copel has made its contractors aware to report their emissions and adopt measures to reduce the emission in their activities.

The inventory will be verified by external unit and afterwards, it will be published in the public *GHG Protocol* records and the Paraná climate change forum. [103-3](#)

ATMOSPHERIC EMISSIONS

In relation to atmospheric emissions, the results come from Thermal Power Plant Figueira, verified upon six-month monitoring according to the requirements of the responsible environmental body (IAP), and the values obtained in the measurement campaigns are followed up¹⁸ [305-7](#)

Types of emissions	2015	2016	2017
Emissions of NOx (t)	583	709	2,510
Emissions of SOx (t)	4,797	2,764	15,344
Emission of Persistent Organic Pollutants (POP) (t).	0	0	0
Emission of Volatile Organic Compounds (COV) (t).	0.42	0.2	0
Emission of Hazardous Air Pollutants (HAP) (t).	0	0	0
Emission of Particulate Matter (MP) (t).	229	709	277

In 2017, the concentrations of atmospheric emissions were higher due to the results from the measurement of TPP Figueira. The values in 2017 are out of the historical series, and met the norms in force partially, considering that the particulate matter and the nitrogen and sulfur oxides exceeded the maximum allowed threshold. The modernization of the power plant, which is in progress will significantly reduce the emission indexes.

¹⁸ The atmospheric emissions from Copel's vehicle fleet are not considered for being little significant.

ADAPTATION TO THE CLIMATE CHANGES

103-3

In 2017, Copel continued the actions of the Adaptation Sub-committee, highlighting the completion of the pilot study carried out with Fundação Getulio Vargas (FGV), whose object was the effects of the climate changes on the high voltage lines of Copel DIS in the region of Paranaíba and Apucarana. After vulnerability analysis with the operation, maintenance, environment, financial and labor safety areas, it was identified that by 2040, these areas will be exposed to higher wind speed and temperature increase, with possibility to impact the distribution operation and maintenance in these areas. The preparation of the risk matrix indicated two impacts, which might be significant in the future:

- Increase in collapse of transmission structures built with wind project at 60 and 80 km/h.

- Higher overload on lines and transformers, with full incapacity to supply energy.

Considering the possibility of occurrence of the mentioned impacts, adaptation options were gathered, which can be applied in the study area. The main considerations were:

- Regarding the increase of the wind speed/frequency: performance of RD&I projects, which enable improving both the meteorological and the structure monitoring. When replacement of towers is necessary due to the climate effects, higher resistance towers are used.
- Regarding temperature increase, it was identified that new parameters shall be considered for the projects to be demanded, considering the temperature increase.

Upon completion of the study, Copel is internally developing a methodology for survey of vulnerability related to climate change, which help in the preparation of risk matrixes for the Company's businesses, as well as in the planning of measures for adaptation for enterprises in operation and under planning.

CARBON VALUATION 103-3

In 2017, Copel continued the studies about carbon pricing within the attributions of the Climate Change Committee. The Company has already adopted internal reference value, which is used by the Business Development Executive Office in simulation made for the Company's projects, supporting the risk assessment and financial opportunities to what refers to climate change.

As study measures, the Company has invested in the employees' participation in discussion forums, such as the Brazilian Business



Council for Sustainable Development (CEBDS) and GVces Companies for Climate (EPC), and in the simulation of a carbon market coordinated by EPC, which uses the BVRio platform. In 2017, Copel participated in the Parana Climate Change Forum, which approached the Carbon Pricing topic: opportunities and challenges for Paraná. At the occasion, a case study about the impacts of the carbon pricing on the industrial sector was presented. In general, in 2017, Copel was recognized for its Climate Change management with the Climate seal of the Government of the State of Paraná.



ECO-EFFICIENCY

ECO-EFFICIENCY PROGRAM

The management of the natural resources is present in all Copel's operations, considering the possibility to impact the business and the society significantly during the processes of implementation and operation of the establishments, as well as in providing services and maintenance of the administrative facilities. Thus, the Eco-efficiency Program, in force since 2014, aims to support projects for reduction and better use of natural resources, making the different areas in the Company aware and complying with the strategic guideline to obtain cost, process and quality excellence. **103-1**

Aligned with the Copel's Sustainability Policy, under an integrated view of Copel's project, good management of natural resources is a relevant factor in the Company's competitiveness, considering its current assets and the prospection of new businesses. Thus, the actions in the Eco-efficiency Program are concentrated in five thematical lines: power, water, paper, mobility and fuel, education and communication. The program management team is responsible to follow up the effectiveness of the initiatives, setting targets associated with reduction of the consumption of water, electricity, fuel and materials (paper). **103-3**

The success of the Program is associated with the direct engagement of Copel's employees and partners, and for this purpose, the following events and trainings were done in 2017:

- I Eco-efficiency Workshop in Ponta Grossa, to prepare an action plan to make the Company's facilities more eco-efficient. The event gathered 18 employees and established actions to be developed in 2018.
- Copel Culture and Sustainability Seminar, held in Londrina in relation to the World Environment Day. At the occasion, the results from the program were presented for 88 employees, who participated, as well as representatives of partners from the community, Funai and the Kaingang Memory and Culture Center.
- Video-conference training with the purpose to guide, qualify and support discussions about the sustainability topic between Copel and suppliers. A total of 340 employees and external audience formed by suppliers and contractors' employees participated, and watched the lectures over the internet.

The main results of the program in its operation fronts are presented below:

WATER CONSUMPTION **103-2, 303-1**

The Eco-Efficiency Program provides the management of the water consumption in Copel's administrative units. The withdrawal of water from underground and surface sources used in power Generation, Transmission and Distribution are controlled directly by the subsidiaries. In relation to the administrative water consumption, increase approximately 8% compared to the previous year was recorded – representing approximately 10,000m³ – considering only the water supplied by Sanepar, which did not impact non-achievement of the reduction target set for 2017 at 2%.

One of the causes of the increased consumption was the installation of water purifiers connected to the supply network. Until the end of 2016, drinking fountains with mineral water bottles were used. It is estimated at throughout 2017, about 1,920m³ of water have been consumed through the new drinking fountain system, representing 18% increase in consumption.

In 2017, the total water consumption in the administrative units located in Paraná was 146,519m³.

Source of water withdrawal consumption (m ³)	2015	2016	2017
Surface sources	107,606,193	99,481,216	147,268,823
Underground sources	24,193 ¹⁹	22,750 ²⁰	76,755 ²¹
Rain water	138	-	108
Municipality supply and other public and private companies	108,803	112,928	146,519
Total	107,739,327	99,616,894	147,492,205

¹⁹ Considering consumption in the administrative facilities.

²⁰ Likewise

²¹ Considering consumption in the administrative facilities and the operations

The actions in the Eco-efficiency Program are concentrated in five thematical lines: power, water, paper, mobility and fuel, education and communication.

Regarding the management of the volume in the reservoirs, Copel maintains hydrological monitoring network in the watersheds, where there are water power plants operating. The network is composed of different hydrological stations, where data is collected about the level of water in rivers and reservoirs and pluviometric data. This data, after processing in the Reservoir Monitoring System (SMR), help and guide the operation of the water power plants. Such data is available at [Copel website](#).

Furthermore, Copel Geração e Transmissão monitors the quality of the water in all reservoirs and rivers, which serve the power plants operations, in compliance with the conditions in the Operation Permits. Mostly, monitoring is carried out quarterly in three points (located downstream, in the reservoir and upstream the generation enterprise). The purpose of the monitoring is to assess the ecological conditions

and the oscillation of the trends of the water quality parameters in long terms. The reports on this monitoring are delivered annually to the Paraná Environmental Institute (IAP).

The volume of water of surface courses captured in 2017 was 147,268,823m³. The captured water was used for cooling in power plants. For water power plants, the loss of water by evaporation in the cooling system is considered irrelevant for being a closed system **303-2**

The volume returned to the water body is virtually the same as that captured at the source, because there are only low losses by evaporation, not considered as water consumed by the Company.

Despite of representing low volume of water withdrawal, Copel Distribuição and Copel Geração e Transmissão present their consumption results by pluvial sources, namely 34.43m³

and 38.2m³, respectively. The use of rain water was possible upon implementation of tanks in Castro, Jaguariaíva, Londrina, Telêmaco Borba and São Mateus.

For 2018, the reduction target is 1% in administrative consumption, and the following strategies are provided to support its achievement:

- Recommend adaptation of the building facilities, where there were no: automatic closing faucets, double flush valves and installation of hydrometers on the tanks and the artesian wells;
- Research of new technologies and equipment, which contribute to reduction of the water consumption in toilets and urinals;
- Local and regional management of water consumption; and
- Awareness campaigns.

RESERVOIRS AND QUALITY OF THE WATER

In the reservoirs and respective surroundings, Copel monitors possible environmental intervention and works with specific measures to solve identified irregularities regarding irregular building in the concession area, launch of effluents, stability of slopes, use and occupation of Permanent Protection Areas and illegal hunting and fishing. To help in the process of preservation of the areas of relevant environmental interest, the Company maintains agreement with the Environmental Police Department of the State of Paraná, participates actively in the Watershed Committees and the National and the State Water Resources Council, monitoring the water situation in the rivers, where it has its reservoirs, in real time, in addition to monitoring the quality of the water.

Copel's main impact on the water resources is the change in their natural flow condi-

tions due to the construction of water power plants. For this purpose, the Company works on the management of the social-environmental impacts of its enterprises – since building to the operation phase, carrying studies out, mitigating impacts and risks and complying with the pertinent environmental legislation. In order to assess part of these impacts, Copel takes and analyzes quarterly samples of the water from the reservoirs of the power plants to monitor their quality through 25 physical-chemical and biological parameters, including the parameter "temperature", which is responsible for the water to return to the river course after the plant cooling. Copel also monitors the quality of the water in the river before starting the construction of a new enterprise. Such monitoring includes analysis of sediments and agricultural chemicals, where the analyzed parameters are much more. **303-2**

NATURAL CAPITAL

Electricity consumption (MWh)	2015	2016	2017
Copel Telecomunicações	535.2	656.4	674.6
Copel Distribuição S.A.	23,498.20	21,160	24,912.6
Copel Geração e Transmissão S.A. ²²	8,324.5	7,840.4	7,321.8
Holding	87.1	186.4	227.8
Grand Total	32,445	29,843	33,136.8

²² The results from 2015 and 2016 were adjusted considering the incorporation of Copel Renováveis by Copel Geração e Transmissão.

ELECTRICITY AND FUEL CONSUMPTION
302-1

The Eco-Efficiency Program consolidates the data on electricity consumption sent by Copel Distribuição. The information comprehends virtually all Copel's facilities in Paraná, except for the facilities in other states, such as São Paulo, Mato Grosso and Rio Grande do Norte. It shall be highlighted that the consolidated data include substations, which are big power consumers and have their consumption estimated. 103-2

In 2017, Copel recorded total consumption of electricity at 33,136.8 MWh, considering Generation, Transmission, Distribution, Telecommunications and Holding. The table below presents the electricity consumption in 2017 and in the last two years.

For 2017, Copel assumed a target to reduce electricity consumption by 2%, and 11% growth was recorded at the end of the year. The inclusion of the substations, where there

is no regular measurement, might be the cause of the consumption increase compared to the previous year. For 2018, the reduction target was set at 2%, considering the implementation of the following guidelines:

- Identify places, where installation or review of automatic sensors is pertinent, with cost and return on investment analysis;
- Evaluate the possibility for separate measurement in facilities, where there are equipment units with high energy consumption; and
- Provide local and regional management of the energy consumption.

In the same period, Copel consumed 2,209,582.16 GJ of power in its operation.

The values corresponding to fuel consumption by the Company by type of fuel are presented below.

Type of fuel	Consumption (GJ)
NON-RENEWABLE SOURCES	
Coal (TPP Figueira)*	1,926,305.16
Diesel**	162,287.43
LPG***	68,375.53
Gasoline	36,972.11
Aviation Kerosene	2,994.21
RENEWABLE SOURCES	
Ethanol	12,647.72
Total	2,209,582.16

* Coal is used to produce electricity in a thermal power plant.

** Total diesel used in transportation and emergency generating sets.

*** Total consumption in the company's forklifts and kitchens.

Ethanol, gasoline, LPG and aviation kerosene are the fuels used in the Company's own means of transport.

Among the highlighted initiatives of the Eco-Efficiency Program, there is the campaign for encouraged use of ethanol in the dual fuel vehicles of Copel Distribuição, Geração e Transmissão and Telecomunicações. Launched in August 2017, the campaign presented short-term results with reduction in gasoline consumption and increase in ethanol consumption.

Another initiative for reduction of the fuel consumption was the incentive to use video-conferences. Between December 2016 and December 2017, more than 6 thousand meetings were held by video-conference at Copel. The performance of each meeting avoided an average of 270 km, representing total savings of 140 thousand liters of fuel (considering gasoline) and emission of about 290 tCO₂e.

PAPER CONSUMPTION

Copel keeps control on the copy printing data obtained by means of reports presented by the company providing the service. The monthly report includes data, such as printing quantity, billing amount, attendance and other management information. The main actions carried out in 2017 to reduce paper consumption and printing were corporate notifications encouraging the use of double mode prints (both sides of the sheet).

In 2017, two targets were defined for the use of this resource:

- Achieve 40% double prints by Dec/2017; and
- Achieve 50% double prints by Dec/2018.

The absolute number of prints has dropped in the last years, and the reduction was of approximately 15% from 2015 to 2017. In relation to the double printing, the annual mean was 39.82%, close to the 40% target.

In 2017, Copel saved 3,701,352 sheets of paper by using double printing. This number is equal to 7,402 reams or 740 boxes of paper. It would correspond to approximately

490 trees, as described in the International Featured Standards (IFS): 1 tree = 7,500 sheets of paper.

WASTE MANAGEMENT 103-2, 306-2

The waste management at Copel is based on the Corporate Waste Management Program, whose purpose is to reduce generation, value the disposed material and promote reverse logistics. All processes adopted by the Companhia are in compliance with the National Solid Waste Policy and all relevant legislation and standards in force.

The waste generated in the company's operations is duly segregated, packaged and sent to one of the warehouses, where it is stored until disposal. In 2017, most of the generated waste was sent to recycling through the alienation process. The chart below demonstrates the destination of the waste::

Copel keeps the following waste destination targets for 2018:

- 95% of the industrial waste from Distribution submitted to reuse or recycling; and

Destination (in tons)	Hazardous Waste	Non-Hazardous Waste
Recycling	5,490.30	45,877.40
Composting	-	31.10
Incineration	0.05	-
Autoclaving + Landfill (class II)	0.76	-
Landfill	-	20,688.40
Co-processing	33.04	3.75
Total	5,524.15	66,600.65

- 60% of the industrial waste from Generation and Transmission submitted to reuse or recycling (ash not included).

As a good practice, the Company maintains the Solidary Waste Segregation program, which consists is destination of the recyclable administrative waste to associations and cooperatives of recyclable materials registered by means of Public Call. The initiative plays an important social role upon strengthening and protagonist of the collection entities, which are considered fundamental tools for the fulfillment of the National Solid

Waste Policy. In 2017, more than 100 tons of recyclable waste was sent to collection associations and cooperatives in Paraná, benefiting 331 families and generating estimated income at BRL 29 thousand.

In 2017, Copel Telecomunicações kept the project for recycling lead batteries and optical fiber cable waste with the purpose to reduce the impacts to the environment, create opportunities to generate income and fulfill the National Solid Waste Policy. In relation to service providers, a clause was included in the contracts for correct destination of waste classified as work leftovers.



ECOSYSTEMS **103-3, 304-1, 304-2**

Copel Distribuição and Copel Geração e Transmissão have 82,146 km high voltage distribution lines (69 and 138 kV), which affect preservation units from the Full Protection of the State of Paraná, according to the National Preservation Unit System (SNUC).

MITIGATION OF THE IMPACTS CAUSED BY PROJECTS

Power generation, transmission and distribution projects may generate impacts on the ecosystem in the region, where they are situated. According to its principles and the environmental legislation in force, Copel carries out environmental studies before starting the installation of new enterprises. The results from these studies enable elaboration and execution of environmental projects and programs aiming to avoid, mitigate or minimize the negative impacts and maximize the positive impacts from their enterprises. **103-1**

GENERATION ENTERPRISES

The installation of generation enterprises provokes changes in the environment of a region, with impacts on the physical, the biotic and the social environment. There might be changes in some ecological processes, modifications in the fauna and flora species, impacts on the population's way of life and on the historical-cultural heritage. To mitigate these possible impacts, Copel carries out programs for monitoring and rescue of flora and fauna, recovery of Permanent Preservation Areas (APPs), re-forestry, archeological monitoring and rescue, among others. Several programs are carried out in the phase of implementation of the enterprise and others are broken down to the operation phase as well.

103-2

It shall be highlighted that the enterprises undergo inspections and periodic studies for preparation of Technical Reports, which enable constant follow-up of the environments, enabling preservation and correction of possible impacts, in addition to keeping the responsible environmental bodies informed about the status of the enterprise. **103-3**

TRANSMISSION AND DISTRIBUTION ENTERPRISES

The power transmission and distribution enterprises have their main impacts concentrated in the phase of implementation, when there is vegetation suppression for their installation. This process may increase forest fragmentation of the environments and lead to reduction of the native species caused by the increase of the border effect, reduction of fauna habitats, increased hunting in the region, etc. In the operation phase, for power distribution, oil leakage from the transformers is considered a risk to the biodiversity to what refers to pollution. The oil substances, if not contained, contaminate the soil and the water table, impairing the water and the land biodiversity. In this context, Copel keeps preventive measures to avoid spillage. In the distribution lines and the substations, exotic, invasive exotic and other opportunist species might be favored due to the opening of clear passages to build structures and launch cables. **103-1**

Internally, Copel carries out Prior Environmental Analysis to check whether there are social-environmental restrictions for the selection of land for the implementation of power

substations. This study considers social-environmental aspects in the enterprise concept phase. For the definition of the route of its transmission lines, multi-functional analysis is carried out, seeking the lowest possible impact on the natural environment, but also considering the economic and the social issues of the selected route. However, in some cases, it is not feasible to deviate the line route from forest fragments. For this reason, the current projects seek to minimize vegetation suppression only to the strictly necessary to build the project – sometimes, restricted only to the opening for cable launching – and to provide use of high structures to reduce the impact on the vegetation, whenever possible. In some cases, to minimize suppression, the cables are launched by drones, thus, avoiding low cutting of native species.

It shall also be highlighted that, in order to avoid or reduce the negative impacts in its works, Copel has provided environmental programs, such as Vegetation Suppression Monitoring and Control, Forest Restoration, Erosive Process Monitoring and Control and Driving

out and Rescue of Fauna, whenever applicable to the enterprises. In medium voltage distribution lines, the use of compact grids reduced the need to prune trees..

In 2017, Copel Distribuição elaborated a Simplified Environmental Report (RAS) for three substations and thirteen High Voltage Distribution Lines (HVDL), and a Detailed Environmental Program Report (RDPAs) for four substations and seven HVDLs, in addition to Forrest Inventories (IF) for eight HVDLs. In none of these studies highly relevant impacts on biodiversity were identified. **103-2**

In 2017, Prior Environmental Analysis was carried out for four substations 34.5 kV and 138 kV.

Copel Geração e Transmissão S.A. elaborated RDPAs for six projects and eight Forest Inventories. It also completed the elaboration of the Environmental Impact Study and the respective Environment Impact Report (EIA/RIMA) for a Transmission Line, and held public hearings, which are part of the process necessary to obtain prior license (LP) of the enterprise.

It also be highlighted that ICMBio approved the work plan of the pilot project for In-

tegrated Vegetation Management in progress for the high voltage distribution line projects passing through the National Park Saint-Hilaire/Lange (HVDL 138 kV Posto Fiscal - Matinhos, Guaratuba - Matinhos and Posto Fiscal - Guaratuba) at the Paraná sea coast, which reduced the need to cut in these areas and the environmental impacts caused by this activity. In the future, the project can be applied to other preservation units, as well.

The establishments of Copel Telecomunicações are concentrated in Paraná and it shares the infrastructure with Copel's transmission and distribution subsidiaries Copel.

FOREST COMPENSATION

103-3, 304-3, G4-EU13

Since 2012, Copel Geração e Transmissão and the Environmental Institute of Paraná (IAP) work in partnership in the production of native forest seedlings for restoration of Permanent Preservation Areas, Legal Forest Reserves and Forest Restoration Areas of the State of Paraná. Copel is responsible to grant contractors' work posts to dedicate exclusively to production of seedlings.

Another relevant partnership of Copel Geração e Transmissão is with the Environmental Police Department (BPAMB) to assure agility and effectiveness of the actions for protection of permanent preservation areas around its reservoirs, acting preventively to protect water bodies, fauna and flora.

Also in the scope of forest compensation, Copel Geração e Transmissão is responsible to protect and restore habitats in the following areas:



SUSTAINABLE USE UNITS:

Guaratuba State APA:

3,513.34 hectares

between the municipalities of São José dos Pinhais and Tijucas do Sul (Paraná);

8,798.70 hectares

between the municipalities of São José dos Pinhais and Guaratuba (Paraná);

812.14 hectares

between the municipalities of Guaratuba, Morretes and São José dos Pinhais (Paraná).

Escarpa Devoniana State APA:

88.72 hectares

between the municipalities of Ponta Grossa and Carambeí (Paraná) and

40.10 hectares

in the municipality of Castro (Paraná).



FULL PROTECTION UNITS:

Pico do Marumbi State Park:

225.98 hectares

in the municipality of Morretes.

Pico do Paraná State Park:

865.18 hectares

in the municipality of Antonina (Paraná).

Tia Chica Ecological Station:

423.12 hectares

between the municipalities of Cândói and Reserva do Iguçu (Paraná).

Rio dos Touros Ecological Station:

1,231.06 hectares

in the municipality of Pinhão (Paraná)

Rio Guarani State Park:

2,235 hectares

in the municipality of Três Barras (Paraná)

The actions developed in these areas have not been assessed by external specialists.

Due to the vegetation suppression in distribution lines and substations, Copel Distribuição carried out compensating actions for forest restoration by donating seedlings to be planted by third parties and delivering seedlings to city halls to be planted in urban areas, totaling 430 native forest seedlings and 1,345 urban afforestation seedlings.

URBAN FOREST PROGRAM

Copel supports the city halls in the planning of afforestation of public roads since 2007, contributing to environmental improvement of the cities and reduction of the interruption of power supply caused by incompatibility of the trees with the electric systems.

The initiative is focused on own production of seedlings in the Company's forest gardens. Thus, in addition to serving the interested municipalities, the compensatory measures are also met. More than 41 thousand seedlings have already been planted for street afforestation.

The afforestation seedlings are supplied through term of donation with charges. In the period, 895 seedlings were delivered to three municipalities and documentation was received for seedling supply to 24 municipalities will be delivered at the beginning of 2018.



The produced seedlings are also used to meet the conditions for environmental licensing. In 2017, the conditions for the projects in the municipalities of Mandaguari (1,015 seedlings) and Lapa (200 seedlings) were met.

In the period, Copel DIS Innovation Committee approved the R&D Project "Urban forest management – Improvement of the pruning activities under electric systems," presented by the Forest Research Foundation (FUPEF), whose project is under elaboration.

As a result from the participation of Copel DIS in the Work Group Thesis – Trend in Ecosystem Services in the Sustainability Study Center (GVCes) at Fundação Getúlio Vargas, the study "Assessment of the results from the Urban Forest Program in terms of regulation of the global climate" was published in 2017.

THREATENED SPECIES

103-3, 304-4

Copel GeT carries out different actions in relation to threatened species in the areas influenced by its enterprises, according to the group it belongs to. For water fauna, Copel GeT keeps continuous monitoring on the ichthyofauna in its reservoirs. Monitoring enables identifying the presence of invasive species and follow up their populations. By monitoring in water power plants in stage of installation, Copel GeT seeks to identify the changes in the ichthyofauna as a consequence of the damming and the change in the characteristics of the water body. Monitoring enables Copel GeT to keep the environmental bodies and the society informed about long-term changes in the fish populations.

Along its monitoring activities, Copel GeT recorded presence of eight species of threaten fish detected in the watersheds, where Copel maintains power plants. It is an estimation based on the information about fish species in continental waters considered somehow threatened by the Red Book of Threatened Fauna in the State of Paraná. For this

purpose, the watersheds, where Copel GeT has power generation enterprises operating today, have been considered, crossing this information with the distribution of the fish mentioned in the Red Book for the same watersheds. The species indicated in the Red Book of Threatened Fauna in the State of Paraná are not registered in IUCN Red List. By now, the monitoring of the ichthyofauna in WPP Colíder, a power plant in process of installation in the basin of the Teles Pires River in Mato Grosso, has not registered any threatened species. As compensation measure, Copel maintains an Experimental Stations for Ichthyological Studies since 1996, whose juvenile fish production is destined to the reservoirs in the Iguaçu River. The target for 2017 was to produce 120,000 juvenile fish and it was exceeded with production reaching 124,367 native fish. Furthermore, in 2017, the company provided approximately 15 thousand native fish for external events, contributing to the environmental education around the Iguaçu River and other watersheds.

The target for 2017 was to produce 120,000 juvenile fish and it was exceeded with production reaching 124,367 native fish.



NATURAL CAPITAL

In relation to the land fauna, upon implementation of enterprises, Copel GeT carries out programs for survey and monitoring of the fauna. In addition to monitoring, Copel GeT carries out specific programs for rescue and relocation of fauna for installation of enterprises with potential impact on the land fauna during the activities, such as vegetation suppression and reservoir filling. Copel GeT is also a pioneer in rescuing and relocation of native bees, and it started this kind of activity in the installation of WPP Mauá in the Tibagi River.

In the works on survey and management of

wild animals contracted by Copel GeT, 47 land fauna species, considered somehow threatened in the IUCN Red List, have already been registered, 42 according to the Red Book of Threatened Fauna in the State of Paraná and 28 according to the Red Book of Threatened Brazilian Fauna. The data validation was done by comparing the preservation status to the most recent documents evidencing monitoring and rescue of fauna.

Regarding flora, as for land fauna, Copel GeT contracts specialized teams to carry out survey programs, monitoring and rescue of flora (germplasm) in areas affected by the en-

terprises during the installation phase. Copel GeT also carries out actions for re-composition and maintenance of the Permanent Protection Areas (APP) of its reservoirs with native species for each region.

To register threatened flora species, the data from the monitoring, rescue and forest re-composition programs of the different enterprises were crossed with that from two sources: The National Official List Threatened Flora Species of the Ministry of Environment (MMA) and the Brazilian Environment and Water Resources Institute (IBAMA), and the IUCN (International

Union for Nature Conservation) Red List of Threatened Species. In general, until now, 36 flora species were registered in the IUCN Red List and 17 species were found in the MMA List.

For Copel Distribuição, in the elaboration of the Simplified Environmental Report (RAS) and the Forest Inventory (IF), the species potentially present in the areas of influence and those indicated for suppression are classified regarding the state of conservation.

A summary of the threatened species record, according to group, list and degree of threat, is provided in the table below:

NUMBER OF THREATENED SPECIES RELATED TO THE AREAS OF INFLUENCE OF COPEL GET ENTERPRISES, ACCORDING TO GROUP, LIST AND DEGREE OF THREAT.

Subsidiary	Group	List	Threat Status					TOTAL	
			DD Insufficient Data	LC Less Worrying	NT Almost threatened	VU Vulnerable	EN In Danger		CR Critically in Danger
GeT	ICHTHYOFAUNA	PR	-	-	-	7	1	-	8
GeT	LAND FAUNA	IUCN	10	27	14	16	6	2	75
		PR	16	-	3	13	4	9	45
		BR	-	-	-	20	6	3	29
GeT	FLORA	IUCN	-	-	-	-	11	5	16
		MMA	-	-	23	2	8	3	36
DIS	FLORA	IUCN	-	1	2	1	2	1	7

Legend: IUCN IUCN Red List of Threatened Species
PR Red Book of Threatened Fauna in the State of Paraná

BR Red Book of Threatened Brazilian Fauna
MMA National Official List Threatened Flora Species



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

APPENDIX

INFRASTRUCTURE CAPITAL



GENERATION AND STRATEGIC PLANNING ASSETS

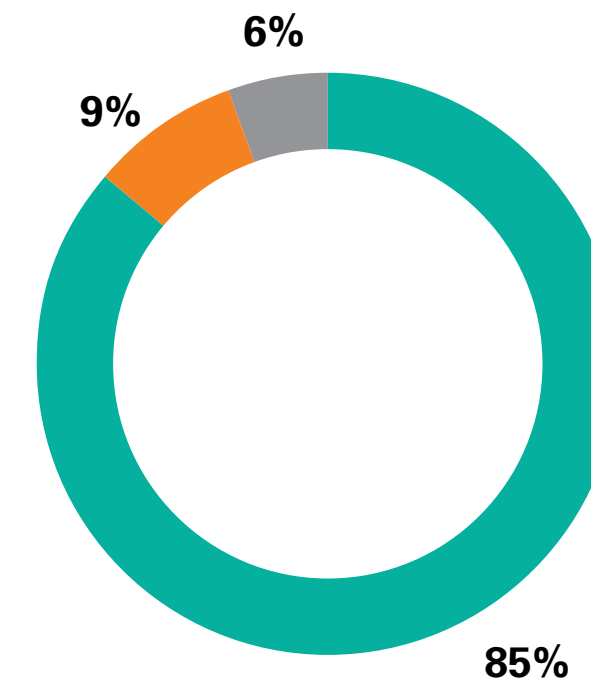
Copel operates 28 own power plants and participates in 3 other power plants, 17 of which are Hydroelectric plants, 12 wind farms, and 2 Thermoelectric plants, with total installed capacity of 5,313.4 MW and Physical Guarantee of 2,430.3 MW average. In 2017, the net power production was 20,453.09 GWh.

G4 DMA EU1, G4 DMA EU2

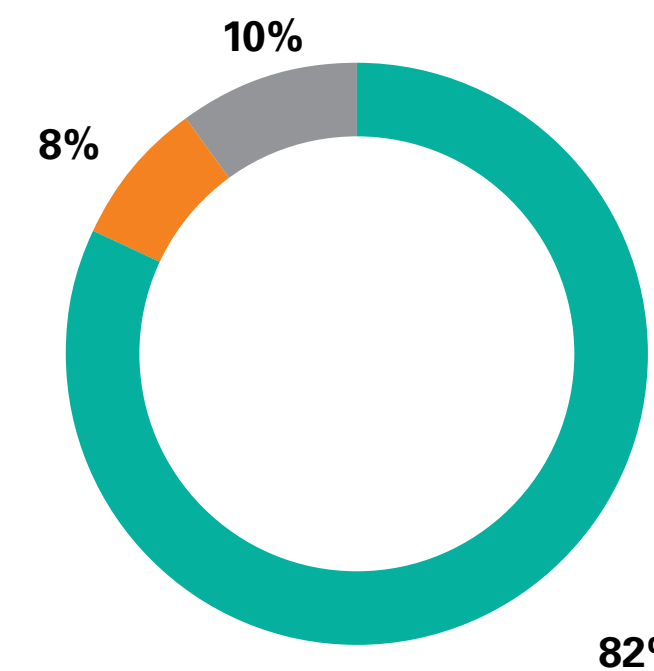
To assure power availability and reliability, the Generation Operation and Maintenance (O&M) processes are based on management model supported by reliability techniques, where, through cause and effect analysis, it is possible to define the perfect policies for failure management to avoid or restrict the consequences from functional failures and its relations (health, environment, safety and cost).

For distribution, to assure power reliability and availability in Copel's system is a part of a process, which involves medium and long-term planning of the networks, as well as different short-term actions, called Distribution Network Operation. **G4 DMA EU6**

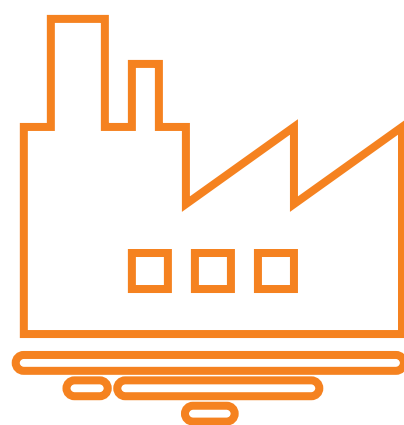
Generation Park Physical Guarantee by Source



Generation Park projection for 2019 Physical Guarantee by Source

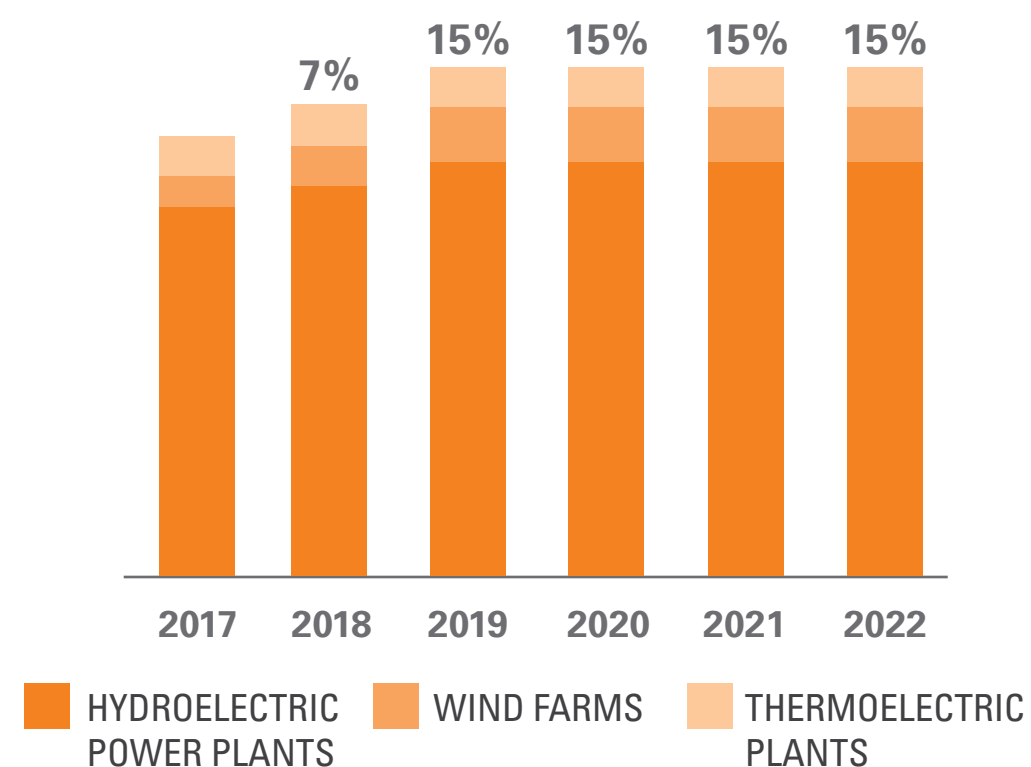


● HYDROELECTRIC PLANTS ● THERMOELECTRIC PLANTS ● WIND FARMS



Currently, the Company is concentrating efforts in building 15 power plants, which will add 716.8 MW installed capacity and 355.3 MW average physical guarantee to the generation park, 80% of this physical guarantee scheduled to start commercial operation during 2018, according to the chart below:

Evolution of Generation Park (Physical Guarantee)



POWER PLANT AVAILABILITY

In the generation activities, the indicator of average availability of the power plants is monitored. The indicator measures the number of hours of interrupted generation. **G4-EU30**

AVERAGE AVAILABILITY FACTOR	2015	2016	2017
Total planned interruption hours	42,265	21,916	28,426
Total forced interruption hours (non-planned)	36,048	18,672	11,290
Own Hydroelectric plants	0.90	0.92	0.96
Hydroelectric Plants with capital shares of Copel	0.96	0.96	0.94
Thermoelectric Plants	0.78	0.70	0.81
Thermoelectric Plants with capital shares of Copel	0.89	0.89	0.98

HIGHLIGHTED GENERATION PROJECTS

- Colíder Hydroelectric Power Plant:** The building of the power plant located on the Teles Pires River between the municipalities of Nova Canaã do Norte and Itaúba in Mato Grosso started in 2011 and shall absorb BRL 2.1 billion investment. In 2017, 94% of the works were already completed. Copel Geração e Transmissão conquered the concession for implementation and exploration of the power plant for 35 years in the power bid made by Aneel on 07/30/2010. The installed capacity of the enterprise will be 300 MW, and the forecast to start commercial has been reviewed, providing that the first generating unit will start operation in May 2018, while the third and last generating unit is scheduled to start operation in November 2018.

- Modernization of the Figueira Thermoelectric Plant:** The Company started the works on the modernization in 2015, aiming to increase its efficiency and reduce the emission of gases and particles resulting from the coal firing. After the replacement of the supplier, who had financial difficulties, the completion of the works is scheduled to the end of the second half-year 2018
- Cutia and Bento Miguel Wind Complexes:** The biggest wind enterprise of Copel is under construction, it is called Cutia and it is sub-divided into two big complexes: (a) Cutia Complex, composed of seven wind farms (Guajiru, Jangada, Potiguar, Cutia, Maria Helena, Esperança do Nordeste and Paraíso dos Ventos do Nordeste) with 180.6 MW total installed capacity and 71.4 MW average physical guarantee, all situated in Rio Grande do Norte. The commercial operation of these farms is scheduled to July 2018; and (b) Bento Miguel Complex, composed of six wind farms (São Bento do Norte I, São Bento do Norte II, São Bento do Norte III, São Miguel I, São Miguel II and São Miguel III) with 132.3 MW total installed capacity and 54.8 MW average physical guarantee, all situated in Rio Grande do Norte. The initial forecast for commercial operation of these farms is January 2019. In January 2017, the process of erection of the wind generator towers was started.

The Hydroelectric Plant Colíder will have 300 MW of installed capacity, which is expected to start commercial operation, and it is anticipated that the first generating unit will start operating in May 2018.

TRANSMISSION AND DISTRIBUTION ASSETS

EXTENSION OF THE TRANSMISSION AND DISTRIBUTION LINES **G4-EU4**

Transmission

The Company wholly owns and participates in the concession for transmission and operation corresponding to 7,025 km transmission lines and 45 substations of the basic grid, with transformation power of 14,752 MVA.

The year was marked by the entry in operation of 1,678 km lines and the start of the implementation of a BRL 580 million project, a result from a tender won in 2015.

Currently, the Company is concentrating efforts to build three enterprises, which will add 1,430 km length and 4,500 MVA transformation capacity to the transmission lines and substations owned by the company itself and in partnership.

Distribution

Copel's distribution lines are 196,951.2 km long and totally, they serve about e 4.6 million consumers in 394 municipalities in Paraná and one in Santa Catarina.

Distribution lines – Voltage level	2017	2016
Total length (km)	196,951.20	195,458.50
13.8 kV	105,510.6	104,556.0
34.5 kV	84,639.2	84,071.3
69 kV	866.4	695.4
138 kV	5935.0	5,970.3
230 kV	0	165.5
Number of substations	369	364

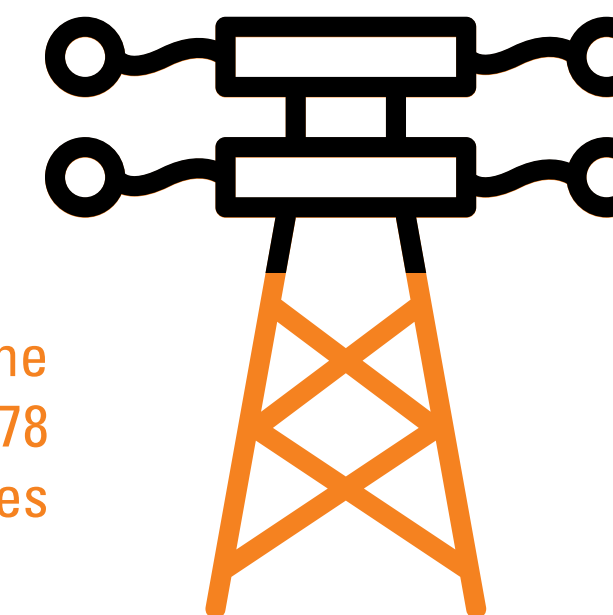
In 2017, new substations and high voltage lines were connected to reinforce the quality and increase the availability of power to the consumers. In 2017, all these enterprises added approximately 553.34 MVA to the distribution system and 192.81 km of new distribution lines.

Wire Market (TUSD) – In 2017, the load wire, which takes into account all consumers that accessed the Distributor's network, grew by 3.4% compared to 2016.

The industrial wire market grew by 4.9% in 2017, driven mainly by the food products, manufacture of pulp, paper and paper products, and manufacture of wooden products.

Power Wire Market'	Number of Consumers/contracts			Distributed Power (GWh)		
	2017	2016	%	2017	2016	%
Captive Market	4,560,493	4,478,767	1.8	19,743	22,328	(11.6)
Utility and Licensed Companies	3	4	(25.0)	521	614	(15.1)
Free Consumers ²⁴	991	620	59.8	8,873	5,273	68.3
Wire Utilities	3	2	50.0	78	52	50.0
Wire Market	4,561,490	4,479,393	1.8	29,215	28,267	3.4

²⁴ Total free consumers served by Copel Geração e Transmissão and by other suppliers within the concession area of Copel Distribuição.



The year was marked by the entry in operation of 1,678 km of transmission lines



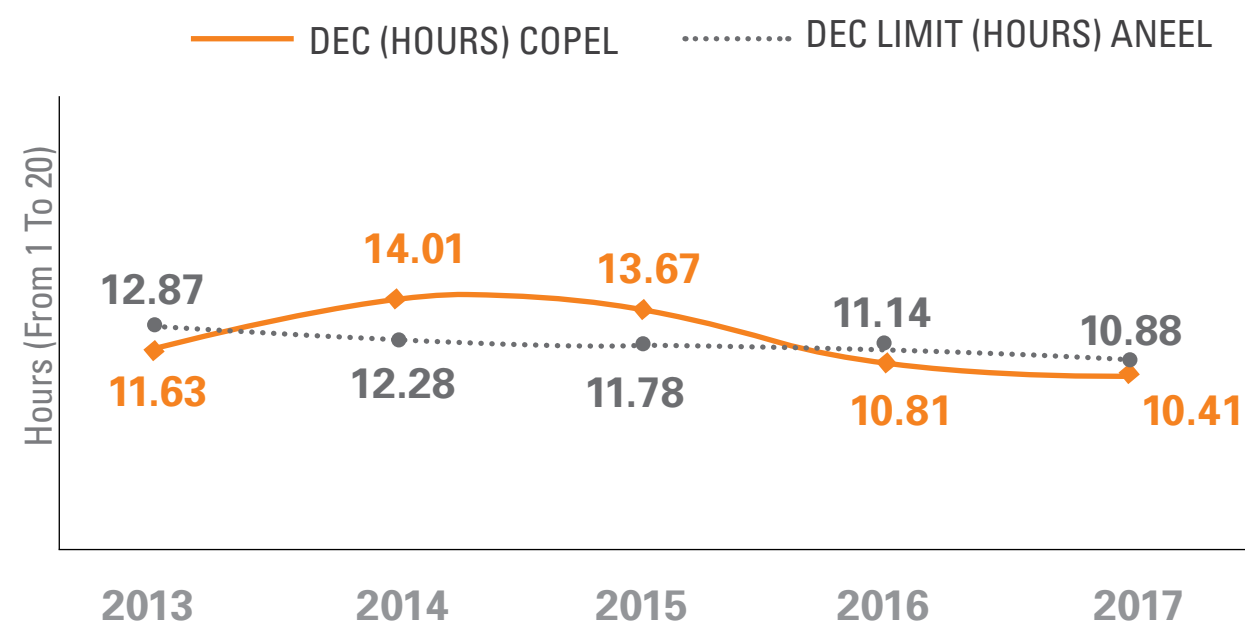
Captive market - From January to December, the captive market consumption was 19,743 GWh, with a negative variation of 11.6%, compared to the previous year, due to the migration of consumers to the free market. The number of captive consumers billed by Copel Distribuição was 1.8% higher than in December 2016, totaling 4,560,493 consumers. In 2017, 81,726 captive consumers were added to the system.

Sold Power (GWh)	2017	2016	%
Residential	7,126	6,932	2.8
Industrial	3,254	5,753	(43.4)
Commercial	4,651	5,059	(8.1)
Rural	2,257	2,179	3.6
Others	2,455	2,405	2.1
Total	19,743	22,328	(11.6)

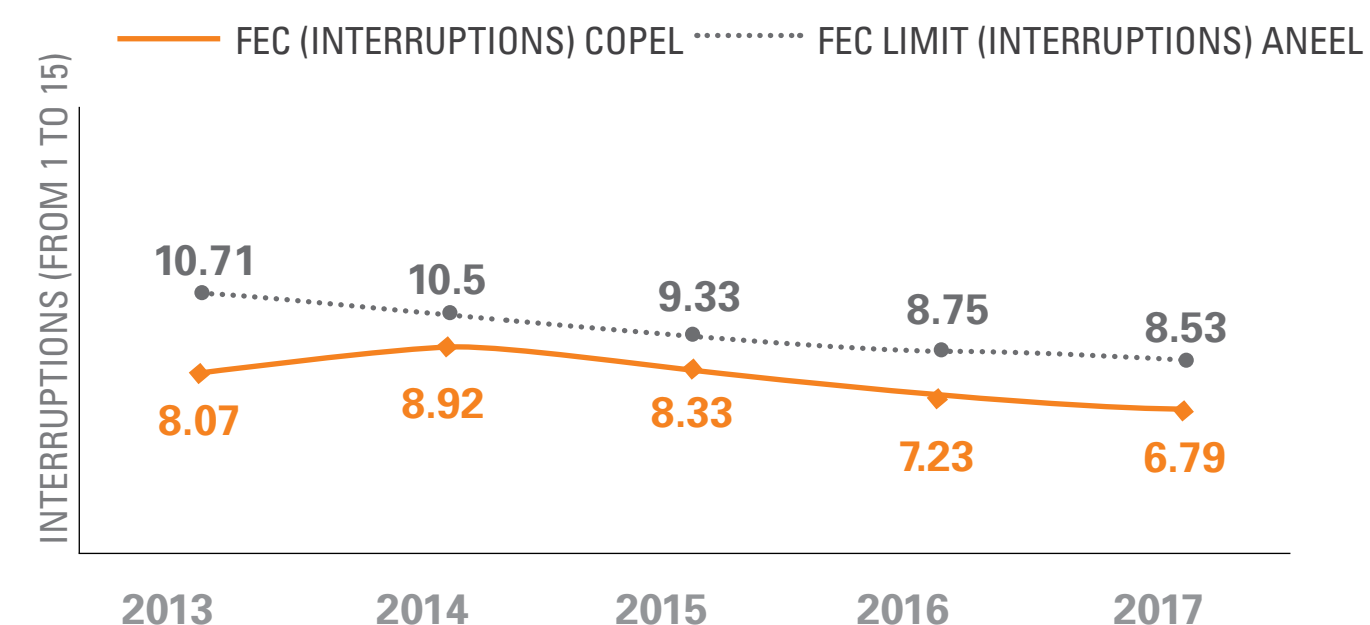
EFFICIENCY IN SUPPLY: QUALITY MANAGEMENT AND ENERGY LOSS
G4-EU28, G4-EU29

Quality of supply, measured through the performance indicators of distributors in terms of continuity of the provided services, known as DEC (Equivalent Interruption Duration by Consumer Unit) and FEC (Equivalent Interruption Frequency by Consumer Unit) showed improvement in 2017, compared to the previous year. DEC improved from 10.82 to 10.41 and FEC improved from 7.23 to 6.79, according to the graphs below:

DEC Evolution (hours)



FEC Evolution (interruptions)



In 2017 COPEL achieved target set for 2018 of DEC and FEC, of which 11.23 and 8.24 respectively





The improvement in DEC and FEC is a result of changes in processes focused on agility, optimization and relocation of recourses to respond the occurrences. There was also increase of investment in the rural grid through the Mais Clic Rural program, where funds have been applied in special equipment and grid automation, improving the system reliability.

Loss of energy is inherent to the nature of electric power transformation, transmission and distribution. In 2017, overall losses - technical, non-technical and of basic grid – represented 9.2% of the energy injected into the Distributor's system. This percentage reduced by almost 0.4% compared to that in 2016 and remained below the values verified in the last years. A factor that contributed to this reduction was the Program for Fighting Non-Technical Loss carried out by Copel Distribuição.

EVOLUTION OF LOSSES IN TRANSMISSION AND DISTRIBUTION

G4-EU12

TYPES OF LOSSES		2015	2016	2017
Transmission ²⁵	Overall losses (%)	1.8	1.5	1.4
	Technical losses (%)	1.8	1.5	1.4
Distribution	Overall losses (%)	9.6	9.6	9.2
	Technical losses (%)	6.1	6.1	6.1
	Non-Technical losses (%)	1.6	2.0	1.7

²⁵ In relation to the previous years, the loss in the basic grid were changed. The amounts refer to losses verified in the basic grid of the national integrated system, shared at 50% for generation companies and 50% for load agents, and Copel Distribuição has its share defined by its market share. Any change in this loss influences the total overall loss.

OPERATIONAL EXCELLENCE PROGRESS:

Telemetry Group A – This billing data is automatically obtained, without the need to send someone to read the meter. This kind of remote measurement enables automated collection of data on time, optimizing the process considering the precision in collection, handling and availability of the data, also for the customers over the internet.

The system is also capable of monitoring use of energy, issuing alarms when abnormal events occur, contributing to detection of defects and irregular measuring procedures and reducing Copel's commercial loss.

Paraná Smart Grid Project - The Paraná Smart Grid Project was proposed as a part of the actions stipulated in State Decree No. 8,842/2013, with the purpose to improve the telemetry system. It was designed to improve the quality of the services and the capacity of the Company to serve in the electric system and the telecommunication system.

The Project was completed in 2017, recording the following conclusions: measuring automation requires standardization among suppliers, because the power Distributor depends on the implemented own system and the automation of the Medium Voltage Grid is one of the main tools to reduce the time and the frequency of duration of the interruptions.

Through the project, micro-generation studies were also carried out using intermittent sources, as well as tests with electric vehicles. The findings are used for connection of new users and preparation of the grid for the future.

Mais Clic Rural – In 2016, investments were made at the amount of BRL 70 million in new technologies for automation and communication systems, 34/13 kV substations and work to improve and reinforce the grid. The initiative focuses on the four sectors most sensitive to the quality of the power supply: pig farmers, tobacco farmers, aviaries, and dairy farmers in the State of Paraná. Altogether, more than 200 thousand rural producers in Paraná were benefited from these initiatives. Among the main advances made in the period is the implementation of 55 automatic grid reconfiguration systems, whose installation has already been done.

Distributed Generation (GD) – This is the generic name of the type of power generation that differs from the centralized generation, usually of greater size and greater environmental impact, because it occurs at or near consumers.

Copel Distribuição updates technical standards and adopts best engineering and safety practices to connect distributed generation users (57 independent producers or self-producers, with 600 MW generation in 45 municipalities).

For micro and mini generation companies, including operating units and units under document processing, there are 405 units, most of photovoltaic generation (395 units). Total 3.34 MW installed power.

The addition of GD, although still insufficient to meet the growth in demand, is fundamental to reduce the rate of growth of generation and postpone the need to build big power plants and transmission lines that, which, together with their benefits, are associated with expressive environmental impacts.

COMMERCIALIZATION

Copel Comercialização, created in January 2016, established itself in the market under the brand Copel Energia, working with a free market specialization of energy purchase and sale, driven by the accelerated movement of migration of large consumers from the regulated market to the Free Marketing Environment - ACL (ACL). In addition to operating in the energy purchase and sale segment, it offers management services in the free energy market for its customers. The Company showed fast growth, closing the year with 300 megawatts average energy sold.



TELECOMMUNICATIONS

Copel Telecomunicações provides telecommunication and communication services in general, in Multimedia Communication Service (SCM), developing studies and projects focused on meeting the needs of the Company and the market in general. The exploration of such services is for an indefinite term, without exclusivity, at national level.

Increasingly more connected, the people in Paraná are following the trend in the telecommunication sector in Brazil, which presented growth by 7.2% in 2017. Driven by regional providers, such as Copel Telecom, the broadband expansion places the telecommunication services sector as the only one growing above the average among the essential services. According to Anatel, only in the State of Paraná, the number of new contracts of broadband service subscribers grew by 11.3% compared to 2016.

The search for efficient services and state-of-art solutions placed Copel Telecom on a differentiated level in the sector, with growth above 30% in relation to the number of subscribers. Upon the increasing demand and context of improvement in

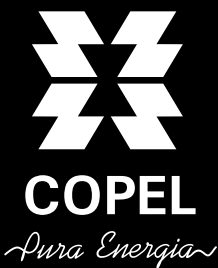
the processes and the teams' efficiency, it managed to reduce the cost in percentage without losing revenues.

Copel Telecom serves all 399 municipalities in Paraná and 2 municipalities in Santa Catarina on optical fiber with high-performance network and internet services for companies, operators and the government. The company serves 65 municipalities, 64 in Paraná and 1 in Santa Catarina, with residential broadband internet on optical fiber, in a GPON (Gigabit Passive Optical Network) model network, with one of the best performances on the market. The State is the first and the only one in the country to become 100% digital, with network, which in 2017 totalized more than 32 thousand km optical cables, almost the distance around the Earth.

Copel Telecom's internet is installed totally on optical fiber, in fiber-to-the-home (FTTH) or fiber-to-the-office (FTTO) system, i.e., where the fiber cable is connected in the consumer's house or office, without any other kind of intermediary material. This system guarantees the high performance of the Company's connection.

PARTICIPATIONS

Copel has corporate shares and association in companies, consortiums and other institutions, which work in different sectors in addition to the power area. Further information in EN 1.1, EN 2, EN 18 and EN 19.7 of the [Financial Statements](#).



COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

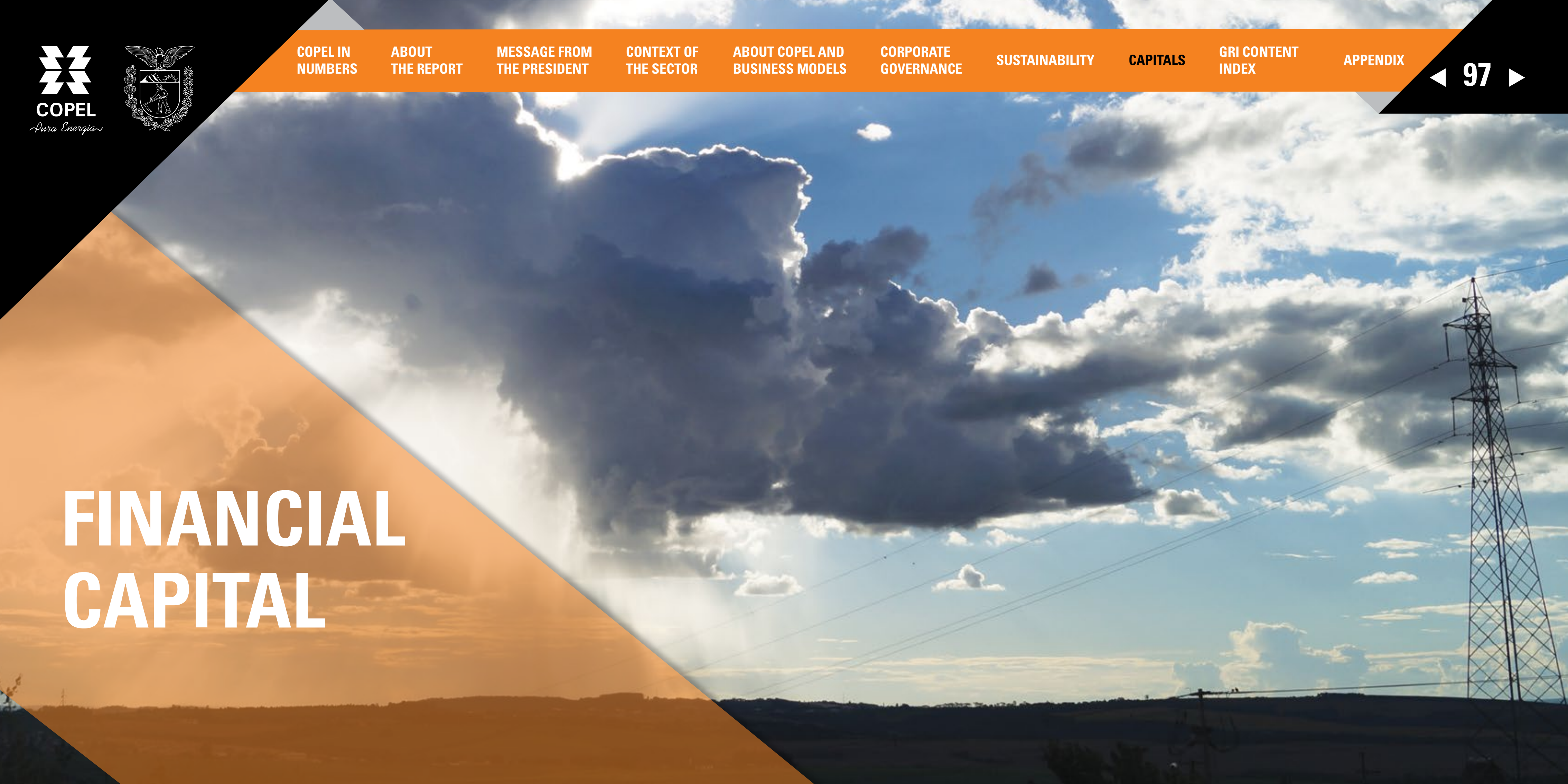
SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

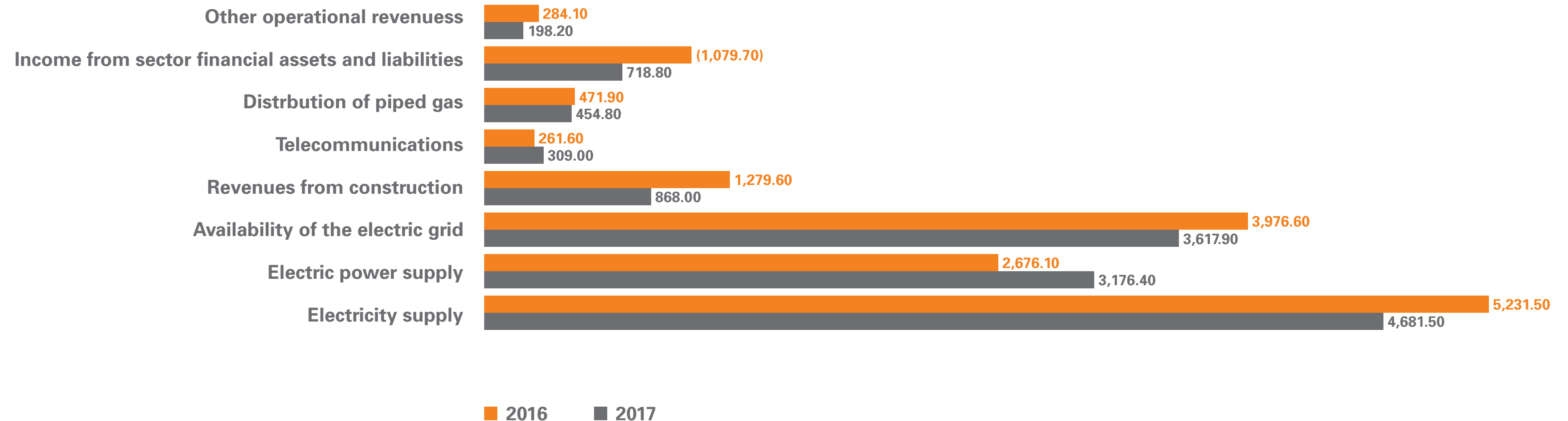
APPENDIX

FINANCIAL CAPITAL



Aligned to the strategic guidelines of the Company to expand the business in a sustainable and profitable way and obtain excellence in costs, processes and quality, in 2017, Copel increased the Net Operational Revenues from BRL 922.8 million, representing 7% increase compared to 2016. [103-2](#), [103-3](#), [201-1](#)

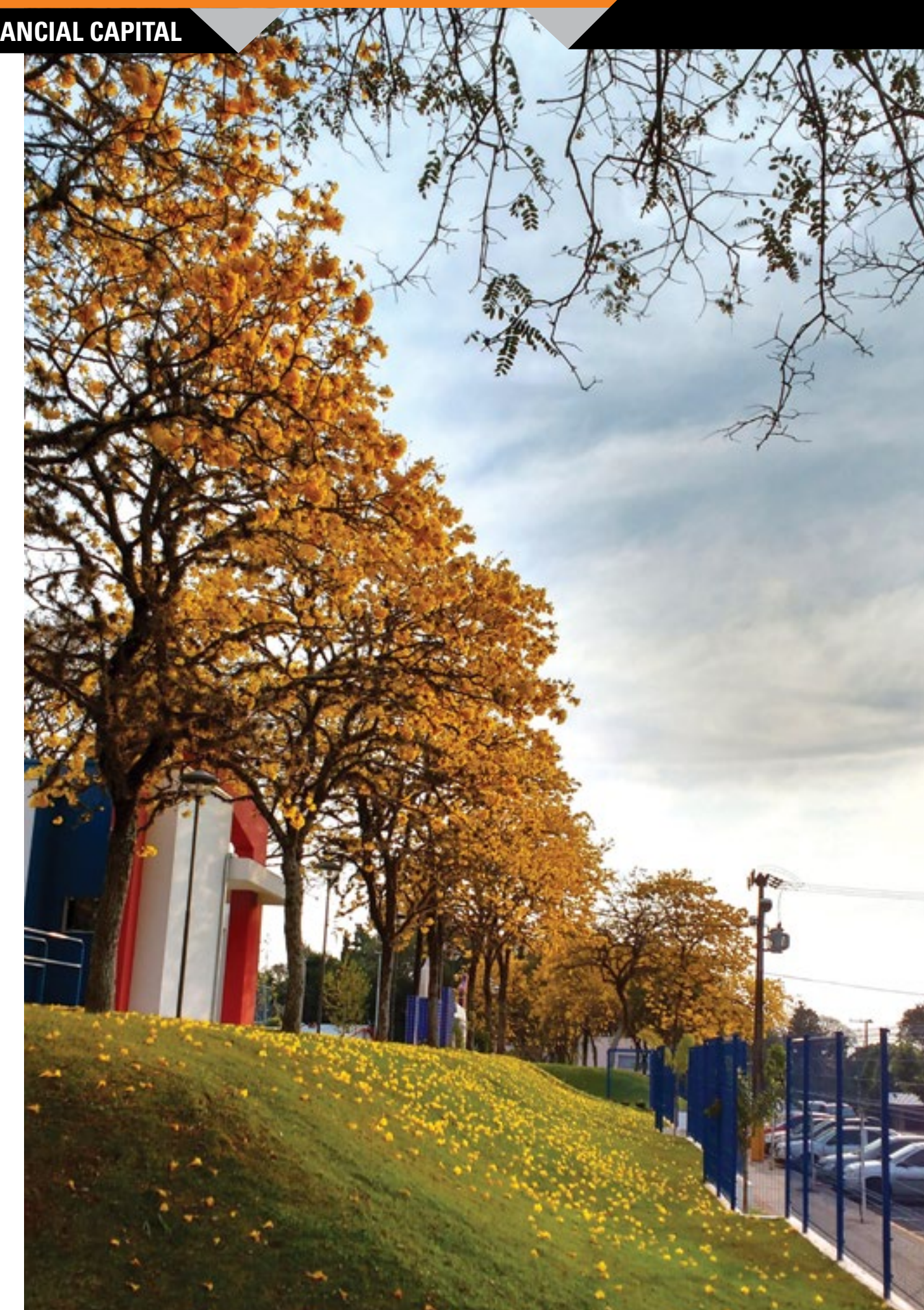
Copel increased 7% of the Net Operational Revenues compared to 2016.



FINANCIAL CAPITAL

The presented variation is pursuant to the following factors:

- 1) decrease of BRL 550 million in **Revenues from Electric Power Supply**, mainly due to:
 - 11.6% retraction of the captive market compared to the previous year, due to migration of captive consumers to the free market and the economic situation in the Country; and
 - average reduction of 17.9% in the rate applied since June 2016.
- 2) increase by BRL 500.3 million in Electric Power Supply mainly due to the increase of the revenues at the Electric Power Commercialization Chamber (CCEE) pursuant to higher average PLD in the period, BRL 318.15/MWh in 2017 compared to BRL 92.40/MWh in 2016, and higher commercialization within the Free Contracting Environment (ACL);
- 3) reduction of BRL 358.6 million in Revenues from Electric Grid Availability, mainly due to the effects of the remuneration for re-measuring the cash flow in compliance with MME Ordinance No. 120, related to RBSE assets;
- 4) reduction of BRL 411.6 million in Revenues from Construction. The Company accounts revenues related to construction or improvement in the infrastructure used in the provision of electric power and gas distribution and transmission services, which totaled BRL 868 million in 2017 and BRL 1,279.6 million in 2016. The respective expenses are recognized in the income statement for the period as cost of construction, when incurred;
- 5) increase of BRL 47.4 million in **Revenues from Telecommunications**, mainly because of the increase of the number of customers, mostly on the retail market with the Copel Fiber product;
- 6) reduction of BRL 17.1 million in **Revenues from Distribution of Piped Gas**, impacted by the retraction of the market compared to the previous year;
- 7) increase of BRL 1,798.5 in **Income from sector financial assets and liabilities** because of the positive result in 2017, BRL 718.8 million, while in 2016, the result was negative, BRL 1,079.7 million; and
- 8) reduction of BRL 86 million in **Other Operational Revenues**, reflecting the lower variation in the fair value of the indemnifiable asset of the concession of approximately BRL 75.7 million, followed by reduction in the revenues from service provision and offset by the increase in revenues from leases and rental of equipment and structures, and charged services.



OPERATIONAL COSTS AND EXPENSES 201-1

In 2017, Copel presented the following variation in relation to the manageable and the non-manageable costs and expenses.

Non-manageable

Raw material and consumables for electric power production

33.4
97.4

Natural gas and consumables gas operation

325.4
309.5

Charges on use of electric grid

866.2
712

Electric power purchased for sale

4,685.60
6,165.60

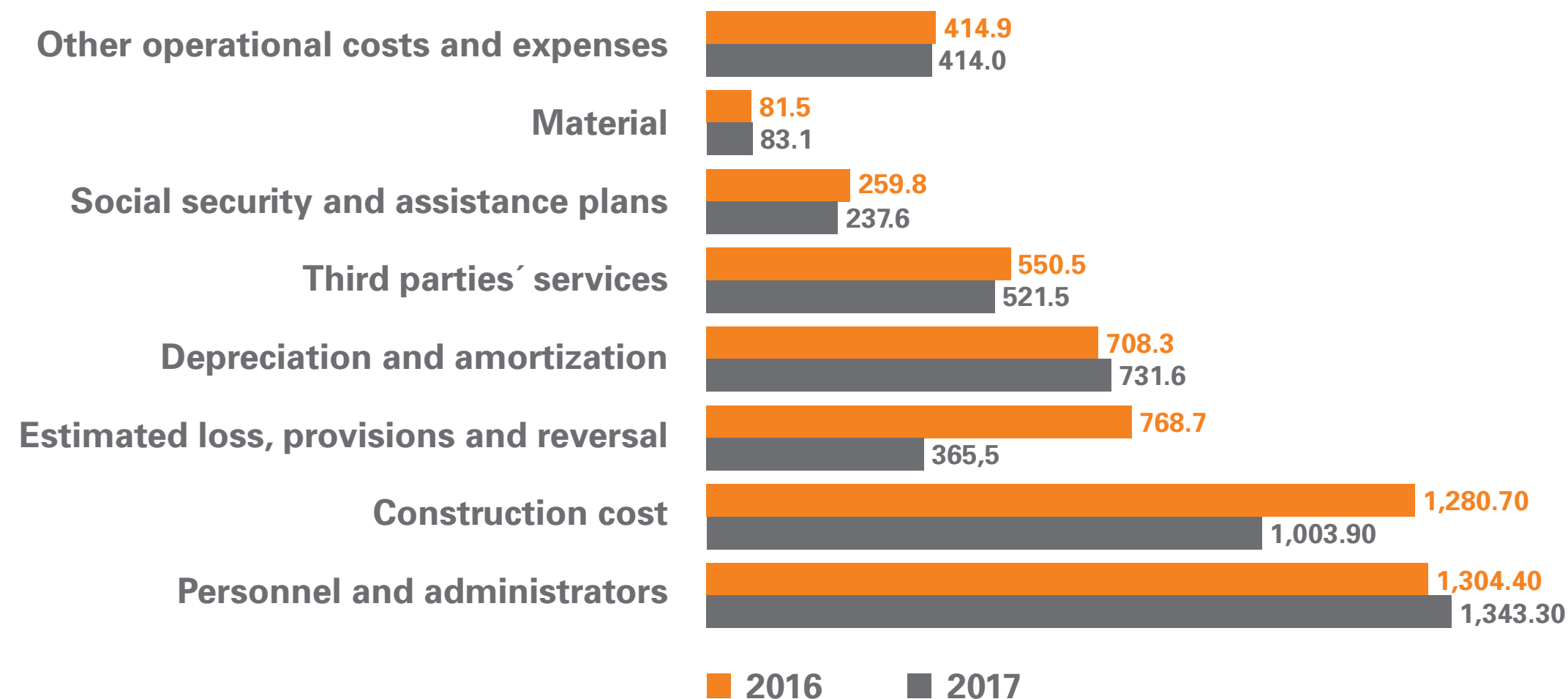
■ 2016 ■ 2017

1) increase of BRL 1,479.8 million in **Electric power purchased for sale**, mainly due to higher PLD in the period and the impact of GSF - Generation Scaling Factor (hydrological risk) and increased commercialization within the Free Contracting Environment (ACL);

2) reduction of BRL 154.2 million in **Charges on use of electric grid** mainly due to lower cost for System Service Charges (ESS), reflecting the resources received from the Reserve energy account - Coner and the Reserve Energy Charge (EER), offset by the increase of the cost of the basic grid and power transport, due to the effects of the indemnities paid to power transmission companies;

3) reduction of BRL 15.9 million in **Natural gas and consumables for gas operation** due to lower consumption; and

Manageable



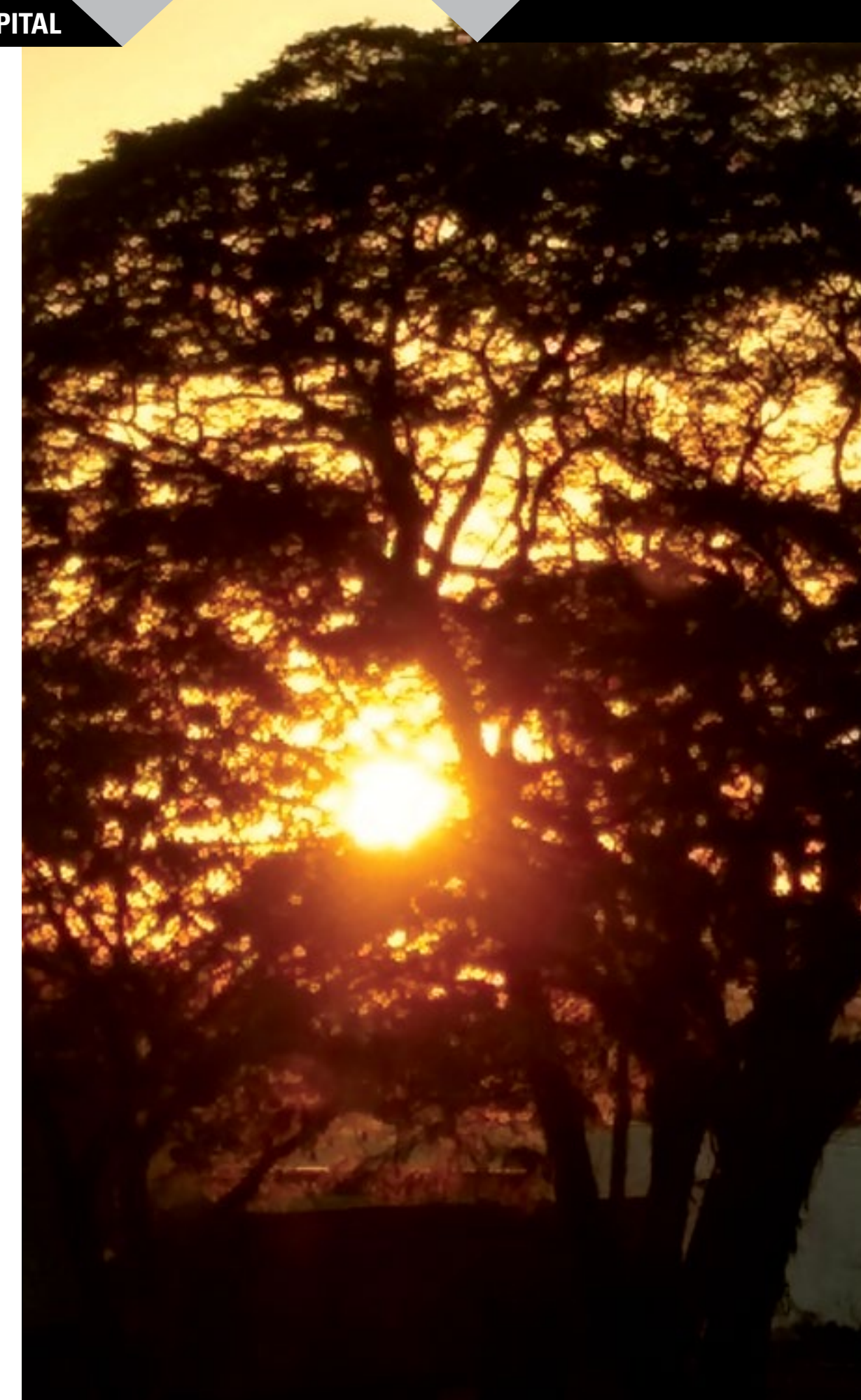
4) increase of BRL 38.9 million in **Personnel and administrators**, reflecting salary adjustment at 1.6% in October 2017, according to the group agreement, and variation of BRL 9.1 million of Provision for indemnity for voluntary dismissal and retirement;

5) reduction in **Construction cost** from BRL 1,280.7 million in 2016 to BRL 1,003.8 million in 2017;

6) reduction of BRL 403.1 million in **Estimated loss, provisions and reversal** mainly due to the reversal of estimated loss for reduction to impairment value of assets and reduction in PECLD, offset by the increase in the provision for litigation;

7) reduction of BRL 29 million in **Third parties' services** pursuant to reduction of the maintenance services on the electric system and consulting and auditing; offset by the increase in communication, data processing and transmission services;

8) reduction of BRL 22.2 million in **Social security and assistance plans** pursuant to effects of the actuarial evaluation calculated by contracted actuary.



EBITDA OR LAJIDA

The Company's Ebitda in 2017 was BRL 2,872.9 million, presenting increase by BRL 175.8 million compared to 2016, which represents 6.5% increase.

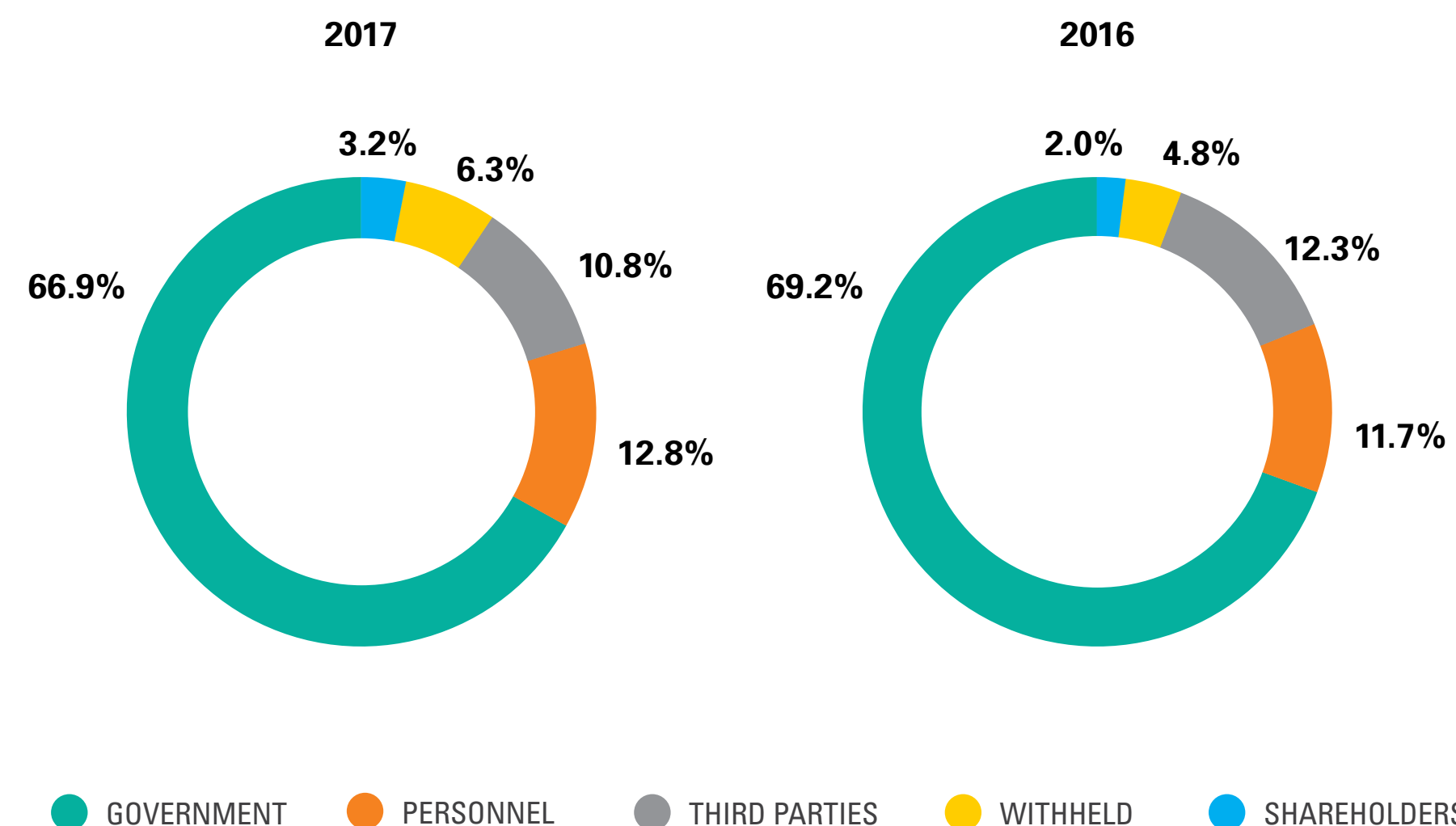
Consolidated – In million BRL	2017	2016 Re-submitted
Net profit attributed to the controlling company's shareholders	1,118.2	874.5
Deferred IRPJ and CSLL	(105.2)	(69.6)
IRPJ and CSLL	379.9	589.3
Financial expenses (revenues), net	748.4	594.6
Lajir/Ebit	2,141.3	1,988.8
Depreciation and amortization	731.6	708.3
Lajida/Ebtida	2,872.9	2,697.1
Net Operational Revenues - ROL	14,024.6	13,101.8
Ebitda Margin % (Ebitda / ROL)	20.5%	20.6%

FINANCIAL INCOME

The financial income dropped by BRL 153,8 million mainly due to the 22.6% drop in the financial revenues pursuant to the reduction of the interest for arrears on power bills and deflation of the financial indexes, which update the financial revenues.

VALUE ADDED ²⁰¹⁻¹

In 2017, Copel calculated BRL 11,772.8 million Value Added. Total, 7.7% lower than the previous year. The complete statement is included in the [Financial Statements](#)



INDEBTEDNESS

The Company finances the liquidity and the need of capital mainly with resources from the operations and external financing, aiming to expand and modernize businesses associated with power generation, transmission, marketing, and distribution, as well as telecommunications.

It is important to point out that the Company seeks to invest in corporate shares, to use credit lines available in the market, that make sense in Copel's capital structure, regarding financial leverage concerning the return from projects. We point out that our perspectives for financing, as well as cash availability, will be sufficient to meet the needs of the investment plan for the fiscal period.

The payments made in the year totaled BRL 3,042 million, namely BRL 1,887 million principal and BRL 1,155 million charges.

NET PROFIT 201-1

In 2017, the net profit attributed to the shareholders of the controlling company was BRL 1,033.6 million, 15.4% higher than that obtained in the previous period, BRL 895.8 million.

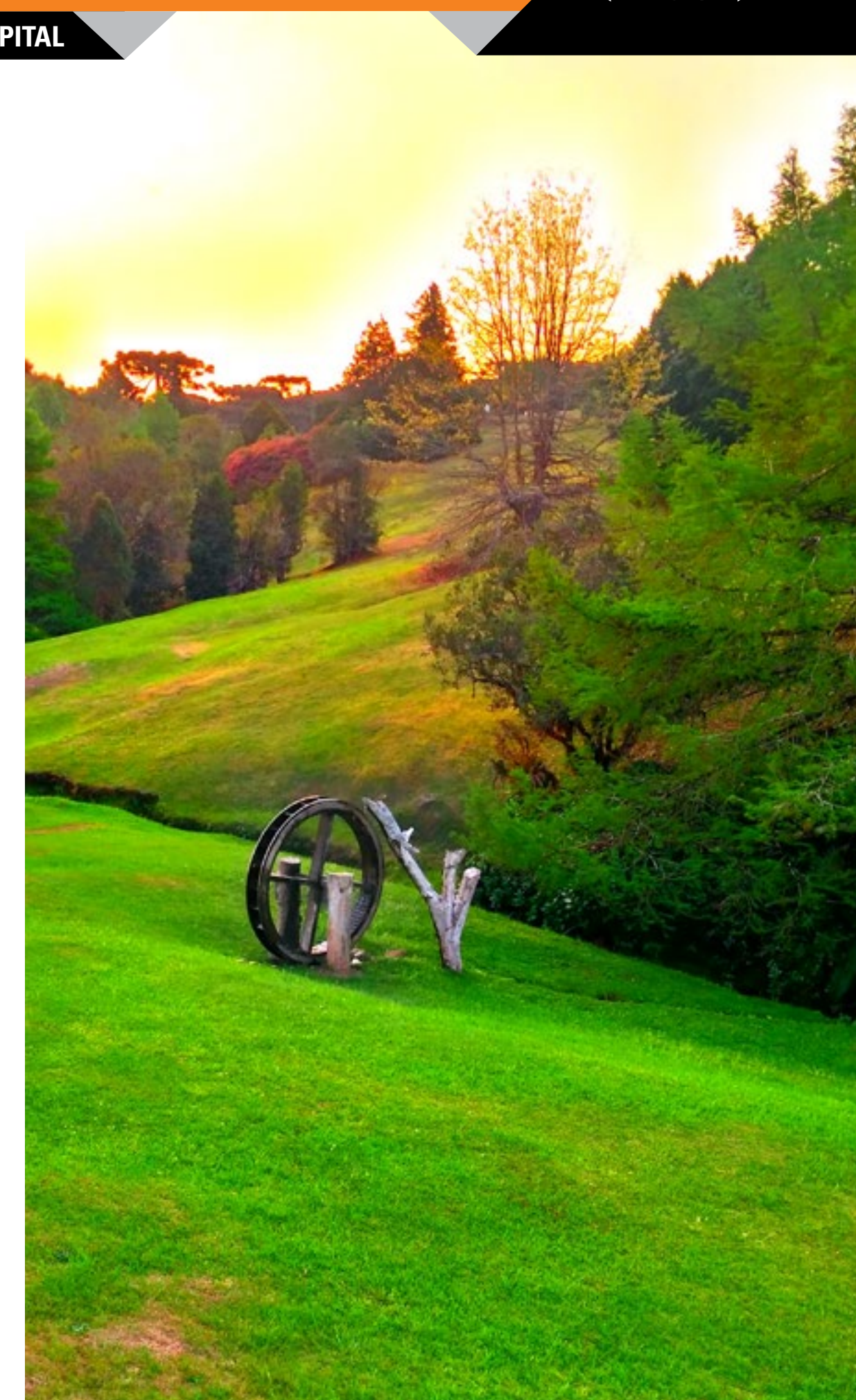
CONSUMERS' DEFAULT

In December 2017, the default²⁵ of Copel Distribuição consumers was BRL 226.5 million, which is equal to 1.52% of its billing, while in 2016 it achieved BRL 267.3 million, 1.61% of the billing.

Another control indicator of the Company is Abradee, whose methodology considers debts overdue from 1 to 90 days. The economic scenario in 2017 contributed directly to the increase of this indicator, 18.35% higher compared to 2016, due to the concentration of debits from 1 to 30 days.

Indicador	2017	2016	%
Default Abradee	2.58%	2.18%	18.35%
Default Company	1.52%	1.61%	-5.59%

²⁵ Since 2003, Copel started calculating the default index of the product "electric power supply"; its calculation methodology considers default all consumers with debt overdue for more than 15 days up to 360 days, in conformity with the due date warning deadline (Aneel Resolution No. 414/2010), and the recognition of the loss of overdue debts is excluded.



FINANCIAL CAPITAL



INVESTMENTS

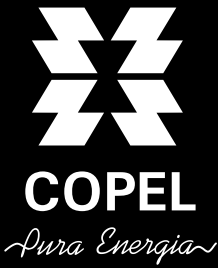
The investment program for 2018 was approved on 12/13/2017 by the 173rd ordinary

meeting of CAD. The investments made and planned are shown below:

Companies (in BRL million)	Done		%	Planned
	2017	2016	2017-2016	2018
Generation and Transmission	1,071.3	1,879.2	(43.0)	743.6
Distribution	630.4	777.1	(18.9)	790.0
Telecommunications	241.1	193.8	24.4	340.2
Wind Farms ²⁶	566.0	722.2	(21.6)	1,051.4
Others ²⁷	-	3.1	(100.0)	3.4
Total	2,508.8	3,575.4	(29.8)	2,928.6

²⁶ Includes Brisa Potiguar, Cutia Wind Farms and São Bento Energia.

²⁷ Includes Holding, Copel Renováveis, Copel Comercialização, among others.



COPEL IN NUMBERS

ABOUT THE REPORT

MESSAGE FROM THE PRESIDENT

CONTEXT OF THE SECTOR

ABOUT COPEL AND BUSINESS MODELS

CORPORATE GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT INDEX

APPENDIX

SUMMARY OF THE GRI



GRI CONTENT INDEX 102-55



**Materiality
Disclosures**
Companhia Paranaense de
Energia - COPEL



Standard GRI	Disclosure	Page and/or URL	Omission	External verification
GRI 101: FOUNDATION 2016				
GENERAL DISCLOSURES				
GRI 102: General Disclosures 2016	102-1 - Organization Name.	5		x
	102-2 - Activities, brands, products and services	15		x
	102-3 - Headquarters localization	15		x
	102-4 - Operation localization	15		x
	102-5 – Property and legal format	15		x
	102-6 - Markets served	15		x
	102-7 - Organization Size	2, 40		x
	102-8 - Information about employees and other workers	40		x
	102-9 - Supplier chain	65		x
	102-10 - Significant changes in the organization and the supply chain	5		x
	102-11 - Precaution approach or principle	19		x
	102-12 - External initiatives	35		x
	102-13 - Participation in associations	36		x
	102-14 – Statement of the main decision-maker	8		x
	102-15 - Main impacts, risks and opportunities	19		x
	102-16 - Values, principles, standards and norms of behavior	17		x
	102-17 - Mechanisms of consulting and concerns about ethics	31		x
	102-18 - Governance Structure	25		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
GRI 102: General Disclosures 2016	102-20 - Executives' responsibility for economic, environmental and social issues	28		
	102-22 – Composition of the highest governance body and its committees	27, 28		
	102-23 – President of the highest governance body	27		
	102-25 - Conflicts of interest	27		
	102-26 – Role of the highest governance body in the definition of purpose, values and strategy	27		
	102-28 – Performance assessment of the highest governance body	29		
	102-38 – List of annual remuneration	45		
	102-39 - List of percentage of increase of total annual remuneration	45		
	102-40 - List of stakeholders	59		x
	102-41 - Group negotiation agreements	42		x
	102-42 - Identification and selection of stakeholders	59		x
	102-43 - Approach for engagement of stakeholders	59		x
	102-44 – Main topics and concerns found	60, 61		x
	102-45 - Entities included in the consolidated financial statements	5, 18		x
	102-46 - Definition of the report content and limit of the topics	6		x
	102-47 – List of material topics	7		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
GRI 102: General Disclosures 2016	102-48 - Reformulation of information	Reformulation of information is indicated along the Report together with the change context		x
	102-49 - Changes in the reports	5		x
	102-50 - Period covered in the report	5		x
	102-51 - Date of last report	The last Sustainability Report refers to 2016.		x
	102-52 - Report issuance cycle	5		x
	102-53 – Point of contact for questions about the report	5		x
	102-54 - Statement according to the GRI Standards	5		x
	102-55 - GRI Content Index	106		x
	102-56 - External verification	5, 113, 114, 115		x

MATERIAL TOPICS

Economic Performance

GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 17		x
	103-2 – Management approach and its components	17, 25, 31, 98		x
	103-3 – Assessment of the Management approach	8, 25, 98		x
GRI 201: Economic Performance 2016	201-1 – Direct economic value generated and distributed	98, 100, 102, 103		x
	201-2 – Financial impacts and other risks and opportunities pursuant to climate changes	76		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Market Presence				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 39		
	103-2 – Management approach and its components	44		
	103-3 – Assessment of the Management approach	45		
GRI 202: Market Presence 2016	202-1 – Proportion of the lowest salary paid by gender compared to the local minimum salary	45		
Fighting against corruption				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 25		x
	103-2 – Management approach and its components	25, 30, 31		x
	103-3 – Assessment of the Management approach	30, 31		x
GRI 205: anti-corruption 2016	205-1 – Operations evaluated regarding risks related to corruption	30		x
	205-2 – Communication and training on anti-corruption policies and procedures	30		x
	205-3 – Confirmed cases of corruption and actions taken	31		x
Power				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 80		x
	103-2 – Management approach and its components	82		x
	103-3 – Assessment of the Management approach	80		x
GRI 302: Power 2016	302-1 - Consumption of power within the organization	82		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Water				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 80		x
	103-2 – Management approach and its components	80		x
	103-3 – Assessment of the Management approach	80		x
GRI 303: Water 2016	303-1 - Consumption of water by source	80		x
	303-2 – Water sources significantly affected by water withdrawal	81		x
Biodiversity				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 84, 85		x
	103-2 – Management approach and its components	84, 85		x
	103-3 – Assessment of the Management approach	84, 86, 87		x
GRI 304: Biodiversity 2016	304-1 – Own, leased operating units, managed in or in the surroundings of protected areas and areas with high biodiversity value situated outside the protected areas	84		x
	304-2 – Significant impact of activities, products and services on biodiversity	84		x
	304-3 – Protected or restored habitats	86		x
	304-4 – Threatened species	87		x
Emissions				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 76		x
	103-2 – Management approach and its components	76, 77		x
	103-3 – Assessment of the Management approach	78, 79		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
GRI 305: Emissions 2016	305-1 – Direct GHG emissions (Scope 1)	77		
	305-2 - Indirect GHG emissions because of power purchase (Scope 2)	77		
	305-3 – Other indirect greenhouse gas emissions (Scope 3)	77		
	305-7 – Emissions of NO _x , SO _x and other significant atmospheric emissions	78		x
Effluent and waste				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 80		
	103-2 – Management approach and its components	83		
	103-3 – Assessment of the Management approach	80		
GRI 306: Effluents and waste	306-2 – Waste by type and disposal method	83		
Environmental Conformity				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 25		x
	103-2 – Management approach and its components	25, 31		x
	103-3 – Assessment of the Management approach	30, 31		x
GRI: 307: Environmental Conformity 2016	307-1 – Non-conformity with environmental laws and regulations		-	x

Copel signed 3 Terms of Conduct Adjustment, whose management is responsibility of the respective technical areas of the Company, thus, as 104 lawsuits or administrative processes with objects related to fulfillment of the environmental legislation in force are pending judgement, they are of public domain and can be checked by any stakeholder.

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Supplier Environmental Assessment				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 67		
	103-2 – Management approach and its components	67		
	103-3 – Assessment of the Management approach	31, 61, 62		
GRI 308: Supplier Environmental Assessment 2016	308-1 – New suppliers selected based on environmental criteria	66		x
Employment				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 39		x
	103-2 – Management approach and its components	39, 44, 46		x
	103-3 – Assessment of the Management approach	39, 42, 45		x
GRI 401: Employment 2016	401-1 – New hiring and turnover of employees	42		x
	401-2 – Benefits granted to full-time employees which are not offered to temporary or half-time employees	45		x
	401-3 – Maternity/paternity leave	45		x
Health and Safety at Work				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 51		x
	103-2 – Management approach and its components	51		x
	103-3 – Assessment of the Management approach	50		x
GRI 403: Health and Safety at Work 2016	403-2 – Types and ranges of injuries, occupational diseases, lost days, absenteeism e and number of fatalities related to the job	50		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Training and Education				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 39		x
	103-2 – Management approach and its components	39, 46		x
	103-3 – Assessment of the Management approach	39, 47		x
GRI 404: Training and Education	404-1 – Average training hours a year, by employee	47		x
	404-2 - Programs development of the employees' competencies and assistance for career transition	47		x
	404-3 – Percentage of employees, who regularly receive performance and career development assessments	46		x
Diversity and Equality of Opportunities				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 41		x
	103-2 – Management approach and its components	43, 44		x
	103-3 – Assessment of the Management approach	43		x
GRI 405: Diversity and Equality of Opportunities 2016	405-1 - Diversity in governance bodies and employees	27, 41, 43		x
Rights of Indigenous Tribes				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 74		x
	103-2 – Management approach and its components	74		x
	103-3 – Assessment of the Management approach	Currently Copel no devices to assess the human rights management		x
GRI 411: Rights of Indigenous Tribes 2016	411-1 - Cases of violation of the rights of indigenous or traditional tribes	74		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Human rights Assessment				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 74		x
	103-2 – Management approach and its components	74		x
	103-3 – Assessment of the Management approach		Currently Copel does not have any mechanisms to evaluate the management of human rights	x
GRI 412: Human rights Assessment 2016	412-3 – Agreements and contracts for significant investments, which include clauses on human rights or have been submitted to human rights assessment	66		x
Local Communities				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 67		x
	103-2 – Management approach and its components	67		x
	103-3 – Assessment of the Management approach	31, 61, 62		x
GRI 413: Local Communities 2016	413-1 – Operations engaging the local community, assessment of impacts and programs for local development	69, 70		x
	413-2 - Operations with significant negative impacts, actual and potential, on the local communities	67		x

Standard GRI	Disclosure	Page and/or URL	Omission	External verification
Supplier Social Assessment				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 67		
	103-2 – Management approach and its components	67		
	103-3 – Assessment of the Management approach	31, 61, 62		
GRI 414: Supplier Social Assessment 2016	414-1 - New suppliers selected based on social criteria	66		x
Social-Economic conformity				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 25		
	103-2 – Management approach and its components	25, 31		
	103-3 – Assessment of the Management approach	30, 31		
GRI 419: Social-Economic conformity 2016	419-1 – Non-conformity with laws and regulations in the social and economic area		Regarding Social-Economic conformity, Copel has 8 Terms of Conduct Adjustment handled by the technical areas. In 2017, there was no record of group suits on the same matter to lead to financial or other civil and/or administrative sanctions.	x
Relationship with customers				
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	7, 59		x
	103-2 – The management approach and its components	61, 62		x
	103-3 – Assessment of the Management approach	60		x

Disclosure	Page and/or URL	Omission	External verification
SECTOR SUPPLEMENT			
Organizational Profile			
G4-EU1 Installed capacity, broken down by primary energy source and regulatory regime	90		x
G4-EU2 - Net energy output, by primary energy source and regulatory regime	90		x
G4-EU3 Number of residential, industrial, and trade accounts	60		
G4-EU4 Extension of transmission and distribution lines, aerial and underground, broken down by regulatory system	92		
Management of Demand for Electric Power			
G4-DMA EU7 Management programs for demand, including residential, trade, institutional, and industrial	64		
Research & Development			
GRI 103: Management Approach 2016	103-1 – Explanation of the material topic and its Boundaries	54	x
	103-2 – The management approach and its components	54, 56	x
	103-3 – The management approach and its components	55	x
G4-DMA EU8 Research and development activities and expenditure aimed at providing more reliable electricity and promoting sustainable development	54		x
Availability and Reliability			
G4-DMA EU6 Management approach to ensure short- and long-term electricity availability and reliability	90		

Disclosure	Page and/or URL	Omission	External verification
G4-EU10 Planned capacity against projected electricity demand over the short- and long terms	The planning of the generation expansion is done by Empresa de Pesquisa Energética – EPE, considering the whole load of the National Interconnected System - SIN. The implementation depends on the expansion plans by the Federal Government and the tenders for power sale, considering that the division of the demand attendance among the different sources of generation is also set by the Federal Government.		x
System Efficiency			
G4-EU12 Transmission and distribution losses as a percentage of total energy (%)	94		
Biodiversity			
G4-EU13 Biodiversity of offset habitats compared to the biodiversity of the affected areas	86		
Labor Practices and Employment			
G4-DMA EU14 Programs and processes that ensure the availability of skilled labor	47		
G4-EU15 Percentage of employees with a right to retirement in the next 5 and 10 years, broken down by functional category and region	39		
EU18 Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	51		
Local Communities			
G4-DMA EU20 Approach to managing the impacts from displacements	67		

Disclosure	Page and/or URL	Omission	External verification
G4-EU22 Number of people physically or economically displaced or compensated, broken down by type of project	67, 68		
Provision of Information			
G4-DMA EU24 Practices used to address barriers related to language, culture, low schooling and special needs that stand in the way of access to electricity and customer service, as well as to its safe use	63		
Consumer Health and Safety			
G4-EU25 Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases	52		
Access			
G4-EU23 Programs, including those in partnership with the government, to improve or maintain access to electricity and customer support services, as well as its safe use	63		
G4-EU26 Percentage of unattended population in concession area	Copel does not restrict to attend requests for power connection, unless in specific cases, where there is environmental impediment.		x
G4-EU27 Number of residential disconnections for non-payment, broken down by duration of disconnection and regulatory regime	64		x
G4-EU28 Frequency of interruptions in power supply (FEC)	93		x
G4-EU29 Average duration of interruptions in energy supply (DEC)	93		x
G4-EU30 Average plant availability factor, broken down by energy source and regulatory system	91		x

EXTERNAL ASSURANCE 102-56

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INDEPENDENT AUDITOR'S LIMITED ASSURANCE REPORT ON THE GRI (STANDARDS) INDICATORS INCLUDED IN THE 2017 SUSTAINABILITY REPORT

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

Introduction

We have been engaged by the Management of Companhia Paranaense de Energia - Copel ("Company") to submit our limited assurance report on the compilation of the information related to the Global Reporting Initiative ("GRI") Indicators ("GRI Indicators"), included in the Company's 2017 Sustainability Report for the year ended December 31, 2017.

Management's Responsibility

Management is responsible for the preparation and fair presentation of the information on GRI Indicators, included in the 2017 Sustainability Report, in accordance with the GRI criteria, as set out in its Standards version, and for such internal controls as Management determines are necessary to enable the preparation of such information that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express a conclusion on the information related to the GRI Indicators, included in the 2017 Sustainability Report, based on our limited assurance engagement conducted in accordance with Technical Bulletin 07/2012, approved by the Federal Accounting Council ("CFC"), and prepared in accordance with NBC TO 3000 - Assurance Engagements Other than Audits or Reviews, issued by the CFC, which is equivalent to the international standard ISAE 3000, issued by the International Federation of Accountants (IFAC), applicable to the non-historical information. Those standards require that we comply with ethical requirements, including independence requirements, and that our work be performed to obtain limited assurance that the information related to the GRI Indicators, included in the 2017 Sustainability Report, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with NBC TO 3000 (ISAE 3000) primarily consists of making inquiries of the Company's Management and other Company staff in charge of preparing the information related to the GRI Indicators, included in the 2017 Sustainability Report, and applying analytical procedures to obtain evidence that enables us to express a limited assurance conclusion on the information taken as a whole. A limited assurance engagement also requires that we perform additional procedures in the event matters come to our attention that cause us to believe that the information related to the GRI Indicators, included in the 2017 Sustainability Report taken as a whole may contain material misstatements.

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The selected procedures were based on our understanding of aspects relating to the compilation and presentation of the information related to the GRI Indicators, included in the 2017 Sustainability Report, and other engagement circumstances, as well as on our consideration of areas where material misstatements might exist. These procedures encompassed the following:

- (a) Plan our work, considering the relevance, volume of quantitative and qualitative information and the operating systems and internal controls based on which the information related to the GRI Indicators, included in the Company's 2017 Sustainability Report, was prepared.
- (b) Obtain an understanding of the computation method and the procedures performed for compiling the indicators by interviewing managers responsible for the relevant information.
- (c) Apply analytical procedures on the quantitative information and make inquiries about qualitative information and its relationship with the indicators disclosed in the information related to the GRI Indicators, included in the 2017 Sustainability Report
- (d) Trace financial indicators to the financial statements and/or accounting records.

The limited assurance work also included compliance with the guidelines and criteria of the GRI drafting structure in the Standards version, applicable to the preparation of information related to the GRI indicators, included in the 2017 Sustainability Report.

We believe that the evidence we have obtained during our work is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Scope and Limitations

The procedures applied in a limited assurance engagement are substantially less in scope than those applied to an assurance engagement whose objective is to provide an opinion on the information related to the GRI Indicators, included in the 2017 Sustainability Report. Consequently, these procedures do not enable us to obtain assurance that all matters that might be identified in an assurance engagement designed to provide an opinion came to our attention. Had we performed an engagement designed to provide an opinion, we could have identified other matters and material misstatements that might exist in the information related to the GRI Indicators, included in the 2017 Sustainability Report. Accordingly, we do not express an opinion on this information.

Nonfinancial data is subject to more inherent limitations than financial information, given both its nature and the methods used for determining, calculating or estimating such data. Qualitative interpretations of materiality, relevance and accuracy of the data are subject to individual assumptions and judgments. Additionally, we did not perform any work over data for prior reporting periods or over projections and goals.

Conclusion

Based on the procedures described herein, nothing has come to our attention that causes us to believe that the information related to the GRI Indicators, included in the 2017 Sustainability Report, was not compiled, in all material respects, in accordance with Global Reporting Initiative (GRI) guidelines, Standards version.

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Other Matters

Scope of Assurance

The criterion to define the scope of assurance consisted of the selection of the indicators directly associated with the material aspects reported by the Company during the planning phase of the work, also excluding the data and information of the projects and initiatives listed in Annex of the Company's 2017 Sustainability Report. The indicators listed below were not part of our limited assurance:

Indicators associated with "General Disclosures": 102-20, 102-22, 102-23, 102-25, 102-26, 102-28, 102-36, 102-39

Indicators associated with "Market Presence": 103-1, 103-2, 103-3, 202-1

Indicators associated with "Emissions": 305-1, 305-2, 305-3

Indicators associated with "Effluent and waste": 103-1, 103-2, 103-3, 306-2

Indicators associated with "Supplier Environmental Assessment": 103-1, 103-2, 103-3

Indicators associated with "Supplier Social Assessment": 103-1, 103-2, 103-3

Indicators associated with "Social-Economic Conformity": 103-1, 103-2, 103-3

Indicators associated with "Sector Supplement": EU3, EU4, DMA EU5, DMA EU7, EU12, EU13, DMA EU14, EU15, EU18, DMA EU20, EU22, EU23, DMA EU24, EU 25.

Guidelines and Specifications

In accordance with the guidelines of the Global Reporting Initiative (GRI) in its Standards version, the Company declares that it is in accordance with the "Core/Essential" specifications in its Sustainability Report for the year ended December 31, 2017, which reports the key performance indicators and supplementary indicators of the energy sector.

The accompanying limited assurance report has been translated into English for the convenience of readers outside Brazil.

Curitiba, May 25, 2018

Deloitte Touche Tohmatsu
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COPEL IN
NUMBERS

ABOUT
THE REPORT

MESSAGE FROM
THE PRESIDENT

CONTEXT OF
THE SECTOR

ABOUT COPEL AND
BUSINESS MODELS

CORPORATE
GOVERNANCE

SUSTAINABILITY

CAPITALS

GRI CONTENT
INDEX

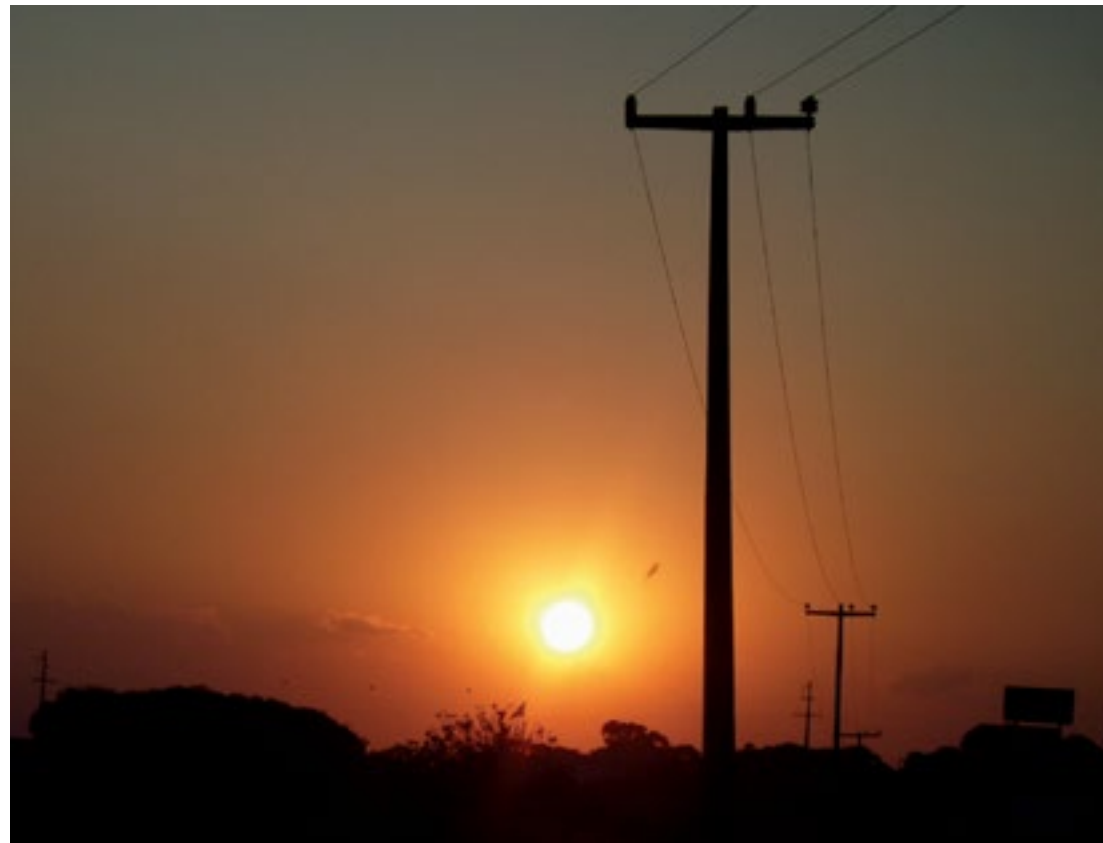
APPENDIX



APPENDIX

INCORPORATION OF THE PRINCIPLES OF THE GLOBAL COMPACT AND SDGS

The company ratifies its commitment to the United Nations Global Compact and Sustainable Development Goals, and presents as an Annex to this Progress Communication (COP) below, where it specifies the initiatives developed to implement the principles of the Global Compact and the SDGs in its operations. Throughout the publication this annex is part of, the results of this initiatives are also presented, as well as the progress of its commitments in 2017, which can be found in the GRI indicators reported by Copel.



GLOBAL COMPACT PRINCIPLES

-  **RESPECT** and support the internationally recognized human rights in its area of influence
-  **ENSURE** the company's non-participation in violation of human rights
-  **SUPPORT** freedom of association and recognize the right to collective bargaining
-  **ELIMINATE** all forms of forced or compulsory labor.
-  **ERADICATE** effectively all forms of child labor from its production chain
-  **STIMULATE** practices that eliminate any kind of discrimination in employment
-  **ASSUME** a responsible and proactive preventive approach to environmental challenges
-  **DEVELOP** initiatives and practices to promote and disseminate social and environmental responsibility
-  **ENCOURAGE** the development and diffusion of environmentally responsible technologies
-  **FIGHT** corruption in all its forms, including extortion and bribery

THE GLOBAL GOALS FOR SUSTAINABLE DEVELOPMENT



PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Adherence to voluntary commitments in an effort to promote sustainability, ethical conduct and best practices in corporate governance: Global Compact; ODS National Movement We Can Paraná; Statement Call to Action for Governments in the Fight against Corruption; Business Pact for Integrity and against Corruption, and Principles for Sustainable Executive Education (PRME).	1 to 10	16, 17	Various / Indeterminate
Management to Sustainability in the Supply Chain: aims to contribute to the development of suppliers, establishing parameters linked to sustainability, proposing actions that promote and strengthen good practices throughout the supply chain.	1 to 10	16, 17	2008 / Indeterminate
Our Energy Program: ties together obtaining new opportunities in relation to career development, remuneration and personal development to performance.	6	10	2013 / Indeterminate
Generation by renewable sources: compliance with the strategic and sustainability guidelines established for the generation business.	7, 8, 9	7, 17	Indeterminate
Ethical Guidance Board: analyzes and provides guidance on processes related to ethical conduct in the Company.	1 a 10	5, 8, 16	2003 / Indeterminate
Committee for the Analysis of Reports on Psychological Harassment: aims to assess reports on psychological harassment in labor relations within the Company.	1 a 10	5, 8, 16	2009 / Indeterminate
Integrity Program and Compliance Portal: a set of internal mechanisms and procedures for integrity, audit and incentive to report irregularities and effective application of codes of ethics and conduct, policies and guidelines aiming to detect and heal deviations, frauds, irregularities and illegal acts done against the national or foreign public administration.	10	16	2015 / Indeterminate
Copel Transparency Portal: it aims to provide information in compliance with the federal and the state legislation.	10	16	2014 / Indeterminate
Diversity Program: Implementation of the Action Plan and certification for the 5th Edition of the Pro-Gender and Race Equity Program of the Department of Policies for Women.	1 to 10	5, 8 10, 16, 17	2014 / Indeterminate
Internal Social and Environmental Committees – CISAS: Acts as multipliers of sustainability concepts, enabling the identification of problem situations in the social and environmental aspect, strengthening the relationship with stakeholders.	1, 2, 6, 7, 8, 9, 10	12, 13	2012 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Copel Corporate University – UniCopel: implementation of the Educational Planning and management of Leadership Development Programs, Postgraduate, Master's and Doctorate Degrees and Languages.	1, 2, 7, 8, 9	16, 17	2007 / Indeterminate
Corporate Management Program on Climate Change: Aims to discuss and deliberate actions associated with the study of the effects of climate changes, implementation of Copel's Climate Change Policy, and undertaken voluntary commitments.	1, 2, 7, 8, 9	11, 13, 17	2011 / Indeterminate
Support to Public Policies and Management Improvement			
Participation in the Brazilian Committee on the Global Compact and the ODS National Movement We Can Paraná.	1 to 10	16, 17	2016 / Indeterminate
Member of the Brazilian GHG Protocol Program: as a founding member, Copel conducts and publishes annually the accounting report of greenhouse gas (GHG) emissions.	1, 2, 7, 8, 9	11, 13	2008 / Indeterminate
Participation in the Entrepreneurship Initiative Trends in Ecosystem Services - TeSE: initiative of the Center for Sustainability Studies of FGV (Gvces) – aims to incorporate the concepts of valuing Ecosystem Services in business, as well as developing methodology. (Until 2017, for 2018, Copel will not sponsor the FGV initiative, it will work the subject internally)	7, 8, 9	16, 17	2015 / Indeterminate
Participation in organizations that discuss and promote energy efficiency: Brazilian Association of Electric Utilities, Energy Planning Company, Independent Power Producers Assoc., Brazilian Assoc. of Power Generation Companies, Brazilian Assoc. of Power Distribution Companies, Brazilian Association of Large Power Transmission Companies, Brazilian Committee of Large Dams, Regional Engineering, Architecture and Agronomy Council in PR, FUNCUGE.	1 to 10	6, 7, 15	Diversos / Indeterminate
Participation in associations that discuss and promote environmental improvements: Forum Paraná Agenda 21, Federation of Industries of Paraná, Interinstitutional Commission of Environmental Education of the National Program of Environmental Education, Watersheds Committees of the State of Paraná, Cigré Environment Committee, Regional Engineering, Architecture and Agronomy Council of the State of Paraná, Garbage and Civic Awareness Forum PR, Forum on Climate Change of the State of Paraná, Environmental Committees of the Public Ministry of Paraná.	7, 8, 9	6, 15, 17	Diversos / Indeterminate
Participation in the Corporate Citizenship Council of the State of Paraná - CPCE, for joint promotion of social responsibility in the State of Paraná.	1 to 10	16, 17	2005 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Voluntary participation in the Competitive Paraná Movement and in examining panels of awards: National Quality Awards, MPE Brazil and The Management Quality of Paraná.	1 to 10		2000 / Indeterminate
Integrated Management of Water and Soil: in partnership between Copel, Sanepar and State Departments to create synergy between the actions carried out in the watersheds, to promote the improvement of quality and the availability of water by perfecting the use, management and proper conservation of soil, water and forests.	1, 2, 7, 8, 9	6, 15, 17	2010 / Indeterminate
UN Global Compact Cities Program: Since November 2017, Copel started hosting and coordinating the Center of the UN Global Compact Cities Program for the South Region of Brazil. It acts jointly with the State Council of Economic and Social Development of Paraná – CEDES and the Independent Social Service Paracidade.	1 to 10	11, 17	2017 / Indeterminate
Social and Environmental Programs, Projects and Initiatives			
Program to collect donations to charity and social service institutions, non-profit and of group interest, through the energy bill.	1 to 10	1, 10, 17	1999 / Indeterminate
Annual donation, through tax incentives, to the Fund for the Rights of Children and Adolescents – FIA, Rouanet Act, Elderly Act, Incentive to Sports Act, PROFICE, PAIC, PRONON and PRONAS.	1, 2, 5	1	2006 / Indeterminate
Corporative Volunteer Program - EletriCidadania: the program allows employees to use up to four hours/month to perform volunteer work.	1, 2, 4, 5, 7, 8	10, 16, 17	2001 / Indeterminate
Choir: promotes employees integration, the quality of life at work, the development of the music culture and education, as well as appreciation of the Copel brand in the community.	6	3	2010 / Indeterminate
Support room for breast pumping and reduced working day: comfortable and cozy place where mothers may withdraw and store breast milk to be offered to their children timely.	1, 2, 6	3	2016 / Indeterminate
Cultivating Energy Program: the purpose is to implement community gardens in the safety sections of Copel's electric grids, in partnership with municipal administrations and associations of residents.	1, 7, 8, 9	1, 2, 10	2009 / Indeterminate
Corporative Accessibility Program: aims to adapt the Company in accessibility issues.	1, 2, 6	11, 16, 17	2007 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Eco-efficiency Program: concentrates several eco-efficiency initiatives developed in Copel into a single Program operating as a <i>hub</i> , interconnecting them, strengthening them, potentializing them, and enabling new forms of operation.	7, 8, 9	6, 8, 12, 13	2014 / Indeterminate
EducaODS Program (Former Education for Sustainability Program): it aims to train and develop professionals, formal and informal leaders of Copel, in sustainability-related issues.	1 to 10	4, 12, 13	1998 / Indeterminate
Susie Pontarolli Sustainability Trophy: aims to recognize and support initiatives aimed at contributing to the promotion of sustainable development and improvement of the quality of life.	1 to 10	10, 16, 17	2012 / Indeterminate
Luz Fraterna Program: Program of the Government of the State of Paraná that pays the bills of consumers registered at the Social Electricity Rate, provided that consumption does not exceed 120 kWh.	1, 2, 4, 5, 10	1, 7, 11, 17	2003 / Indeterminate
Morar Bem (Live Well) Paraná Program: in partnership with the Housing Company of Paraná - Cohapar – housing program for families with monthly income of up to six minimum national wages.	1, 2, 4, 5, 10	1, 7, 11, 17	2003 / Indeterminate
Rural Nighttime Rate Program: incentive to increased agricultural production, to poultry and pig farmers, through discount prices for consumer units classified as rural, served in low voltage.	1, 2, 4, 5, 8	11, 17	2007 / Indeterminate
Nighttime Irrigation Program: incentive to use of irrigation to increase agricultural and poultry production and improve the quality of life in rural areas. Subsidized rates and equipment to rural consumers.	1, 2, 8	8, 11, 17	2003 / Indeterminate
Energetic Efficiency Program: aimed at efficient use of electricity in residential, industrial, trade and public facilities, located in Copel's concession area.	1, 2, 8	7	2000 / Indeterminate
Paraná Cidadão (Paraná Citizen) Program: promoted by the Special Department for Community Relations, with the purpose to offer free services that promote civic awareness and social inclusion. Copel participates by providing information about its products and guidelines on safe and efficient use of electric power.	1, 2, 4, 5, 6, 10	1, 7, 10, 17	2003 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Digital Paraná Program: digital inclusion in public education, through connection with of State schools to the Internet, in partnership with the State Government and the Department of Education, with priority to locations with low HDI.	1, 2, 4, 5, 6, 10	1, 9, 11	2003 / Indeterminate
Connected Paraná Program: the initiative provides access to optical fiber Internet at affordable prices and at 1 Mbps speed, according to the State Broadband Plan.	1, 2, 4, 5, 6, 10	1, 9, 11	2010 / Indeterminate
State Broadband Plan - PEBL: aims to spread affordable Internet access to all municipalities of Paraná. The city halls and the providers, which join the communication service plan, undertake commitment to provide affordable internet access service.	1, 2, 4, 5, 6, 10	1, 9, 11	2010 / Indeterminate
Social Electric Power Rate: Established by Law 10.438/2002, it offers discounts on electricity consumption up to the limit of 220 kWh to families registered in the Unified Registry of Social Programs of the Federal Government, provided that the other criteria set forth in Aneel Resolution 414/2010 are complied with.	1, 2, 4, 5, 6, 10	1, 7, 11	2002 / Indeterminate
Mais que Energia (More than Energy) Project: implementation, expansion and consolidation of social investment projects and programs for the community.	1, 2	1, 7, 10, 11, 16, 17	2014 / Indeterminate
Smart Grid Project: installation of 2000 telemetering points in the urban area of Curitiba and 1000 points in the rural area of Colombo and Bocaiúva do Sul, reading is done every hour, enabling detection of errors, power outage and reading for billing without use of teams.	1, 2, 7, 8, 9	7, 9, 13, 17	2015 / Indeterminate
Telemetry: it enables the automated collection of data in real time, optimizing the process for more precise collection, handling and availability of data, including for customers, via Internet.	8, 9	7, 9, 13	2010 / Indeterminate
Distributed Generation: type of power generation other than centralized, usually of greater size and greater environmental impact, because it is done with or close of consumers.	7, 8, 9	7, 9, 12, 13	2004 / Indeterminate
Illuminating Generations Project: Lectures for fourth-grade students from public schools, of informative and preventive nature regarding the conscious and safe use of electric power, use of natural resources (energy and water) and correct disposal of waste.	1, 2	4	1970 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Mais Clic Rural Program: improving the quality of electric power supply in rural areas, focusing on agricultural activities integrated with production processes sensitive to interruptions.	1, 2, 7, 8, 9	7, 11	2015 / Indeterminate
Solidarity Bill: incentive to customers, who choose to receive the bill by email, at each registration, Copel donates BRL 1.00 to APAE institutions in the State of Paraná.	1, 2	10, 12, 17	2015 / Indeterminate
Program of Integrated Actions for Development and Civic Awareness - UPS Civic Awareness: Integrated actions for urban development and social promotion, as well as recovery of civic awareness are carried out in the areas of installation of the Safe Paraná units (UPS). The initiative is developed in partnership with agencies and entities of federal, state and municipal administration and the civil society, contributing to improve public safety and local social-economic development.	7, 8, 9	7, 11, 17	2013 / Indeterminate
Corporate Waste Management Program: it aims to reduce, reuse, measure and monitor the solid waste generated by the Company.	7, 8, 9	8, 11, 12	2006 / Indeterminate
Selective Collection: destination of recyclable administrative waste for recycling associations and cooperatives, promoting social inclusion and improving quality of life by generating income for the waste pickers.	7, 8, 9	1, 10, 11	2009 / Indeterminate
Prevention: raises the population's awareness about the importance of taking care of pets, in order to prevent accidents with Copel's and Sanepar's readers and postmen.	7, 8, 10	4	2015 / Indeterminate
Urban Forests Program: it works together with the city halls for planning afforestation of public roads, contributing to environmental improvement of cities and reduction of power supply interruptions caused by the conflict between vegetation and electrical systems.	7, 8, 9	11, 15, 17	2008 / Indeterminate
Riparian Forests Program: it aims to recover natural environments surrounding the reservoirs of power plants and other areas of interest of the Company.	7, 8, 9	6, 15	2006 / Indeterminate
Program for Monitoring and Repopulation of Fish Fauna: it aims to monitor and repopulate the Company's reservoirs and the rivers, where Copel's projects have some influence.	7, 8, 9	6, 15	1993 / Indeterminate
Experimental Station of Ichthyological Studies: studies and reproduces species suitable for repopulation of rivers and reservoirs in Paraná.	7, 8, 9	6, 15	1992 / Indeterminate

PROJECTS / PROGRAMS / MANAGEMENT SYSTEMS / PARTICIPATIONS AND POLICIES	PRINCIPLES AND OBJECTIVES RESPONDED		DATE START / FINISH
	GLOBAL COMPACT	ODS	
Management Policies and Systems			
Control of invasive and/or exotic species: monitoring and control of invasive and/or exotic species of wildlife and flora.	7, 8, 9	15	2000 / Indeterminate
Recovery of degraded areas: monitoring and recovery of degraded areas.	7, 8, 9	15	1999 / Indeterminate
Forest Gardens: it aims at production of seedlings suitable for application in other Company Programs.	7, 8, 9	15	1973 / Indeterminate
Botanical Garden: it aims to preserve and research plant species and to house collections of exotic ornamental plants.	7, 8, 9	15	2010 / Indeterminate
Iguaçu Regional Museum: it presents the social, cultural and environmental characteristics of the populations, who have occupied the banks of the Iguaçu River. It holds the collection from the Archaeological Rescue programs and from the Cultural and Scientific Flora and Wildlife Exploitation Memory in the implementation of WPP Gov. Ney Braga.	7, 8, 9	4, 10, 11	2000 / Indeterminate
Ecosystem Services: direct and indirect contributions of the ecosystems to the economy and the well-being of humanity.	7, 8, 9	6, 8, 11, 15	2015 / Indeterminate
Life Cycle Analysis: A tool that quantifies the environmental impacts of given product or service. It is composed of categories, such as: greenhouse gas emission (GHG), acidification, eutrophication, toxicity, consumption of natural resources and depletion of the ozone layer.	7, 8, 9	7, 8, 12, 13	2015 / Indeterminate
Reserve Logistics: plans, recommends and structures the actions related to the aspect within the scope of the Corporate Waste Management Program.	7, 8, 9	12	2014 / Indeterminate

