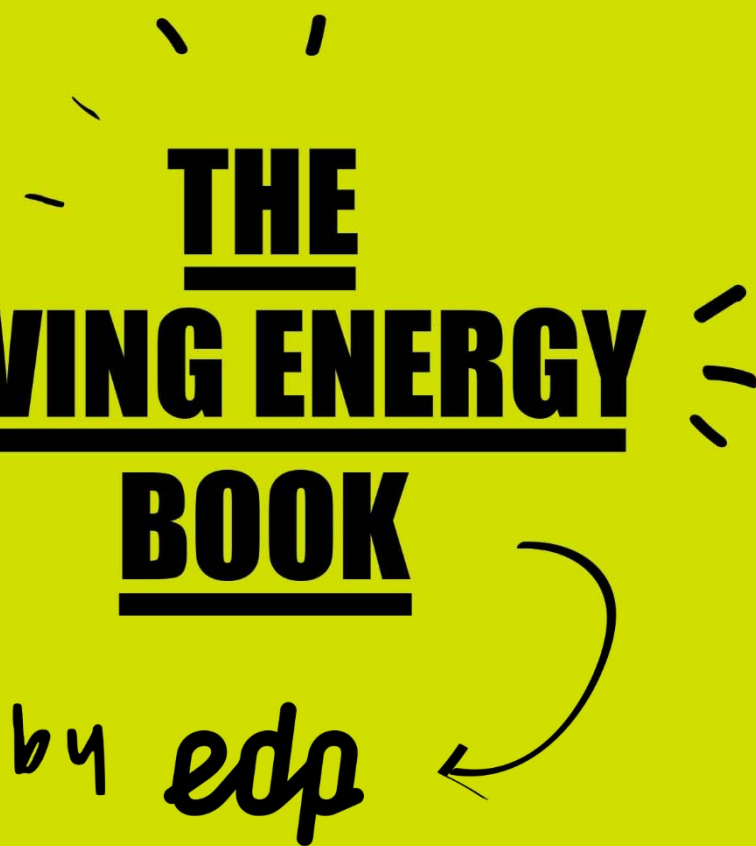


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SUSTAINABILITY REPORT  
2017







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We are energy in the journey we make every day. Energy that changes, reinvents itself and takes different forms.

Energy that lives within us, that is a universal language, that moves us and takes us further.

A living energy that brings us closer, that innovates and with which, together with small actions, we create change.

The energy that lives within every one of us is contagious and is everywhere, in a hug, in the lighting of a lamp, in our houses, in the streets or even across them in the sidewalks.

A living energy that together we continue to write in a book that reveals the present and which is also a building block for the future.

The Living Energy Book.



# **THIS REPORT**

EDP – Energias de Portugal, S.A. (EDP) is a listed company whose shares are publicly traded in the Eurolist by NYSE Euronext Lisbon, Market of official trading. EDP is established in Portugal, organized under the laws of Portugal and with the sole number of registration with the Commercial Registry Office of Lisbon and with the tax authorities 500.697.256. Its registered head office is located at Avenida 24 de Julho, no. 12, 1249-300 Lisbon, Portugal.

The Sustainability Report of EDP Group was prepared in accordance with the standards of the Global Reporting Initiative (GRI Standards) and with the Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 and with the Decree-Law no. 89/2017 of 28 July, as regards disclosure of Group sustainability performance in 2017, with focus in material themes.

This Report has been structured in 3 major blocks:


| <b>PRESENTATION AND STRATEGIC APPROACH</b>  | <b>PERFORMANCE</b>  | <b>PERFORMANCE INDICATORS</b>  |
|---|---|--|
| <p>Focused in Sustainability within the Group's strategy.</p> <p>Includes our commitments, with objectives and targets and their relationship with the United Nations 2030 Sustainable Development Goals.</p> | <p>Organized by material theme. Includes management approach, the main events and illustrative cases about EDP practices.</p> | <p>Organized by material theme. It also includes indicators disaggregated by geography. Together we aim to respond to the Global Reporting Initiative standards.</p> |

Additionally, EDP makes available a set of reports at [www.edp.com](http://www.edp.com)> sustainability> publications> reports:


- Annual Report;
- Annual Report of the General and Supervisory Board;
- Sectoral reports, in particular: Ethics Ombudsman's Report, Report of assessment on potential impacts and respect for Human and Labour Rights, Safety Summary and Stakeholders' Report;
- Annual and sustainability reports of the societies Hidroeléctrica del Cantábrico, EDP – Energias do Brasil and EDP Renováveis;
- Management Approach on Sustainability, which endorses the issues set by GRI methodology and explains the relation between organizational processes and material issues for the society.

## **ENGLISH VERSION**

This Sustainability Report is a free translation of the Sustainability Report originally issued in Portuguese. In the event of discrepancies, the Portuguese language version prevails.

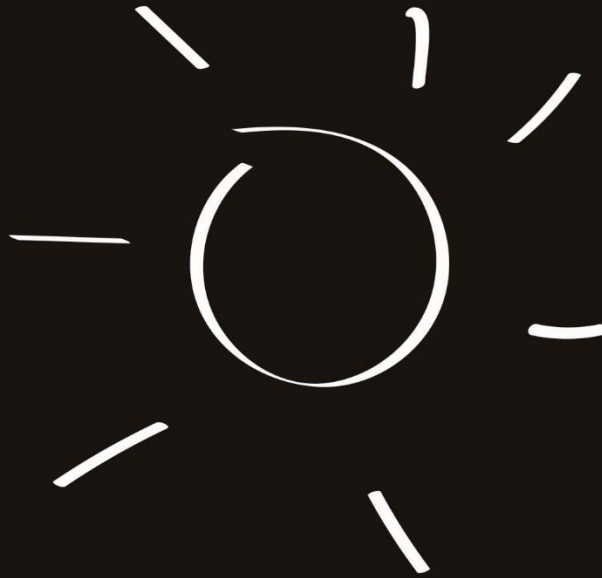


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# 01

## EDP

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ANTÓNIO MEXIA  
CHAIRMAN OF THE EXECUTIVE  
BOARD OF DIRECTORS





## MESSAGE FROM ANTÓNIO MEXIA

It is now evident that we are in an era of profound change and that it is essential to ensure that the progress and economic growth of societies is achieved with maximum respect for human rights and the protection of the environment.

Digitalisation has had strong implications for all economic activities, in disrupting the more traditional business models and in the relationships with customers and partners.

Energy and in particular electricity continue to play a crucial role in linking economic development and reducing inequality. Renewable-based electrification and innovative efficiency solutions are now reinforcing this potential, contributing to the way key global Sustainability challenges are met, including in the context of Climate Change and the consequent imperative of De-carbonising societies.

At EDP, Sustainable Development is incorporated into our strategy, with clear, demanding Sustainability objectives for the future. We have been in the Dow Jones Sustainability Index (DJSI) since 2008, 10 years of ongoing recognition as one of the most sustainable companies in the world. In 2017, we got the best score ever, positioning ourselves as the 1<sup>st</sup> integrated utility.

We pursue the clear goal of putting energy at the service of more sustainable ways of life and for more than a decade we have been investing heavily in renewable energies, efficiency and innovation. Operating in 14 countries we are recognised today as one of the most important global players in the renewable energy sector.

In the near future, by 2020, we want to surpass 75% of installed capacity coming from renewable sources, provide our customers with access to energy efficient products and services to reduce overall consumption by 1 TWh over 2015 levels and invest 200 million euros in innovative projects and promising clean energy technologies.

As part of our climate action, we also propose to reduce our specific CO<sub>2</sub> emissions by 75% by 2030 compared to 2005. This ambition has been recognised by the Science Based Targets Initiative as being in line with the requirements set out in the Paris Agreement.

More recently, as part of the global agenda for sustainable development, we have also given priority to contributing to the achievement of eight of the United Nations Sustainable Development Goals for 2030.

2017 was particularly challenging for EDP, not only due to the difficult market context, mainly because of low hydraulicity in Iberia, but also due to regulatory issues in Portugal that had an impact on our business. Nonetheless, we have proved ourselves capable of carrying out our priorities. EDP reported net income of 1.1 billion Euros, mainly supported by the good performance of EDP Renováveis and EDP Brazil and the sale of the gas businesses in Iberia.

With 26.7 GW of installed capacity, of which 74% is of renewable origin, we added a further 1.5 GW of wind, hydro and solar power to our portfolio this year. Moreover,

several projects promoted by EDP have directly contributed to the achievement of more efficiency and innovation, including the "Smart House"; the extension of the scope of "Save2Compete" to promote energy efficiency in companies; and "InovGrid", to equip electrical networks with information and to automate the management of the network. Others that may be game changers for the technological evolution of renewables include demonstrating the success of the technology of the first floating wind platform prepared for semi-deep waters, the "Windfloat", and the entry into operation, in the Alto do Rabagão dam, of photovoltaic energy production.

Other milestones worth mentioning in 2017 include:

- **the conclusion of the hydroelectric expansion plan in Portugal**, with a greater focus on the optimisation of the management and operation of our asset base, namely through Digitalisation;
- **the continuous growth in Brazil** with our entry into a new market segment, transmission, and bringing forward the construction of the São Manoel dam;
- **the strengthening and consolidation of our position in Renewables** with the reinforcement of the presence of EDP R in the markets in which it operates, namely Canada and Brazil, as well as offshore in the United Kingdom;
- **the entry into a new market in Latin America**, in Peru, with the start of construction of a dam by Hydro Global in partnership with CTG;
- **maintenance of a high quality of service and reinforcement of the penetration of smart meters**, with total coverage in Spain and more than 1 million meters installed in Portugal;
- **maintaining our leading position** in the sale of electricity and gas in Portugal, with quality of service and high customer satisfaction;
- **the reduction of accidents at work** amongst employees and service providers, improving the frequency rate by 30% compared to the previous year;
- **the launch of EDP X**, a Group-wide project, with the aim of speeding up the digitalisation of EDP;
- the first year of the **Museum of Art, Architecture and Technology, with one million visits**, consolidates EDP as a reference in the promotion of culture.

Parallel to our activity, and because we recognise how demanding the challenges we face are, we actively seek to establish alliances and partnerships that help accelerate the energy transition.

To the participation in the main international sustainability associations - the United Nations Global Compact and the

World Business Council for Sustainable Development (WBCSD) in 2017 we added the Presidency of the Administrative Board of Sustainable Energy for All (SEforALL), a United Nations platform for the universalisation of access to clean and competitive energy.

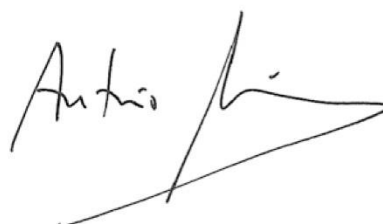
In Portugal, EDP is the Chair of the Business Council for Sustainable Development (BCSD), a national affiliate of the WBCSD. In 2017, we point out the completion of the MEET 2030 project, which involved several companies and academia in creating a common vision of development for the coming decades.

Still in the spirit of openness to society, we publish, once again, an Independent Sustainability Report. It is an accountability exercise on how we manage our business and existing expectations in order to create value for all stakeholders. The transparency of the report, whose framework is the ten principles of the Global Compact, is also a demonstration of our commitment to building a relationship of trust with all agents of change towards sustainable development.

We close the current mandate with confidence. We know that the next few years will be demanding. The transformations that impact the sector tend to accelerate and the regulatory and market context is expected to be ever more challenging. Our priority is always the satisfaction of the needs and preferences of our customers, which are also in transition. They form the basis of a vision for the future that encompasses our continuous commitment to sustainable and innovative solutions, including renewable and decentralised production, electric mobility and energy efficiency.

I am sure that the work we have done to anticipate global trends and future challenges prepares us to continue to achieve our priorities, to lead the sector and to promote sustainability.

Thank you.



António Mexia  
Chairman of the Executive Board of Directors

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RUI TEIXEIRA  
EBD MEMBER RESPONSIBLE FOR SUSTAINABILITY

## MESSAGE FROM RUI TEIXEIRA

### MEETING SOCIETY'S EXPECTATIONS

This year we again have an autonomous sustainability report. An opportunity to give more visibility to our strategy and results already achieved, which have earned recognition from sustainability analysts. In 2017, we achieved the highest Dow Jones Sustainability Index score, achieving a decade of presence in these rankings. It placed EDP as the # 1 integrated utility in the world.

In 2017, we strengthened our ambition. We endorse eight of the 17 Sustainable Development Goals enshrined in the UN Agenda 2030, extending the commitment to fight climate change, already undertaken in 2015.

### GROW AND DECARBONIZE

Our growth is focused on new renewable capacity. Today, 74% is already of renewable origin, and our net investment in 2017 reached 1,143 million Euros, corresponding to 1.5GW of new wind, solar and water capacity, mainly in the US, Mexico, Italy, France and Brazil.

In Portugal, a 10-year investment cycle was completed. Three new dams and five power reinforcements were built. Assets whose strategic importance goes beyond the production of renewable and endogenous energy. The role of dams as reservoirs of water at the service of populations was evidenced by a year with an abnormally dry season. The hydrological reserves of the Iberian Peninsula are

below the historical averages of the last 15 years. In these circumstances, the hydroelectric production index in Portugal was only 0.47, or 53% below the average year. This increased the use of thermal generation with an increase of specific CO<sub>2</sub> emissions of 23% in the Group. However, this does not jeopardize EDP's long - term objective of reducing those emissions by 75% until 2030, when compared to 2005.

The expansion to new geographies continued. After Mexico in 2014, the construction of the San Gaban III hydroelectric power plant, with a capacity of 209 MW, started in Peru.

In Brazil, we continued to expand the electricity transportation business. We compromise 3 billion Brazilian Reais in the acquisition of four more concessions, covering approximately 1,300 km of new transmission lines, essential for strengthening interconnections between the different subsystems in Brazil. With this investment, the increase of the overall efficiency of the system is promoted and a guarantee of energy supply for the Brazilian market is reinforced.

In 2017, we also sold the gas assets in the Iberian Peninsula and strengthened our stake in EDP Renováveis.

### BUILD TRUST WITH INNOVATIVE SERVICES

Trust is an asset that we want to reinforce. Customer satisfaction continues to be a priority for which we work,

ensuring high standards of quality of service and a diversified and customized offer. More transparency and efficiency are success factors with our customers, whose overall satisfaction rate reached 74%.

In a changing industry, the challenges stemming from increased network intelligence and a growing digitalisation of services are also an opportunity to develop new technological solutions that respond simultaneously to the needs of our customers and to the global pressures of a more sustainable management of resources and decarbonisation of the economy. Examples are the "Smart House" options for residential customers or Save2Compete, now extended to SMEs. In 2017, the strengthening of the range of products and services, just in energy efficiency, ensured 134 million Euros of income.

To accompany this change, EDP sees innovation as key for creating value, focusing on open innovation as a way of accelerating knowledge creation, valuing collaborative partnerships that result in new clean customer-centric solutions. The distributed generation project with storage that EDP Brasil is developing with the Federal University of Santa Catarina is a clear example of this focus. In 2017, the Innovation Group's investment exceeded 65 million Euros.

## **STRENGTHEN THE SOCIAL DIMENSION**

On the social front, safety at work remains a priority for EDP. With the "Zero Accidents" vision, we have been undertaking initiatives focused on promoting safe behaviours and learning, achieved through communication and the study of near-misses and dangerous situations. Examples include the security campaign at EDP Distribuição, training in Brazil through the Electricians Training College, the Atenção Mais project at EDP Produção and the safety culture diagnosis at EDP Spain.

Because of our efforts, the number of accidents at work in EDP, including partners and service providers, fell by 32% compared to 2016, and the frequency index was 2.03 accidents per million hours worked, a reduction of 32% over the previous year.

Employees training, a central tool in the transmission of knowledge and incorporation of new skills, surpassed the 473 thousand hours in all geographies.

We have implemented the EDP Supplier's new code of conduct for all suppliers, enabling a transparent and uniform assessment to extend sustainability principles

across the value chain and to promote continuous improvement of its performance.

2017 was also a year of extreme weather events in countries where we operate. As part of the EDP volunteer program, a cornerstone of our relationship with communities, more than 500 people were mobilized to support the population affected by the fires in Portugal and Hurricane Harvey in Houston. In total, the EDP volunteer programme involved 2,294 employees and contributed more than 40,000 hours, among EDP workers and friends.

Other highlights, include over 28 million Euros of social investment, predominantly in the areas of education, social and cultural welfare, in the year when the Museum of Art, Architecture and Technology surpassed one million visitors.

## **LEAD SUSTAINABLE DEVELOPMENT**

We conclude the year convinced that we have worked to ensure the skills and solutions necessary for the new challenges facing the sector, in the context of a growing environmental and social demand. We will continue to provide an answer that will ensure EDP's success in a changing world where electricity plays a central role in supporting the decarbonisation of the economy. We will now give greater priority to electric mobility and energy services, which will emerge as indispensable for sustainable development.

We have begun 2018 confident that this will be another year of progress in creating economic, environmental and social value.



Rui Teixeira  
EBD member responsible for Sustainability

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# WHERE WE ARE



Generation



Renewables



Transport



Distribution



Supply



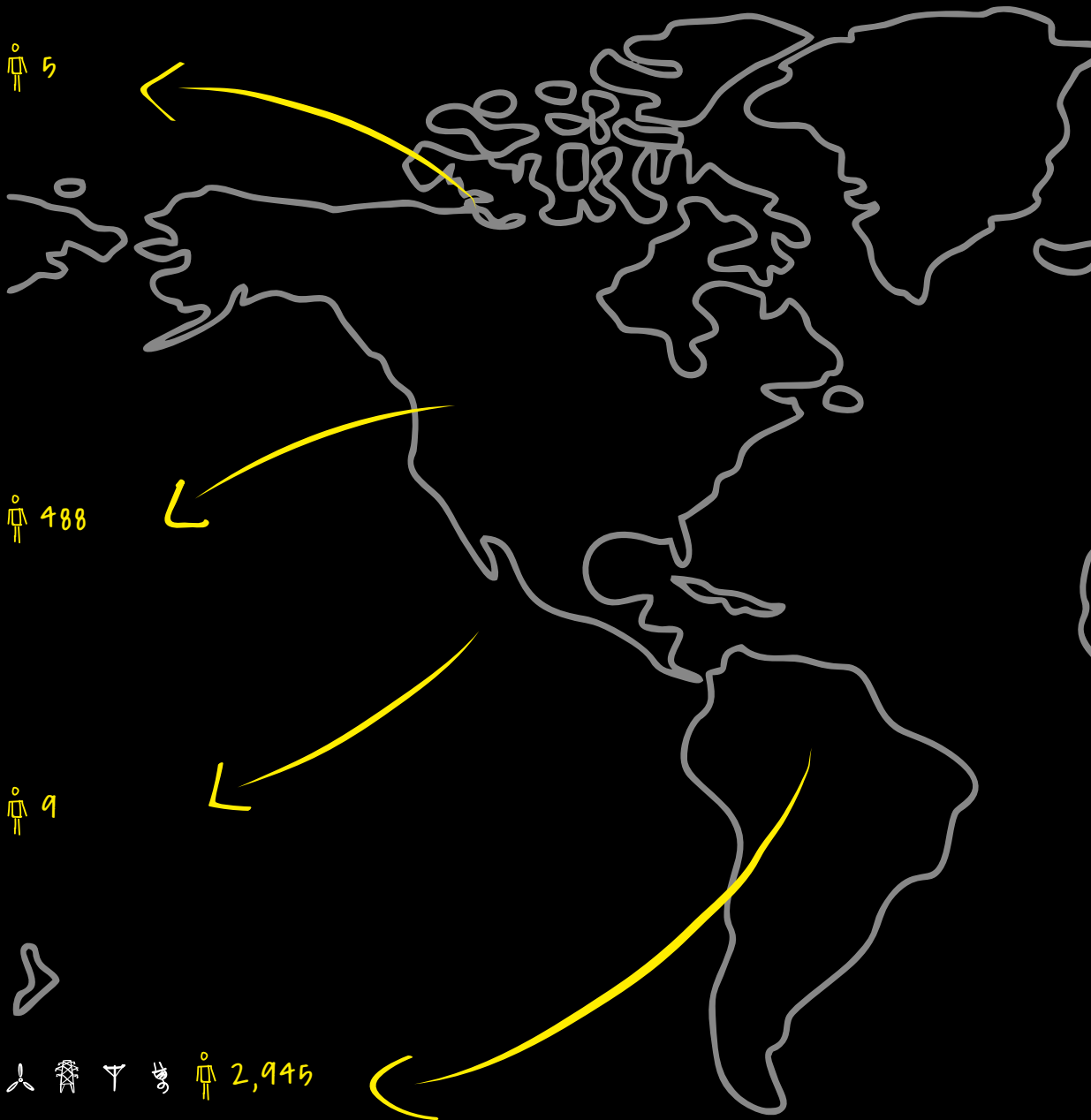
Employees

Canada   5

USA   488

Mexico   9

Brazil       2,945





Portugal 🌀 🌿 ♀ 🌱 🧑 6,326

Spain 🌀 🌿 ♀ 🌱 🧑 1,680

Poland 🌿 🧑 35

Romania 🌿 🧑 32

Italy 🌿 🧑 28

UK 🌿 🧑 42

Belgium 🌿 🧑 3

France 🌿 🧑 60



China

Angola

# HOW WE ARE ORGANIZED

## BUSINESS AREAS

### 01 IBERIAN GENERATION AND SUPPLY



hc energia



#1 GENERATOR AND SUPPLIER  
IN PORTUGAL

#3 IBERIAN GENERATOR

### 02 IBERIAN NETWORKS

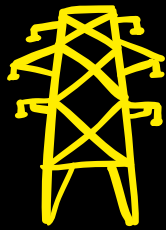


hc energia



#1 PORTUGUESE DISTRIBUTOR

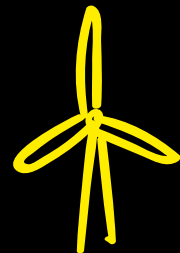
### **03 BRAZIL**



#4 PRIVATE SUPPLIER IN THE  
FREE MARKET

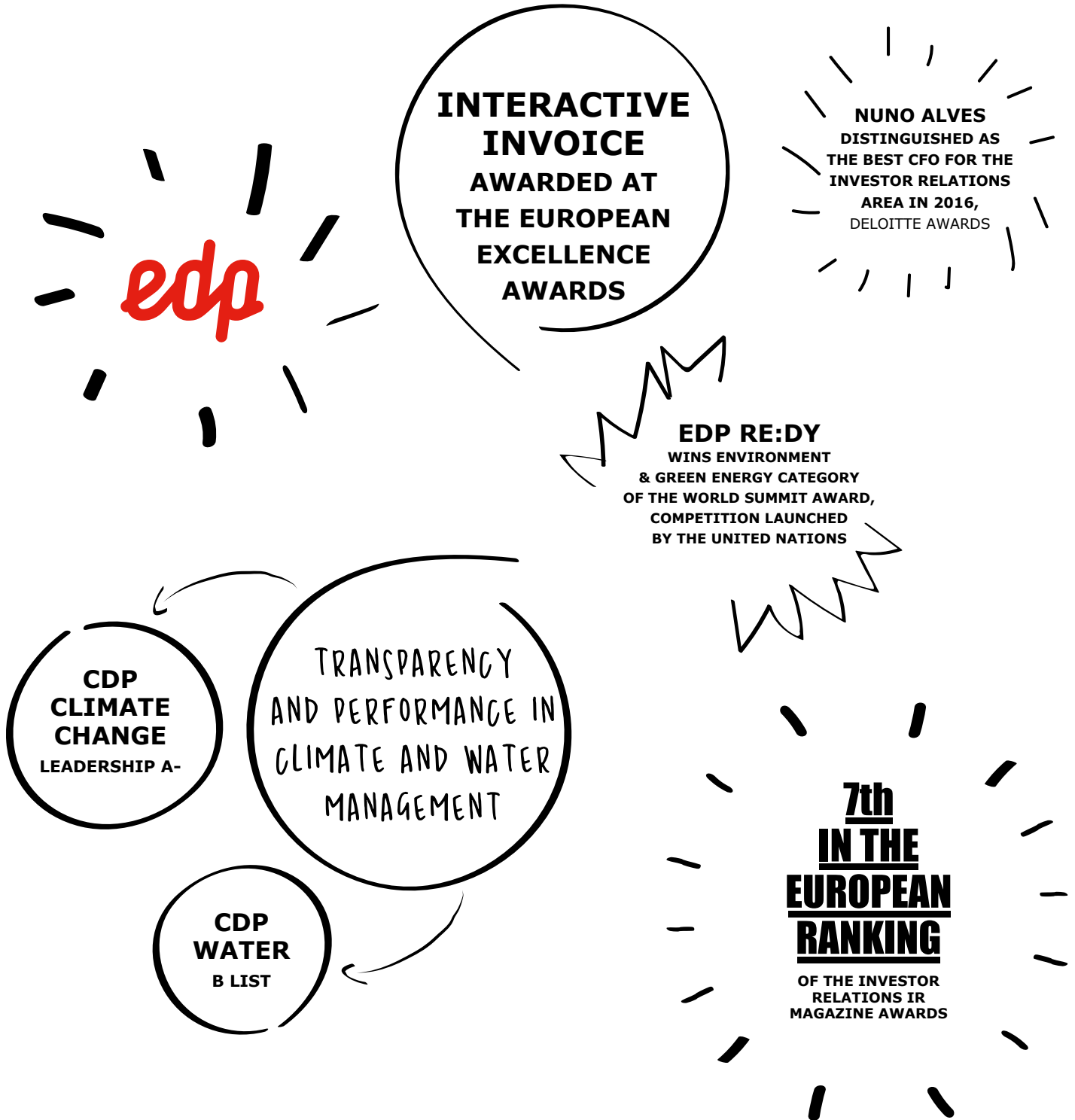
#5 PRIVATE GENERATOR

### **04 RENEWABLES**



#4 GLOBAL WIND PLAYER

# RECOGNITION





EDPR AWARDED  
BY AMERICAN WIND ENERGY  
ASSOCIATION (AWEA) SAFETY  
AND HEALTH ACHIEVEMENT  
GOLD AWARD

**EDP BRASIL  
IN THE TOP 5  
OF INNOVATION  
IN THE ELECTRIC  
SECTOR**  
VALOR INOVAÇÃO  
BRASIL

ANTÓNIO MEXIA  
WINS CATEGORY WHICH CEO  
WOULD MOST LIKE TO HAVE?  
PORTUGAL HUMAN RESOURCES  
AWARDS 2016

**#1  
OF THE  
WORLD**  
OF INTEGRATED UTILITIES  
WITH THE BEST SCORE  
EVER IN DOW JONES  
INDEX

EDP SPAIN IS  
A LEADER IN THE  
CUSTOMER  
EXPERIENCE STIGA  
INDEX (ISGX)  
2016

MIGUEL SETAS,  
EDP BRASIL, IN THE  
TOP 3 OF THE BEST CEO  
OF THE ELECTRIC SECTOR  
IN LATIN AMERICA  
INSTITUTIONAL  
INVESTOR



EUROPEAN  
EXCELLENCE  
AWARDS IN HUMAN  
RESOURCES  
WINNER IN THE  
CATEGORY DIVERSITY  
MANAGEMENT



**BUSINESS MODEL**

**INPUTS**

**NATURAL RESOURCES**  
Renewable resources (water, sun, wind)  
Non-renewable resources (coal, natural gas, raw materials for network equipment)

**HUMAN RESOURCES**  
Employees  
Suppliers

**FINANCIAL RESOURCES**  
Third party capital  
Income  
Financing  
Stocks

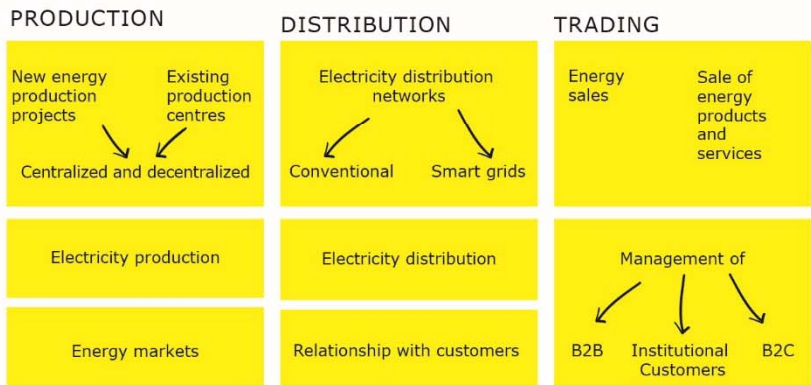
**INTELLECTUAL RESOURCES**  
Brand  
Patents  
Innovation  
Partnerships

**PHYSICAL RESOURCES**  
Assets (power grid; hydroelectric, thermal, wind and solar infrastructures)  
Shop network  
Property  
Other facilities

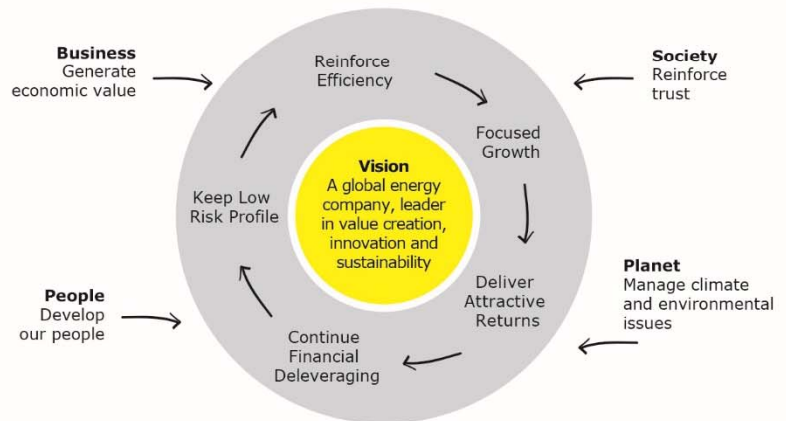
**SOCIAL RESOURCES**  
Qualified competences of employees and suppliers  
Business partners (suppliers, communities, joint ventures, State, R&D, NGOs)



**VALUE CHAIN**



**STRATEGY**



**MARKET FORCES**

Regulatory and governmental pressure

**KEY TRENDS**

Enhanced investment in renewables and infrastructure  
Diversification of revenue sources  
Climate change and energy efficiency  
Technological innovation and internet  
New challenges for conventional production  
Cultural and socio-economic changes

**STAKEHOLDERS**



**RESULTS**

**IMPACTS**



**NATURAL VALUE**

Air pollutant emissions  
Waste and effluent management  
Water management  
Habitats and protected species  
Environmental incidents  
Energy consumption

**HUMAN VALUE**

Diverse workforce  
Volume of Training  
Injuries and ill health  
Employee salaries  
Employee satisfaction  
Social benefits for employees

**FINANCIAL VALUE**

Profit  
Returns on third party capital / dividends  
Debt management

**INTELLECTUAL VALUE**

Innovative products and services  
Knowledge generated

**SOCIAL VALUE**

Energy production and distribution externalities  
Brand reputation  
Social investment  
Customer satisfaction  
Contractual relationship with suppliers

**INFRASTRUCTURE VALUE**

Quality and efficiency of energy supply  
Energy Produced and Distributed  
Incidents with third parties

**NATURAL VALUE**

Reduction of CO<sub>2</sub> emissions through promotion of renewable energy  
Reduction of air pollutant emissions  
Reduction of consumption of Natural Resources  
Ensuring water quality  
Preservation of biodiversity  
Reduction of energy consumption through energy efficiency measures

**HUMAN VALUE**

Promotion of diversity and equal opportunity  
Promotion of employee skills development  
Promotion of occupational health and safety  
Promotion of employee satisfaction

**FINANCIAL VALUE**

Minimizing financial risks  
Debt reduction

**INTELLECTUAL VALUE**

Promotion of innovation and research  
Promotion of the adoption of sustainable consumption behaviours  
Leveraging generated knowledge

**SOCIAL VALUE**

Reputation and recognition  
Promotion of social investment  
Promotion of customer satisfaction / customer experience  
Promotion of an ethical culture  
Supplier development

**INFRASTRUCTURE VALUE**

Ensuring the quality and efficiency of energy supply  
Promotion of safety of facilities and equipment



# **SOCIALLY RESPONSIBLE INVESTMENT**

The socially responsible investment (SRI) market is growing very rapidly. In 2016, SRI Assets under Management (AuM) totalled 23 billion USD i.e. 26% of the total market and an increase of 25% compared to 2014. Europe and the USA hold more than 90% of the total of these assets.

The growth of socially responsible investment (SRI) is closely associated with the creation and evolution of sustainability indexes, due to the importance attributed to the integration of economic, environmental, social and governance (ESG) factors in the investment decisions and their positive correlation with the cost of capital and financial performance. Currently there are more than 300 sustainability indexes relating to stocks and bonds.

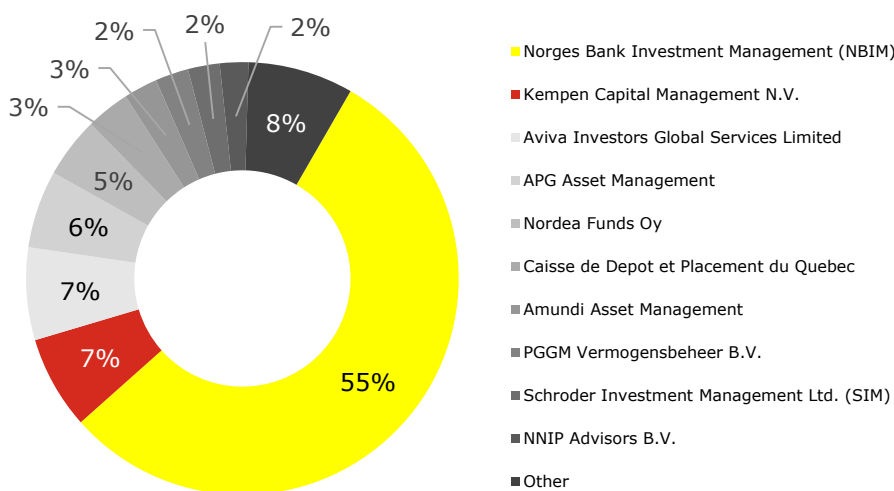
In this most recent economic model, EDP has been evaluated in relation its environmental, social, ethical, human rights, corruption and diversity practices and impacts, among others. However, although it is not possible to deduce which index is the most appropriate for reflecting sustainability matters, EDP considers it relevant to interpret and monitor some of the indexes in its different sustainability priorities. Further information is available on the EDP website ([www.edp.com](http://www.edp.com)> sustainability> economic dimension> sustainability indexes> esg indexes).

The results of EDP's ESG performance are specified in:

- Annual participations in face-to-face and conference call meetings with SRI investors, especially the events in Frankfurt (February) and Paris (March).
- Response to ESG questionnaires, namely RobecoSAM, VIGEO, Sustainalytics, FTSE, CDP, Thomson Reuters and Ethisphere Institute.
- Separate written responses to SRI investors who question directly the company.

According with the results of the analysis prepared for EDP by Nasdaq in December 2017, the SRI investors held 178.593.891 shares, correspond to 4.9% of EDP social capital. Norges Bank Investment Management is EDP's major SRI investor that is an investor that combines traditional interests with environmental, social and governance concerns.

## **SRI INVESTMENT BREAKDOWN IN EDP (4.9% of share capital)**





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# 02

## STRATEGIC APPROACH

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# TRENDS IN THE ENERGY SECTOR

## DECARBONISATION

Decarbonisation continues to set the world agenda, with the world seeing in 2016 the third consecutive year of energy sector CO<sub>2</sub> emissions levelling off. However, this change in emissions is not sufficient to meet the targets set in the Paris Agreement (December 2015). This agreement aims to limit the global average temperature rise well below 2°C to pre-industrial levels and to continue efforts to further limit this increase to 1.5°C. For that to happen, countries should reach the peak of their emissions as quickly as possible and pool efforts to reduce them in the following periods, acting in a variety of areas.

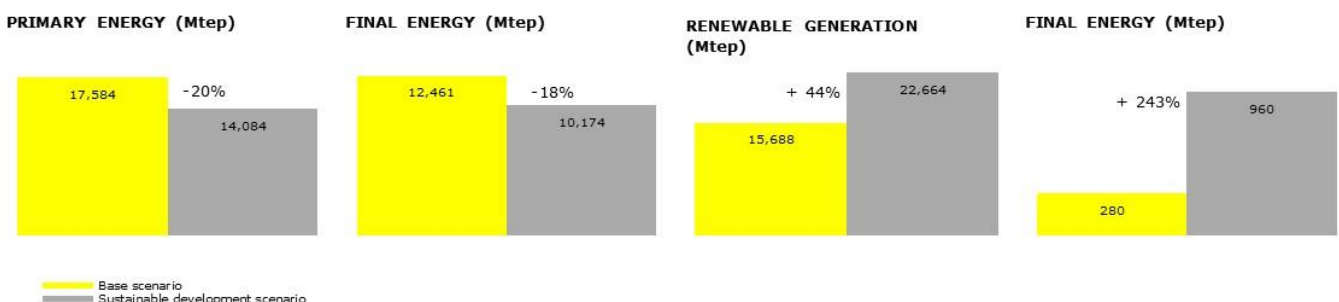
The pace of increase in global energy demand will slow down with this historic event, but the International Energy Agency (IEA) estimates global energy demand will increase by 30% by 2040, which is equivalent to an increase of 1% per year.

Energy efficiency has gained global visibility, emerging as one of the key parts of the commitments set out by various countries in the Paris Agreement. About 30% of global energy consumption is currently covered by energy efficiency policies, which have become more widespread over the last decade. It is recognized not only for promoting environmental sustainability, but also for reducing the cost of energy and external energy dependence.

The decoupling of economic growth and increased demand for energy leads to a significant reduction (2.3%/year) in energy intensity globally. At the same time, CO<sub>2</sub> emissions related to the energy sector are expected to increase by only 0.4% per year, reflecting an improvement in the overall carbon intensity indicator.

While long-term improvements in the carbon intensity of the global economy are expected, increasing energy demand continues to raise climate concerns as it makes it difficult to meet the objectives proposed under the Paris Agreement. The path of decarbonisation implies a profound change to the fossil fuel-based economic model, a strong focus on energy efficiency, renewable-based electrification and the promotion of innovation.

### WHAT CHANGES WOULD BE NEEDED TO LIMIT THE TEMPERATURE RISE TO 2°C IN 2040?



- Global primary energy consumption should decline by 20%, with fossil fuels falling 35% and renewables to grow by 20%;
- The electricity sector anticipates: 8% reduction in consumption, driven by energy efficiency in the industrial and services sectors; 63% generation from renewable sources vs. 40% in the baseline scenario; Installation of 210 GW thermal with Carbon Capture and Storage (CCS), more than 50% located in China;
- In the transport sector, the fleet of light electric vehicles would be 960 million, corresponding to 50% of the estimated total fleet.

## **RENEWABLES**

In recent years the global renewable energy industry has been developed, promoted by regulatory support, cost reduction and technological development.

Until now, the penetration of renewables has been mainly in the electricity sector, currently responsible for 60% of the use of renewables. In the transport and heating/cooling in buildings sectors, the weight of renewables is substantially lower despite the enormous potential for their direct and indirect use. The IEA estimates that by 2040, the direct use of renewables in these sectors will see its value double but will not exceed the expected growth in the electricity sector, which will triple.

In the electricity sector in particular, the cost of renewable generation sources, namely solar and wind, has reached record levels in the minimum prices due to several factors, such as: 1) strong technological development and consequent reduction of costs of renewables combined with 2) a competitive remuneration mechanism based on auctions of long-term contracts. By 2030, the majority of the global generation will come from renewable sources, with hydro, wind and solar to dominate the mix of renewable and responsible for 16%, 9% and 6% of total electricity respectively.

Reducing the costs of renewable technologies and developing decentralized generation systems will allow access for many rural populations to electricity in regions where the extension of the network entails higher investment costs.

### **AUCTIONS AND CORPORATE CONTRACTS**

The auctions of long-term renewable energy contracts have become one of the main driving forces behind the development of these generation technologies in several countries, since they promote a reduction of risk and consequent decrease of the cost of capital. In countries such as Mexico, Chile and India, record high prices for solar projects were achieved, while in the Netherlands, Denmark and Germany, there were record wind prices. In parallel, the interest of corporate consumers in obtaining their energy from renewable generation sources has increased in recent years. The objectives of corporate social responsibility coupled with the increasing competitiveness of renewables make energy procurement contracts attractive, enabling companies to meet their sustainability targets and reduce uncertainty regarding the cost of electricity and producers of renewable energy to ensure return on investment. Since 2008, around the world, corporate contracts that total 19 GW of renewable capacity have already been completed, of which 5.4 GW were negotiated in 2017.

## **ELECTRIFICATION**

In a world of decarbonisation, electrification is expected to play an increasingly important role in final energy consumption. Indeed, electrification contributes to decarbonisation in two ways. On the one hand, electric technologies, such as electric vehicles and heat pumps, are more efficient than conventional alternatives, which translates into a reduction in total energy consumption. On the other hand, the transport and heating / cooling sectors are mostly satisfied with fossil fuels, with electricity being the easiest form to decarbonize through the penetration of renewables.

In all scenarios of the IEA, the share of electricity will represent in the long term between 23% and 27% of final energy consumption, compared to 19% today. Of the various forms of final energy, electricity is expected to register the greatest growth, around 63% by 2040, due to increasing urbanization and the penetration of electricity into new sectors, such as transport. Decentralized generation - off-grid and mini-grid - emerges as a catalyst for universal access to electricity, particularly in rural communities.





## **ELECTRIC VEHICLES**

In the transport sector, the continued reduction of the cost of batteries in electric vehicle modules, coupled with recently announced regulatory policies, will promote the adoption of this type of transport. The IEA estimates that in 2040 its share will represent 14% of the fleet of passenger cars compared to the current 0.2%.

At the same time, the introduction of intelligent charging technologies will enable a better integration of the fleet of electric vehicles into the electrical system, through the management of battery charging / discharging and providing flexibility to the system. The IEA estimates that the implementation of intelligent charging infrastructure translates into savings of 100 and 280 billion USD by 2040.

## **DIGITIZATION**

In the electrical sector, there is now a growing digitization and penetration of technological solutions such as aggregation of massive amounts of data, data processing via automatic learning algorithms and concepts such as the Internet of Things (IoT), which emerge across the entire value chain. On the other hand, the digitization of the electricity sector is the basis for integrating decentralized systems and solutions that become increasingly common.

In general, digitization has several advantages related to increasing efficiency and reducing the costs of generation and networks (e.g. better use of fuels, predictive algorithms for optimization of maintenance). In addition, digitization promotes the decarbonisation of the electricity system by allowing a better integration of the renewables in the system, by ensuring a better matching of demand at times of greater renewable generation.

The ability to handle a massive amount of consumption data also creates opportunities for new business models. The concept of "smart house" is becoming increasingly a reality where consumers can monitor and optimize the energy consumption of their home, integrating solutions such as distributed generation, storage, electric vehicle, etc.

## **GRIDS AND SMART METERS**

Smart grids are gaining in popularity since they allow you to automatically monitor electricity flows by adjusting supply and demand deviations efficiently. When combined with smart meters, these networks provide real-time information to consumers and electricity suppliers. Consumers can therefore adapt and optimize - in time and volume - their energy use according to their price throughout the day. The correct forecasting and monetization of energy savings are the basis of energy efficiency services. Bloomberg estimates that the digitization of the electricity sector will generate close to 40 billion USD of energy savings, in 2025, with half of this figure created by the use of smart meters.

# 02 RISK MANAGEMENT

## MAIN RISKS

The group seeks to form an overarching view of the main risks to which it is exposed, at the strategic, business, financial and operational levels, with processes put in place to ensure that they are monitored and managed proactively.

| RISK  | ILLUSTRATION OF THEMES (NON-EXHAUSTIVE)   | RECENT/EXPECTED SHORT-TERM CHANGE | MITIGATION ACTIONS (NON-EXHAUSTIVE)  |
|---|---|-----------------------------------|--|
| <b>EXTERNAL FACTORS</b>                                 | <ul style="list-style-type: none"> <li>Geopolitical instability.</li> <li>Social and economic crises.</li> <li>Disruptive Technologies.</li> <li>Change in the competitive paradigm.</li> </ul>   | =                                 | <ul style="list-style-type: none"> <li>Growing global geopolitical instability, offset by a favorable economic environment (Cf. recent history), particularly in Portugal.</li> </ul>  |
| <b>INTERNAL STRATEGY</b>                                | <ul style="list-style-type: none"> <li>Investment strategy</li> <li>Relationship with stakeholders</li> <li>Corporate Planning</li> </ul>   | =                                 | <ul style="list-style-type: none"> <li>-</li> </ul>  |
| <b>ENERGY MARKETS</b>                                   | <ul style="list-style-type: none"> <li>Fluctuations in the pool, commodities and CO<sub>2</sub> prices.</li> <li>Volatility in the volume of renewable energy production (i.e. hydro and wind).</li> <li>Volatility of energy consumption.</li> <li>Changes in commercial margins.</li> </ul> | ↗                                 | <ul style="list-style-type: none"> <li>Structural increase in market exposure (with the end of CMECs) made worse by the situation in 2017 of reduced hydrology in Iberia and Brazil.</li> <li>Continued postponement of necessary market design reforms (given the mismatch of the marginalist market).</li> </ul>   |
| <b>REGULATION</b>                                       | <ul style="list-style-type: none"> <li>Change in fees, taxes and sectoral charges.</li> <li>Changes in the tariff regime of regulated activities.</li> <li>Legislative changes.</li> <li>Changes in standards (e.g. environmental).</li> </ul>  | ↗                                 | <ul style="list-style-type: none"> <li>High regulatory uncertainty during 2017, particularly in Portugal (e.g. sectoral taxes, final revisability of CMECs, tariff revision 2018-2020), partly already materialized.</li> </ul>  |
| <b>FINANCIAL MARKETS</b>                                | <ul style="list-style-type: none"> <li>Interest rate fluctuations.</li> <li>Exchange rate fluctuations.</li> <li>Inflation.</li> <li>Fluctuations in the value of the financial assets held by the Group.</li> </ul>  | ↗                                 | <ul style="list-style-type: none"> <li>Uncertainty regarding a possible gradual tightening of monetary policies in the US and Europe.</li> <li>Political uncertainty and consequent volatility and devaluation of the BRL.</li> <li>Devaluation of the USD (positive impact on debt, negative impact on EBITDA).</li> </ul>                                    |
| <b>CREDIT AND COUNTERPARTIES (ENERGY AND FINANCIAL)</b> | <ul style="list-style-type: none"> <li>Non-compliance of financial counterparties.</li> <li>Non-compliance of energy counterparties (energy sale / purchase agreements).</li> <li>Non-compliance of customers (B2B and B2C).</li> </ul>   | ⇒                                 | <ul style="list-style-type: none"> <li>Careful selection and regular monitoring of benchmark counterparties.</li> <li>Diversification through multiple counterparties.</li> <li>Low complexity, liquidity and non-speculative financial instruments.</li> <li>Mix of B2B and B2C customers, credit insurance and bank guarantees (when applicable).</li> </ul> |
| <b>LIQUIDITY</b>  | <ul style="list-style-type: none"> <li>Temporary cash shortfalls.</li> <li>Downgrade of financial rating (and consequent increase in loan costs).</li> </ul>  | ↘                                 | <ul style="list-style-type: none"> <li>Cashpooling for all countries (excluding Brazil).</li> <li>Liquidity levels based on detailed forecast of cash requirements (enough to cover 2 years).</li> <li>Diversification of sources of financing, debt type profiles and debt maturity.</li> </ul>   |



| RISK  | ILLUSTRATION OF THEMES (NON-EXHAUSTIVE)   |   | RECENT/EXPECTED SHORT-TERM CHANGE  | MITIGATION ACTIONS (NON-EXHAUSTIVE)   |
|---|---|---|--|---|
| <b>OTHER FINANCIAL LIABILITIES</b>                | <ul style="list-style-type: none"> <li>Capitalization of the Defined Benefit Pension Fund.</li> <li>Additional costs of current and planned retirements.</li> <li>Medical expenses.</li> </ul>  | ⇒ | <ul style="list-style-type: none"> <li>Transfer of additional liabilities (death and medical benefits) and respective allocation to the EDP Group Pension Fund.</li> </ul>   | <ul style="list-style-type: none"> <li>Regular monitoring of the Defined Benefit Pension Fund, the value of its assets and liabilities by specific committee (including financial and risk area).</li> </ul>  |
| <b>PLANNING / CONSTRUCTION OF PHYSICAL ASSETS</b> | <ul style="list-style-type: none"> <li>Delays in asset commercial operation date (COD) and loss of revenue.</li> <li>Deviations in cost of investment (CAPEX).</li> </ul>   | ⇒ | <ul style="list-style-type: none"> <li>Completion of the hydro plan in Portugal (offset partially and over time by the start of the transmission investment plan in Brazil).</li> </ul>  | <ul style="list-style-type: none"> <li>Regular preventive maintenance and inspection.</li> <li>Crisis management and business continuity plans for disastrous events.</li> </ul>  |
| <b>OPERATION OF PHYSICAL ASSETS</b>               | <ul style="list-style-type: none"> <li>Damage to physical assets and third parties.</li> <li>Faults due to defects in components or installation.</li> <li>Unavailability due to external events (e.g. lightning).</li> <li>Technical and non-technical losses associated with the power grid.</li> </ul> | = | <ul style="list-style-type: none"> <li>Tending towards constant (possible emergent risk associated with increased incidence and severity of extreme climacteric events - to be evaluated).</li> </ul>  | <ul style="list-style-type: none"> <li>Comprehensive insurance policies (essentially for property damage and loss of profits, civil and environmental liability).</li> <li>Fraud prevention programs (for non-technical losses).</li> </ul>   |
| <b>PROCESSES</b>                                  | <ul style="list-style-type: none"> <li>Irregularities in the implementation of processes (in commercial activities, supplier selection and management, customer invoicing and collection, etc.).</li> </ul>   | = | -  | <ul style="list-style-type: none"> <li>Dissemination of the Internal Financial Reporting Control System (SCIRF).</li> <li>Documentation / formalization of the various existing processes by dedicated area.</li> </ul>   |
| <b>HUMAN RESOURCES</b>                            | <ul style="list-style-type: none"> <li>Accidents at work.</li> <li>Unethical conduct.</li> <li>People management.</li> <li>Relationship with unions and other stakeholders.</li> </ul>  | = | -  | <ul style="list-style-type: none"> <li>Documentation, analysis and reporting of incidents.</li> <li>Monitoring of ethical risk by the Ethics Ombudsman's Office (independent body).</li> <li>Collection, analysis and evaluation in the Ethics Committee of all allegations of unethical behavior.</li> <li>Regular training on health and safety at work principles.</li> </ul>  |
| <b>INFORMATION SYSTEMS</b>                        | <ul style="list-style-type: none"> <li>Lack of availability of information and communication systems.</li> <li>Information integrity and security.</li> </ul>   | ⇒ | <ul style="list-style-type: none"> <li>Higher level of exposure (e.g. large-scale cyber attacks, data protection directives) partly offset by enhanced mitigation measures (cyber-range, SOC, cyber-risk insurance, training and awareness raising sessions).</li> </ul> | <ul style="list-style-type: none"> <li>Establishment of criticalities and maximum down times for the main applications.</li> <li>Implementation of redundant disaster recovery systems.</li> <li>Establishment of a dedicated Security Operations Center (SOC) for continuous monitoring of the security of the Group's OT / IT infrastructure.</li> <li>In-house Cyber-range for simulation and testing of employees' reactions to cyber attacks.</li> <li>Online training and awareness raising on information security principles.</li> <li>Cyber risk insurance.</li> </ul> |
| <b>LEGAL</b>                                      | <ul style="list-style-type: none"> <li>Losses resulting from non-compliance with current tax, labor, administrative, civil or other legislation (penalties, indemnities and agreements).</li> </ul>   | = | -  | <ul style="list-style-type: none"> <li>Regular monitoring of legal exposure (itemized for high value proceedings).</li> <li>Establishment of provisions designed to cover all estimated probable losses of ongoing litigation.</li> </ul>   |

## EMERGING RISKS

In addition to close monitoring of the main risks involved in the Group's activity, the main trends (at a global and sectoral level) that may become threats and opportunities for the Group have also been comprehensively mapped, and appropriate mitigation strategies have been developed proactively. The following are of note, not least because of their impact throughout 2017: (1) the challenge of adapting the design of the wholesale market to the current conditions, (2) the paradigm shift of decentralized resources, (3) the industrial revolution and digitization of the electricity sector (4) the increasing threat of cyber risks and (5) possible increasing frequency and worsening impact of extreme weather events.

| EMERGING RISKS   | DESCRIPTION   | IMPACT   | MITIGATION MEASURES   |
|--|---|--|---|
| <b>WHOLESALE ELECTRICITY MARKET DESIGN (IN EUROPE)</b> | <ul style="list-style-type: none"> <li>▪ <b>Uncertainty over the change in the wholesale market design, based on current challenges:</b> <ul style="list-style-type: none"> <li>– Marginalist remuneration system ill-matched to the current context of increasing penetration of fixed-cost technologies (renewable, <i>backup</i>, storage).</li> <li>– Growing penetration of 0 marginal cost technologies (reducing prices and making them more volatile).</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Uncertainty about the return of conventional generation, in particular for <i>backup</i> capacity</b> (relevant from a supply security perspective).</li> <li>▪ <b>Volatile environment ill-suited to long-term investments</b> necessary for modernization, decarbonization and security of supply.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ <b>Active and constructive participation in various forums at European and national levels for the adoption of appropriate and balanced market design solutions</b> for various <i>stakeholders</i>, in particular: <ul style="list-style-type: none"> <li>– Adoption of auctions for long-term contracts for the promotion of renewables.</li> <li>– Recognition of the need for capacity remuneration mechanisms.</li> <li>– Strengthening of the CO<sub>2</sub> price signal at European level.</li> </ul> </li> <li>▪ <b>Enhanced emphasis on long-term contracts</b> (renewable and conventional generation), to reduce risk and increase the competitiveness of the supply to the end customer.</li> </ul> |
| <b>DISTRIBUTED RESOURCES</b>                           | <ul style="list-style-type: none"> <li>▪ <b>Increasing proliferation of distributed resources</b>, including: <ul style="list-style-type: none"> <li>– Decentralized production (in particular Solar PV) for self-consumption.</li> <li>– Electric vehicles.</li> <li>– Active demand management.</li> <li>– Storage.</li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>▪ Threat relating to: <ul style="list-style-type: none"> <li>– (Possible) <b>reduction of margins in traditional generation</b> due to lower volume of centrally generated energy.</li> <li>– <b>Lower contribution by self-consumption consumers to system costs</b> (networks and others) and consequent need for tariff increases.</li> <li>– <b>Change in the dynamics of energy flows in the grid.</b></li> </ul> </li> <li>▪ Opportunity for the sale of new products and solutions.</li> </ul>                 | <ul style="list-style-type: none"> <li>▪ <b>Proactive role in marketing innovative products and solutions, with benefits for margins and customer loyalty:</b> <ul style="list-style-type: none"> <li>– Sale of solar panels for self consumption (and batteries).</li> <li>– Marketing of solutions associated with electric mobility (e.g. green electric mobility).</li> <li>– Energy efficiency solutions (e.g. Re:dy with application to electric cars, solar generation, heating, surveillance of outdoor spaces).</li> </ul> </li> <li>▪ <b>Active regulatory management</b>, in particular with regard to the tariff structure, <b>conducive to the existence of price signals and efficient incentives.</b></li> </ul>                           |
| <b>4TH INDUSTRIAL REVOLUTION (AND DIGITIZATION)</b>    | <ul style="list-style-type: none"> <li>▪ <b>Proliferation of new technologies with groundbreaking potential in the electricity sector</b>, in, among others: <ul style="list-style-type: none"> <li>– <i>Blockchain</i>.</li> <li>– IoT.</li> <li>– <i>AI/ machine learning</i>.</li> <li>– Virtual / augmented reality.</li> <li>– <i>Robotic process automation</i>.</li> </ul> </li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>Threats to the entry of new competitors such as aggregators, <i>design science research</i> (DSR) services or customer solutions.</b></li> <li>▪ <b>Operational and business optimization opportunities</b>, e.g. <ul style="list-style-type: none"> <li>– Operation and maintenance of assets (generation and networks).</li> <li>– <i>Pricing</i> and segmentation.</li> <li>– Product innovation and customer service.</li> <li>– <i>Back-office</i> optimization and shared services.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Monitoring of best practices and developments in the area of digital</b>, with application to the energy sector</li> <li>▪ <b>Launch of a comprehensive collaboration program between Group and external experts to accelerate ideas and test digital solutions:</b> <ul style="list-style-type: none"> <li>– Assets / operations (e.g. predictive maintenance, asset management, workforce digitization, energy / <i>trading</i> management).</li> <li>– Customer (product and service innovation, particularly electrification).</li> <li>– Group (<i>agile/ project-based</i> solutions, optimization / automation of internal processes).</li> </ul> </li> </ul>  |



| EMERGING RISKS                | DESCRIPTION  | IMPACT   | MITIGATION MEASURES   |
|-------------------------------|--|--|---|
| <b>CYBER-RISK</b>             | <ul style="list-style-type: none"> <li>▪ <b>Exposure to various types of cyber-risk, as a result of greater sophistication and technological integration.</b></li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>Financial, operational and reputational loss</b>, resulting (among other things) from:                             <ul style="list-style-type: none"> <li>– Loss / interruption of operation (dispatch / central, invoicing, customer service).</li> <li>– Damage / destruction of assets (networks, plants, other systems).</li> <li>– Violation / destruction of data (personal and other).</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Dedicated Security Operations Center (SOC)</b> for continuous monitoring of the Group's OT / IT infrastructure security.</li> <li>▪ <b>In-house Cyber-range for simulation and testing of employees' reactions to cyber attacks.</b></li> <li>▪ Online training and awareness raising on information security principles (in 2017).</li> <li>▪ <b>Cyber-risk security</b> (in 2017).</li> </ul>   |
| <b>EXTREME CLIMATE EVENTS</b> | <ul style="list-style-type: none"> <li>▪ <b>Structural climate change</b> (in particular temperature and rainfall), <b>with an impact on the frequency and severity of extreme weather events</b> (e.g. floods, droughts, storms, fires).</li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Damage to physical assets and loss of revenue.</b></li> <li>▪ <b>Impact on quality of service</b> provided (distribution network).</li> <li>▪ (Possible) <b>structural changes in hydro productivity</b> (mean and volatility).</li> </ul>   | <ul style="list-style-type: none"> <li>▪ <b>Geographical and technological diversification.</b></li> <li>▪ <b>Active role in combating climate change</b> (in particular the promotion of decarbonization and energy efficiency).</li> <li>▪ <b>Internal adoption of best sustainability practices</b> (attested by the consistently outstanding DJSI classification).</li> <li>▪ <b>Existence of dedicated areas and plans for Crisis and Business Continuity Management</b> (corporate and main Business Units).</li> </ul> |

# **STRATEGY, OBJECTIVES AND TARGETS**

EDP Group's business growth strategy is based on investment in renewable assets within a framework of financial deleveraging, increased operational efficiency and low risk exposure. EDP's prioritization of investment in renewable production started in 2006, anticipating major trends in the energy market; it helped to build the vision of a society capable of reducing CO<sub>2</sub> emissions, by replacing thermal with renewable production, decentralizing generation and electrifying transportation. A society that demands more balanced economic growth based on ethics and respect for human rights, protecting biodiversity and limiting the exploitation of raw materials.

Over these last 10 years, technological advances in wind and photovoltaic generation and in energy storage, together with the expansion of the internet and digital transformation, have opened new forms of business and opportunities, have changed social behaviour and challenged the traditional organization of energy markets. The energy sector is undergoing a profound transformation, whose ultimate scope is difficult to predict. EDP is embracing this change by establishing strategic sustainability objectives that are integrated into the Group's overall strategy.

The EDP Group's sustainability objectives and goals, which are integral to the Business Plan and updated periodically, are aligned with the strategic priorities and are currently detailed around the 4 priorities listed below.

These objectives also correspond to contributions to the common agenda set by the United Nations Sustainable Development Goals (SDGs), which EDP endorsed at the launch of this initiative in 2015.

## **GENERATE ECONOMIC VALUE**

The Generate Economic Value priority establishes the objectives and commitments in total renewable production capacity, gains in energy efficiency, investment in innovation and digital transformation of distribution networks and intelligence at energy delivery points. These objectives contribute to SDGs 7, 9 and 12.

## **DEVELOP OUR PEOPLE**

The Develop our People priority defines commitments in relation to EDP employees and in relation to the employees of its suppliers. The themes of diversity, health and safety in the workplace and satisfaction and motivation contribute to SDGs 5 and 8.

## **MANAGE CLIMATE AND ENVIRONMENT**









The Manage Climate and Environment Issues priority establishes the basic commitments for lowering CO<sub>2</sub> emissions, by addressing environmental impacts through in-house management systems and the commitment of suppliers to the same goals and a reduction in the waste produced by company activity. This corresponds to SDGs 13 and 15.

## **IMPROVE TRUST**

The Improve Trust priority focuses on Customers and Communities, Ethics and Human and Labour Rights, on dialogue with and listening to stakeholders and on the promotion of Citizenship and Volunteering. These objectives contribute fundamentally to SDG 11. It is also in this priority that EDP contributes to SDG 17 through active participation in national and international partnerships to promote the United Nations goals.



**STRATEGIC GUIDELINES COMPLIANCE**

|  |   | TARGET 2020  | STATUS 2017   | OBSERVATIONS   |
|--|---|--|---|--|
| <b>FOCUSED GROWTH</b> ✓                          | <ul style="list-style-type: none"> <li>• Net Investments</li> <li>• LT Contracted Renewables<sup>1</sup></li> <li>• EBITDA CAGR 2015<sup>2</sup>-20</li> </ul>  | <ul style="list-style-type: none"> <li>• Avg. €1.4B/year</li> <li>• +3.9GW</li> <li>• +3%</li> </ul>   | <ul style="list-style-type: none"> <li>• €1.5B</li> <li>• +2.8GW</li> <li>• -1%</li> </ul>  | <ul style="list-style-type: none"> <li>• See Annual Report - Chapter 3 - Performance</li> </ul>  |
| <b>CONTINUE FINANCIAL DELEVERAGING</b> ✓         | <ul style="list-style-type: none"> <li>• FFO/Net Debt</li> <li>• Average cost of debt</li> <li>• Net Debt/EBITDA</li> </ul>   | <ul style="list-style-type: none"> <li>• ~24%</li> <li>• 4.2%</li> <li>• ~3.0x</li> </ul>  | <ul style="list-style-type: none"> <li>• ~18%</li> <li>• 4.1%</li> <li>• ~3.3x</li> </ul>   | <ul style="list-style-type: none"> <li>• See Annual Report - Chapter 3 - Performance</li> </ul>  |
| <b>KEEP LOW RISK PROFILE</b> ✓                   | <ul style="list-style-type: none"> <li>• Renewables installed capacity</li> <li>• Avg. Residual Asset Life</li> <li>• EBITDA Regulated/ LT Contracted</li> </ul>  | <ul style="list-style-type: none"> <li>• ~76%</li> <li>• ~21 years</li> <li>• ~75%</li> </ul>  | <ul style="list-style-type: none"> <li>• 74%</li> <li>• ~26 anos</li> <li>• 84%</li> </ul>  | <ul style="list-style-type: none"> <li>• See Annual Report - Chapter 3 - Performance</li> </ul>  |
| <b>REINFORCE EFFICIENCY</b> ✓                    | <ul style="list-style-type: none"> <li>• Opex IV Target Annual Cost Saving</li> <li>• Accumulated Opex Savings</li> <li>• OPEX/Gross Profit</li> </ul>  | <ul style="list-style-type: none"> <li>• ~€200M</li> <li>• €700M</li> <li>• 26%</li> </ul>   | <ul style="list-style-type: none"> <li>• €141M</li> <li>• ~€246M</li> <li>• 29%</li> </ul>  | <ul style="list-style-type: none"> <li>• See Annual Report - Chapter 3 - Performance</li> </ul>  |
| <b>DELIVER ATTRACTIVE RETURNS</b> ✓              | <ul style="list-style-type: none"> <li>• Target Dividend Payout Range</li> <li>• DPS Floor 2016</li> <li>• EPS CAGR 2015<sup>2</sup>-20</li> </ul>  | <ul style="list-style-type: none"> <li>• 65-75%</li> <li>• €0.19/share (+3%)</li> <li>• +4%</li> </ul>   | <ul style="list-style-type: none"> <li>• 72%</li> <li>• €0.19/share</li> <li>• 0%</li> </ul>  | <ul style="list-style-type: none"> <li>• See Annual Report - Chapter 3 - Performance</li> </ul>  |
| <b>GENERATE ECONOMIC VALUE</b> ✓                 | <ul style="list-style-type: none"> <li>• Renewable capacity</li> <li>• Investment in I&amp;D+I (aggregate)</li> <li>• Smart meters (Iberian Peninsula)</li> <li>• Saved Energy (aggregate)</li> </ul>   | <ul style="list-style-type: none"> <li>• ~76%</li> <li>• €200M</li> <li>• 90%<sup>7</sup></li> <li>• 1 TWh</li> </ul>  | <ul style="list-style-type: none"> <li>• 74%</li> <li>• €137M</li> <li>• 28%</li> <li>• 0.5 TWh</li> </ul>  | <br><br> |
| <b>DEVELOP OUR PEOPLE</b> ✓                      | <ul style="list-style-type: none"> <li>• Engagement level</li> <li>• Female employees</li> <li>• Certification according to OHSAS 18001<sup>3</sup></li> <li>• Suppliers with high H&amp;S impacts, certified according to OHSAS 18001</li> <li>• Frequency rate (Fr)<sup>4</sup></li> </ul>  | <ul style="list-style-type: none"> <li>• ≥ 75%</li> <li>• 27%</li> <li>• 100%</li> <li>• 100%</li> <li>• ≤ 2.00</li> </ul>   | <ul style="list-style-type: none"> <li>• 75%</li> <li>• 24%</li> <li>• 36%</li> <li>• 49%<sup>5</sup></li> <li>• 2.03</li> </ul>  | <br>   |
| <b>MANAGE CLIMATE AND ENVIRONMENTAL ISSUES</b> ✓ | <ul style="list-style-type: none"> <li>• Emissions variation vs 2005</li> <li>• Maximum certified installed net capacity</li> <li>• Certified substations capacity</li> <li>• Certified suppliers with high environmental impacts</li> <li>• Variation in specific waste materials vs. 2015</li> </ul>  | <ul style="list-style-type: none"> <li>• -75%<sup>7</sup></li> <li>• 100%</li> <li>• 100%</li> <li>• 100%</li> <li>• -20%</li> </ul>   | <ul style="list-style-type: none"> <li>• -47%</li> <li>• 90%</li> <li>• 50%</li> <li>• 75%<sup>8</sup></li> <li>• -9%</li> </ul>  | <br>   |
| <b>IMPROVE TRUST</b> ✓                           | <ul style="list-style-type: none"> <li>• Clients/Users satisfaction</li> <li>• Recognition by the Ethisphere Institute</li> <li>• Protect Human Rights in the supply chain<sup>5</sup></li> <li>• Implement full stakeholders auscultation<sup>6</sup></li> <li>• Employees participating in volunteer activities</li> <li>• Hours/year in volunteer activities</li> <li>• Investment in the community (LBG) (aggregate value)</li> <li>• Critical suppliers evaluated according to ESG criteria</li> <li>• Service providers with audited ESG risks</li> </ul> | <ul style="list-style-type: none"> <li>• &gt; 80%</li> <li>• ✓</li> <li>• 4<sup>th</sup> stage</li> <li>• 4<sup>th</sup> stage</li> <li>• 4<sup>th</sup> stage</li> <li>• 20%</li> <li>• 20,000h</li> <li>• €100M</li> <li>• 100%</li> <li>• 100%</li> </ul> | <ul style="list-style-type: none"> <li>• 74%</li> <li>• 2<sup>nd</sup> stage</li> <li>• 2<sup>nd</sup> stage</li> <li>• 2<sup>nd</sup> stage</li> <li>• 20%</li> <li>• 24,932h</li> <li>• €83M</li> <li>• 75%<sup>8</sup></li> <li>• 44%<sup>8</sup></li> </ul> |   |

<sup>1</sup> Including installed capacity equity.

<sup>2</sup> Based on recurrent EBITDA and net profit adjusted from weather impact in 2015.

<sup>3</sup> Employees covered by OHSAS 18001.

<sup>4</sup> Accidents with EDP coworkers and outsourcing workers for a million worked hours.

<sup>5</sup> 1<sup>st</sup> stage - Impact Study; 2<sup>nd</sup> stage - Supplier's Code of Conduct; 3<sup>rd</sup> stage - Supplier's assessment in the Human Rights dimensions; 4<sup>th</sup> stage - Plans for improvement in relevant cases; adjustment of purchasing policies.

<sup>6</sup> 1<sup>st</sup> stage - Definition of a stakeholder auscultation methodology; 2<sup>nd</sup> stage - Implementation of the methodology in all Business Units in Portugal; 3<sup>rd</sup> stage - Implementation of the methodology in all Geographies; 4<sup>th</sup> stage - Cover all segments of the EDP Group's stakeholders.

<sup>7</sup> Target for 2030.

<sup>8</sup> Status still to be determined. Status presented referring to last year.

# **CORPORATE GOVERNANCE**

EDP's corporate governance structure, based in the dual model, is composed of the following corporate bodies: General Meeting, Executive Board of Directors, General and Supervisory Board, and Statutory Auditor.

This governance model promotes the separation between management and supervision functions and has shown to be adequate in the effective management of the Society, in the prosecution of its own goals and interests, those of its shareholders, employees and remaining stakeholders, thus contributing to achieve the degree of confidence and transparency necessary to its adequate operation and optimization.

## **SPECIFICITIES OF THE CURRENT CORPORATE GOVERNANCE MODEL**

### **CORPORATE BODIES**

#### **GENERAL AND SUPERVISORY BOARD**

The General and Supervisory Board's task is to permanently ensure advice, monitoring and oversight of the activities of EDP's management, in particular in what concerns the definition of the strategy and its objectives, investments, divestments and financing operations. The powers of the General and Supervisory Board include proposing the dismissal of any member of the Executive Board of Directors and the Statutory Auditor to the General Meeting.

The General and Supervisory Board also has the power to select and replace EDP's External Auditor and for providing instructions to the Executive Board of Directors on how to proceed with such hiring and dismissal. The General and Supervisory Board is responsible for analysing reports of irregularities presented by shareholders, employees and / or other stakeholders.

The members of the General and Supervisory Board are elected by the General Meeting for three-year terms.

On the mandate corresponding to the members for the period 2015-2017, the General and Supervisory Board had twenty-one members, eleven of which were independent, complying with the Portuguese Commercial Code, which establishes that the majority of this body's members must be independent.

Under EDP's articles, independence is defined as the absence of direct or indirect relations with the company or its management body and the absence of circumstances that may affect the exemption from analysis or decision-making, in particular if the persons in question have a qualified holding equal to or greater than 2% of the share capital of the company or have been re-elected for more than two terms, continuously or intermittently.

In accordance with the Law and EDP's articles, the members of the General and Supervisory Board annually renew their declarations of incompatibilities and independence. These statements are disclosed on the EDP website.

For more details on the operation of the General and Supervisory Board see page 102 of EDP's Annual Report of 2017.

#### **EXECUTIVE BOARD OF DIRECTORS**

The Executive Board of Directors is the body responsible for the management of social activities and Company representation.

The Executive Board of Directors is responsible for defining the EDP Group's organisational model and dividing duties among the different business units, the service company EDP Valor - Gestão Integrada de Serviços, S.A. (EDP Valor)





and central structure. This structure consists of a Corporate Centre that provides assistance to the Executive Board of Directors in defining and monitoring the execution of strategies, policies and goals.

The Corporate Centre is divided into departments and business units, allowing for optimisation and greater efficiency of the organisational structure. The Executive Board of Directors is also assisted by specialised committees, which ensure more effective monitoring of matters and contribute to the decision-making process.

The Executive Board of Directors had eight members, elected for the 2015-2017 period. The Chief Executive Officer has the right, whenever he deems it appropriate, to attend the meetings of the General and Supervisory Board, except when deliberations are taking place and in cases of conflict of interest.

For more details on the operation of the Executive Board of Directors, see page 104 of the EDP Annual Report 2017.

### **STATUTORY AUDITOR**

The Statutory Auditor is the company's body responsible for examining the accounting documents and is elected by the General Meeting for three-year terms.

At the General Meeting of 21 April, 2015, KPMG & Associados - Sociedade de Revisores Oficiais de Contas, SA, represented by Vitor Manuel da Cunha Ribeirinho, was elected as EDP's Statutory Auditor for the 2015-2017 period.

For more details on the operation of this corporate entity, see page 134 of the EDP's Annual Report 2017.

### **GENERAL MEETING**

The General Meeting is responsible for deliberating on all matters for which the law and EDP's articles assign it powers, namely electing and dismissing the members of the Board of the General Meeting, the Executive Board of Directors and the General and Supervisory Board, as well as their chairs and vice chairs, if any, the Statutory Auditor, as proposed by the General and Supervisory Board or, by delegation of the latter, of the Audit Committee, and the members of the Environment and Sustainability Council.

It is also responsible for annually appraising the remuneration policy of the members of the Executive Board of Directors, proposed by a Remuneration Committee appointed by the General and Supervisory Board, as well as the remuneration policy of the other corporate bodies proposed by the Remuneration Committee appointed by the General Meeting.

## **CORPORATE BODIES**

### **GERAL GENERAL MEETING REMUNERATION COMMITTEE**

This body is responsible for annually setting the remuneration of the corporate bodies: Board of the General Meeting; Chairman and members of the General and Supervisory Board; Statutory Auditor; and Environment and Sustainability Council.

### **ENVIRONMENT AND SUSTAINABILITY COUNCIL**

It is elected by the General Meeting, reports to the Executive Board of Directors and holds advisory functions in the definition of the corporate environment and sustainability strategy.

### **FINANCIAL MATTERS COMMITTEE / AUDIT COMMITTEE OF THE GENERAL AND SUPERVISORY BOARD**

Its constitution is a statutory requirement. It must be specifically dedicated to performing functions related to the supervision of financial information and permanent monitoring of the Statutory Auditor's activity.

## **OTHER STATUTORY BODIES**

### **REMUNERATION COMMITTEE OF THE GENERAL AND SUPERVISORY BOARD**

Its constitution is permitted by Law and was enshrined in EDP's Articles of Association, which assigned it responsibility for setting the remuneration of the Chairman and other members of the Executive Board of Directors.

### **CORPORATE GOVERNANCE AND SUSTAINABILITY COMMITTEE OF THE GENERAL AND SUPERVISORY BOARD**

Although EDP's Articles provides for its establishment, its actual appointment was freely decided by the General and Supervisory Board, which is responsible for fulfilling various functions in the areas of corporate governance and the economic, social and environmental sustainability of EDP.

### **STRATEGY AND PERFORMANCE COMMITTEE OF THE GENERAL AND SUPERVISORY BOARD**

This body is responsible for the permanent monitoring of the following matters: (i) short, medium and long term scenarios and strategies, (ii) strategic execution and business planning and budgets, (iii) investments and divestments, (iv) debt and loans, (v) strategic alliances, (vi) markets and competitiveness trends, (vii) regulation, (viii) analysis of the performance of the Group and its Business Units, (ix) benchmarking the Group's performance against the top companies in the sector and (x) evaluation of the competitiveness of EDP's business portfolio.

## **CORPORATE GOVERNANCE PRACTICES**

In the current legal framework, EDP annually discloses a report on its governance practices, with a statement on the adoption of the recommendations of the CMVM's Corporate Governance Code 2013, specifying the recommendations on which it diverges and the reasons for the divergence.

In the exercise of the best practices in terms of corporate governance, thus reinforcing EDP shareholders' and remaining stakeholders' confidence, EDP has gone beyond the legal and regulatory requirements.

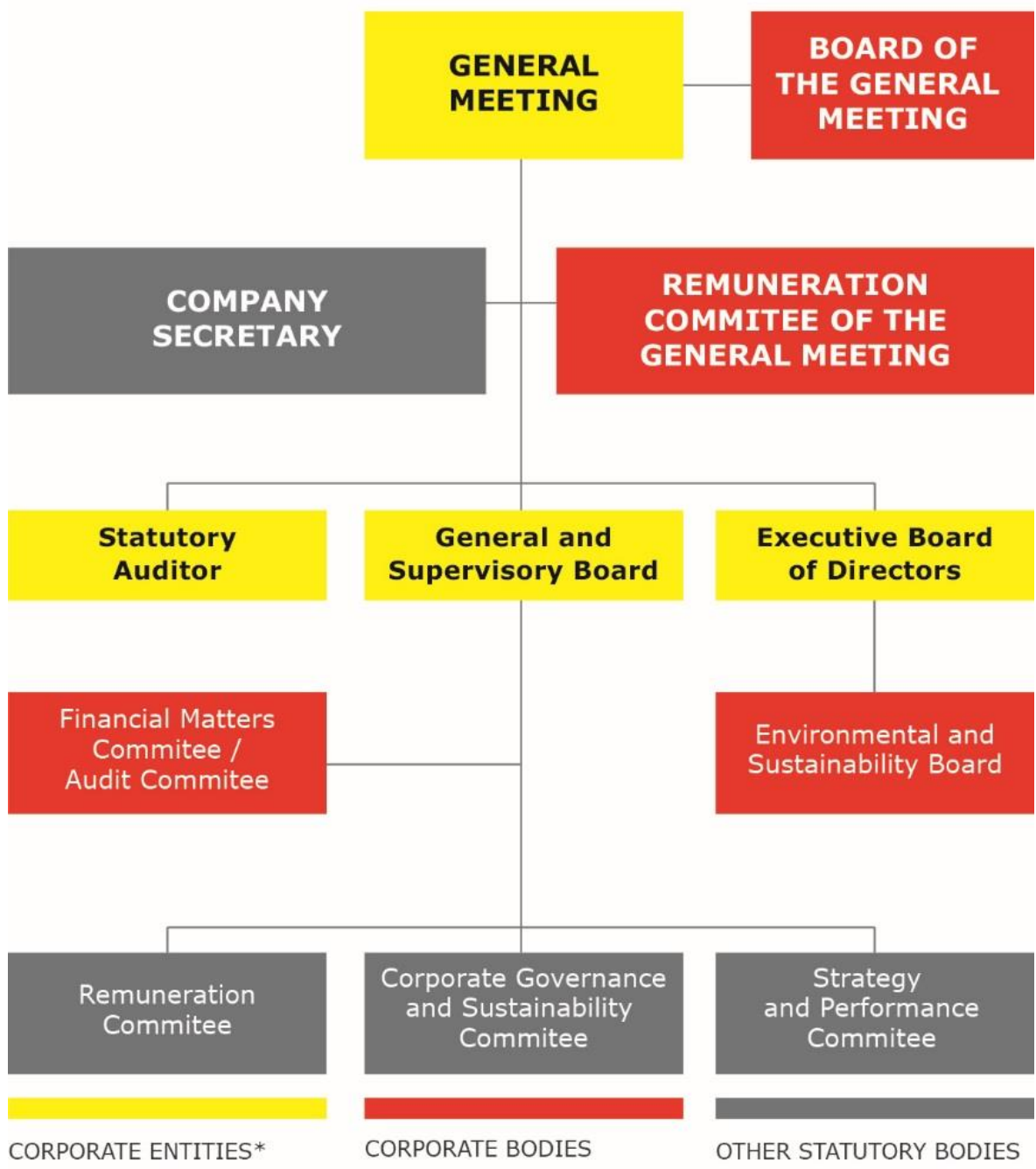
In that sense, the Company has a Corporate Governance Manual, whose primary objective consists of registering and sharing the provisions of the Executive Board of Directors and of General and Supervisory Board regarding corporate governance best practices recommendations applicable to EDP on corporate governance.

This matter can be found in detail in the Corporate Governance Report included in EDP's Annual Report and Accounts.

In order to prevent conflicts of interest, in 2010 the General and Supervisory Board approved a set of objective and transparent rules for identifying, preventing and resolving significant corporate conflicts of interest. This sets of rules can be viewed on the EDP website ([www.edp.com](http://www.edp.com)). They demand a higher standard than that set by the principles of the CMVM's Corporate Governance Code of 2013.

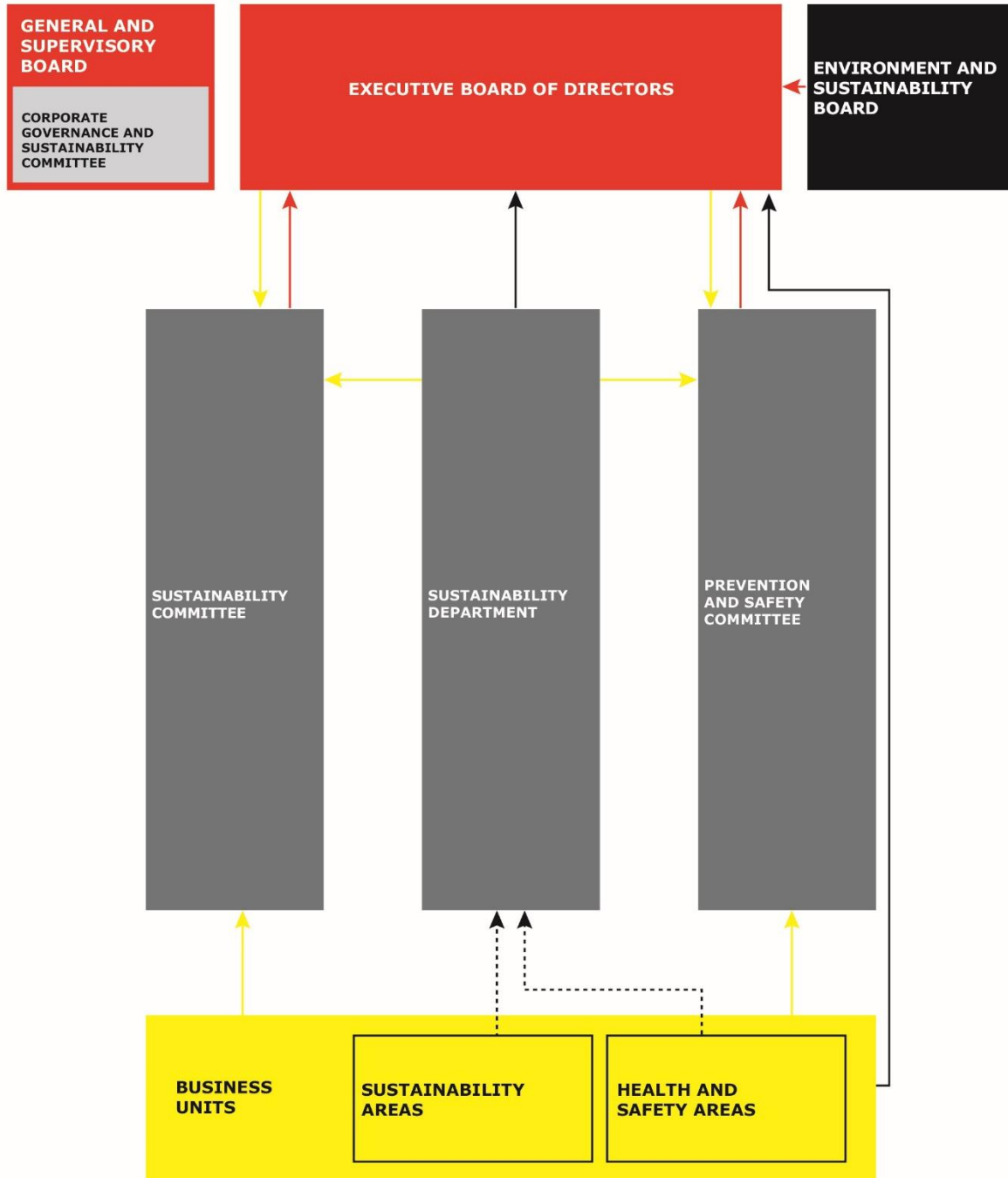
For further details on how EDP operates in the area of corporate governance, see the EDP website ([www.edp.com](http://www.edp.com)). See also chapter Corporate Governance of the EDP's Annual Report 2017.

**ORGANISATION CHART, DELEGATION, AND DIVISION OF POWERS**



\*Corporate Entities are also Corporate Bodies, pursuing the article 8 of EDP's Articles Association.

# SUSTAINABILITY ORGANISATION



■ Corporate body ■ Corporate entity ■ Other statutory bodies ■ Central structure ■ Business units  
 - - Functional reporting/policies and strategies alignment — Hierarchic reporting — Participates — Supports

The EDP Group recognizes the importance of sustainability in its operations and value chain, building economic, environmental and social opportunities and risks into its business strategy.

Sustainability within the EDP Group is organized with the goal of establishing a close communication between the corporate structure and the operating structures, enhancing the information flow and the implementation of its strategy.

As far as sustainability is concerned, this is how EDP is organized:

**GENERAL SUPERVISORY BOARD** - Maximum body responsible for supervision.

- **CORPORATE GOVERNANCE AND SUSTAINABILITY COMMITTEE** - Specialized Committee of the General Supervisory Board that monitors and supervises, among others, issues related to strategic sustainability.

**EXECUTIVE BOARD OF DIRECTORS** - Defines policies and sets Sustainability objectives by proposal from the Sustainability Department.

**ENVIRONMENTAL AND SUSTAINABILITY BOARD**- Specialized committee of the General and Supervisory Board. Its purpose is to monitor and supervise all matters related, among others, to strategic sustainability.

**CENTRAL SUPPORT STRUCTURE** - constituted by a Corporate Centre organized by several Corporate Departments and supported by specific committees. In the sustainability area, we have:

- **SUSTAINABILITY DEPARTMENT** – Corporate Centre Management that analyses, proposes and guarantees the Group's sustainability strategy, supporting EBD in the definition of ESG policies and objectives and their operationalization in the Business Units.
- **SUSTAINABILITY COMMITTEE** - Internal body for information sharing and discussion on legislation in the field of sustainability. Accompanies environmental performance indicators and action plans.
- **PREVENTION AND SAFETY COMMITTEE** - Internal body that issues opinions on proposals for setting objectives, activities plan and regulatory documents on prevention and safety at work. Assesses the development of the main indicators and proposes improvement actions.

**BUSINESS UNITS** - They operate the Sustainability policies and objectives approved in EBD, through their own projects and targets.

**THE**  
**LIVING ENERGY**  
**BOOK**

by *edp*





# 03

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## PERFORMANCE

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**LIVING SUSTAINABILITY**

**THE**  
**LIVING ENERGY**  
**BOOK**

by *edp*

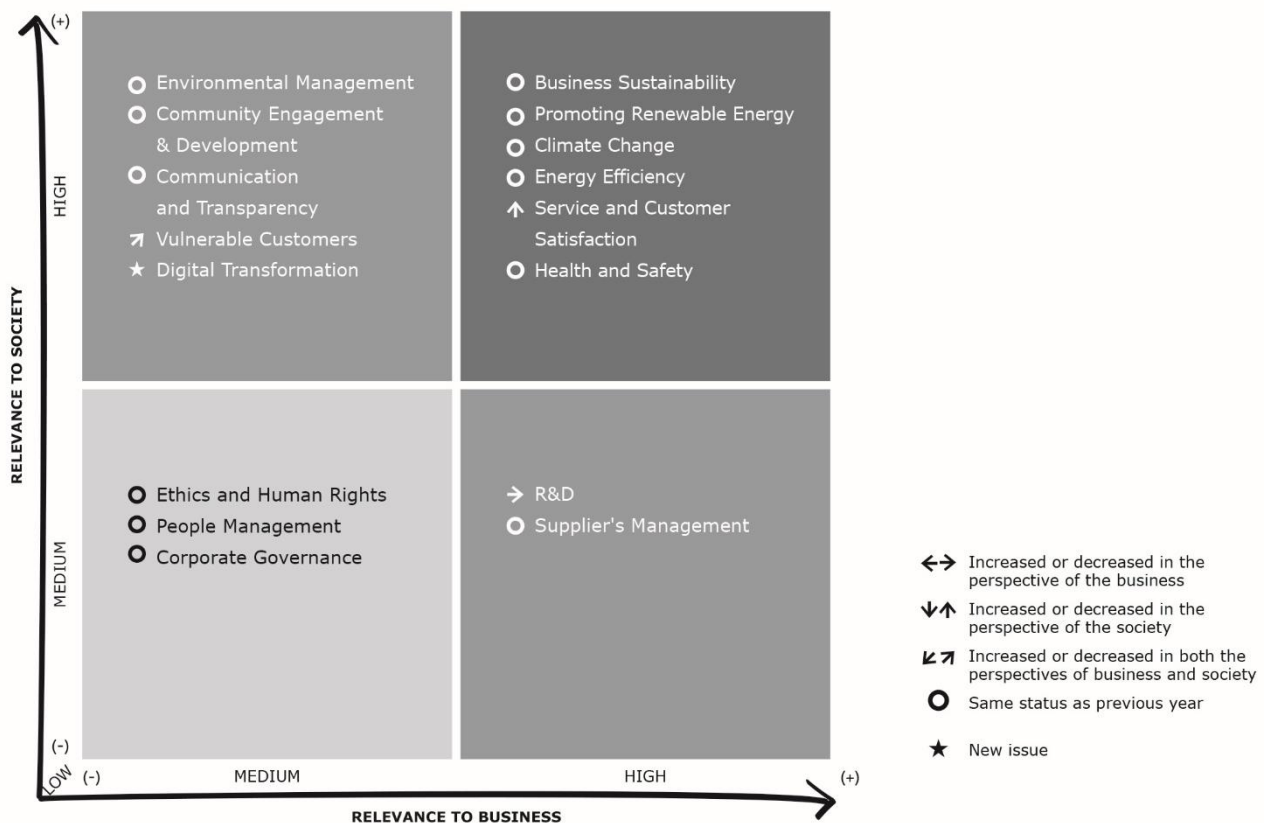


# MATERIALITY

The materiality analysis assesses and prioritises the relevance of an issue for EDP and its stakeholders, (www.edp.com> sustainability> social dimension> stakeholders), in order to support the organisation's decision-making and strategy development process. From this process, the material themes for EDP are obtained, which are the ones able to affect the value creation for the company in the short, medium and long term, and at the same time, are recognized as being important for the different EDP's stakeholders.

The EDP Group's materiality process involves an in-depth review accompanying the company's Business Plan, and it has also an annual review, where the themes of the Group's different companies are revisited and adjusted according to a common methodology, which can be consulted in greater detail at www.edp.com> sustainability> publications> reports> Sustainability Management Approach.

In 2017, as a result of the analysis conducted, 16 material themes were identified for the Group, which have developed in relation to the previous year according to the matrix below:



From the Materiality analysis, produced by the main Group companies in 2017, the following may be highlighted:

- Customer Satisfaction and Service, which is increasingly important for society, has acquired an important position as a critical issue, fundamentally due to the increase in relevance of the issue of energy prices;
- Innovation and Research which relevance increases for business with the themes of smart grids and electric mobility;
- Vulnerable Customers increases for both society and business, including social tariff issues, energy poverty and access to energy;
- Digital Transformation emerges as a new theme in the Group's headquarters, taking on greater relevance both for society and business.

# **01 CORPORATE GOVERNANCE**

The company's governance values integrity, transparency, honesty, and leadership and example capacity, based on components such as strategy, culture, risk control and growth. As a result of the materiality assessment process, three specific key aspects were identified by our stakeholders:

1. Operation of corporate bodies, based on corporate governance pillars of independence and separation of powers and diversity.
2. Risk management and control and audit system.
3. Performance evaluation and remunerations.

## **OPERATION OF CORPORATE BODIES BASED ON THE COMPANY GOVERNANCE PILLARS OF INDEPENDENCE, DIVISION OF COMPETENCES AND DIVERSITY**

EDP's articles and internal regulations contain rules regarding independence and compliance with the best governance practices applicable to listed companies, in particular the CMVM's Corporate Governance Code of 2013.

EDP has established a procedure for checking compliance with the independence requirements for members of the General and Supervisory Board, namely the independence requirements for election as an independent member of the General and Supervisory Board (Internal Regulation of the General and Supervisory Board, Art. 6 and 7, see also the definition of independence on page 41 of this report). At the beginning of each year, Members of the General and Supervisory Board must renew their declarations that they are not ineligible due to incompatibilities and, if necessary, provide evidence of the independence requirements (Article 7, Internal Regulations of the General and Supervisory Board). The main normative sources are Art. 414 (5) of the Commercial Companies Code, Art. 9 of the EDP Articles of Association and the identification in the company's governance report of the members of the General and Supervisory Board and their declarations of incompatibilities / independence that can be viewed on the EDP website ([www.edp.com](http://www.edp.com)).

With the appropriate adaptations, this procedure applies to the members of the Executive Board of Directors, and each of these corporate bodies must judge, at all times, the independence of their members and expressly justify any divergence from the recommendations that EDP must uphold.

EDP's Selection Policy for the members of the General and Supervisory Board and Executive Board of Directors ensures diversity in the membership of the corporate bodies. In the selection process, EDP must ensure the representation of a range of skills, professional experience, diversity of knowledge, gender and culture, in accordance with the specifics of the company's business. In addition to this set of guidelines, EDP has signed a Protocol to promote diversity and equal opportunities. This is in line with the new law which determines that the underrepresented gender must not be lesser than 20% in the management and auditing bodies, beginning on the first elective general meeting after January 1st 2018 and 33.3% in 2020.

## **RISK MANAGEMENT AND CONTROL AND AUDIT SYSTEM**

EDP has internal risk control and management systems designed in accordance with the CMVM's (Portuguese Securities Market Commission) Corporate Governance Code recommendation. Under the internal regulations, the General and Supervisory Board is the body responsible for oversight (adequacy and effectiveness), in particular through the Financial Matters / Audit Committee. In turn, the Executive Board of Directors makes proposals to the General and Supervisory Board for setting the Company's strategic risk-taking objectives, particularly in the context of assessing the Company's business plan. It also makes a continuous effort to improve the internal risk control and management systems and reports regularly to the General and Supervisory Board (and to the Financial Matters / Audit Committee) on the identification and evolution of the main risks associated with EDP's activity, with probability - impact quantifications for the risks considered significant.



## **PERFORMANCE EVALUATION AND REMUNERATIONS**

The remuneration of EDP's corporate bodies is in line with all the recommendations of the CMVM's Corporate Governance Code (see page 155 of EDP's Annual Report). The policy for remuneration of the members of the corporate bodies (except for the members of the Executive Board of Directors) is set by the Remuneration Committee elected by the General Meeting and annually submitted to this body for appraisal.

The policy for remuneration of the members of the Executive Board of Directors is set by the Remuneration Committee of the General and Supervisory Board and is also submitted to the General Meeting for appraisal. The policy for remuneration is designed so as to promote the alignment of their interests with those of EDP, by taking account of the functions performed by each member and the economic situation of the company. The criteria for determining remuneration favour mechanisms that allow remunerations to be linked to the evaluation of the individual performance of each member.

## **OPERATION OF CORPORATE BODIES**

In accordance with EDP's governance model, the separation of management and supervisory functions is implemented in the existence of an Executive Board of Directors, in charge of the management of social affairs, and of a General and Supervisory Board, the highest body responsible for the supervisory remit.

EDP therefore has a Chairman of the General and Supervisory Board, who coordinates the activities of the Board within the scope of the powers of the corresponding corporate body. The Chair of the Executive Board of Directors (CEO) coordinates the activities of this body within his competences.

The representation of these bodies is guaranteed by their presidents.

Eleven out of the twenty-one General and Supervisory Board members have the independent status, in accordance with the provisions of the Portuguese Companies Act.

At the beginning of the mandate, the members of the General and Supervisory Board declared their full compliance with the independence requirements established in article 9 of EDP's Articles.

## **RISK MANAGEMENT AND CONTROL AND INTERNAL AUDIT SYSTEM.**

Effective risk management is vital for long-term financial planning and organizational flexibility. EDP has a comprehensive risk management system based on the best international practices, namely the COSO methodology. This model evaluates any existing gaps or constant external and internal variations, identifies standards to be designed and controls to be implemented. In order to supervise the implementation of the approved regulations, the Internal Audit draws up annual plans, based on its evaluation of execution risks.

The quality of the Internal Audit activity has been evaluated by the "Institute of Internal Auditors", since 2010, thus ensuring that the work is performed in a proficient, thorough manner, with the appropriate skills and in accordance with the international standards of Internal Audit professionals.

## **PERFORMANCE EVALUATION AND REMUNERATIONS**

The policy for remuneration of the members of the corporate bodies (except for the members of the Executive Board of Directors) consists of a single fixed component.

The remuneration of the members of the Executive Board of Directors includes two components: fixed pay and variable pay.

**SUSTAINABILITY REPORT  
EDP 2017**

The variable pay is subdivided into annual variable, which can only reach 80% of the fixed pay, and variable multi-annual pay, which may reach 120% of the fixed pay. The variable multi-annual pay is only remunerated if the previously defined goals have been reached and has a three year delay relative to the corresponding fiscal year, and shall only be paid if no intentional unlawful acts that jeopardize the sustainability of the Company performance come to light following the evaluation, and are perpetrated following the calculation and approval of the bonus by the Remuneration Committee.

More detail is disclosed on pages 155 of EDP's Annual Report of 2017.



## **EVALUATION AND PERFORMANCE OF EBD MEMBERS**

General and Supervisory Board, its Specialist Committees and the Executive Board of Directors.

Since 2009, the self-assessment process provided for in Article 17, number 2 of the Internal Procedures of the General and Supervisory Board, is based on a questionnaire that is individually and confidentially completed, and which seeks to assess the personal perception of each Member of the General and Supervisory Board regarding Board activities, its Specialist Committees and the Executive Board of Directors, namely at the level of:

- Membership, organization and operation
- Activity undertaken during the year in question
- Relationship with other EDP corporate bodies and other stakeholders
- Individual self-assessment

The purpose of this questionnaire is to constitute an objective support for the reflection of the General and Supervisory Board, with a view to the continuous improvement of performance, both in terms of its own functions and in the relationship with EDP stakeholders, in defence of Shareholder interests.

To this end, at the beginning of each year, the members of the General and Supervisory Board are invited to complete the aforementioned evaluation questionnaire. Based on the responses to the questionnaire, the General and Supervisory Board jointly reflects on this data to form its conclusions, which are then widely debated, and the opportunities for improvement to be implemented are identified.

With reference to 2017, this evaluation process (questionnaire content, format and conclusions) was analysed and certified by an external consultant.

The results of the evaluation process of the General and Supervisory Board, its Specialist Committees and the Executive Board of Directors may be consulted in the Annual Report of the General and Supervisory Board ([www.edp.com](http://www.edp.com)> sustainability> publications).



## 02 ETHICS AND HUMAN RIGHTS

EDP has adopted the principles and values enshrined in the Universal Declaration of Human Rights and also the International Labour Organisation Conventions, the United Nations Global Compact and the Guiding Principles for Business of the Human Rights Council - Ruggie Framework.

EDP's responsibility is not confined to the organisational limits of the Group, but it also spreads to our suppliers and service providers in the ethical performance management objectives, particularly with regard to compliance, the fight against corruption and the promotion of Human Rights, and within the broader framework of sustainable management of the EDP Group supply chain. In this context, a training and awareness programme was developed for EDP Group employees and employees of service providers acting on behalf of EDP. The programme covered the guiding principles of actions and commitments made in this area, expressed in the codes and sector policies, which, based on the EDP Code of Ethics, were developed or revised in 2017: Code of Conduct for Senior Management and Senior Financial Officers; EDP Supplier Code of Conduct; Code of Good Conduct for Preventing and Combating Harassment at Work; EDP Renováveis Anti-Corruption Policy and EDP Comercial Code of Conduct.

Integrity in procurement, customer and supplier relations, information management and security, the fight against corruption and bribery, and respect for Human Rights are important focus points of analysis, monitoring and management in the EDP Group. They are supported by a set of information sources, such as: consultancy and internal and external audit; complaints analysis; survey results; feedback gathered in training; multidisciplinary working groups.

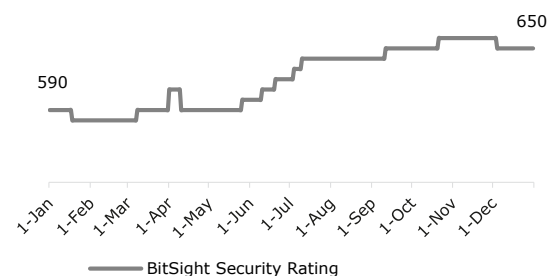
Due to the complexity of these issues a number of policies and procedures are under development, and additional checks on the existing Internal Financial Reporting Control System (SCIRF) will be implemented and monitored.

As one of its strategic objectives, EDP has established controlled risk, which in the scope of security and privacy entails recognizing and prioritizing the assets to be protected, as well as establishing strategies and plans to achieve those strategies. A strategy was developed, considering the recognition of the priority assets to be defended (critical infrastructures for the preservation of EDP's business, the defence of the societies and nations in which it operates), which is guided by the principle of holistic security (Security end-to-end) based on four main areas of action: Intelligence, the use of advanced technology to make security smarter and less intrusive (SOC EDP infrastructure - Security Operations Centre); Resilience, the ability of the Group to resist the occurrence of disruptive events (EDP has the Disaster Recovery solution); Compliance, the EDP Group is subject to various regulatory forces and intends to create confidence amongst its stakeholders; People, reflecting the recognition that the core of information security is the human element. The approach to information security is holistic and involves two dimensions: space, which recognizes the existence of operations in different geographies and networks (IT - Information Technology - and OT - Operational Technology, the networks and systems that manage critical infrastructures), and believes that security can never be addressed in isolation; time, since security should be thought at the level of the business units, when services and processes are envisaged, including the service providers that act in several phases of the value chain.

### INFORMATION SAFETY AND PRIVACY

EDP has a Computer Security Incident Response Team - CSIRT (EDP), which participates in national and international cybersecurity exercises, where it has the possibility to test its ability to react to the occurrence of disruptive events resulting from cyberattacks. In addition to teams dedicated to the response of security incidents, EDP has focused on the awareness and training of all employees. In this particular, we highlight the training in the defence of critical infrastructures carried out in CyberRange EDP (a unique infrastructure in Portugal for cybersecurity training) which,

**BITSIGHT SECURITY RATING (2017)**







in coordination with EDP University, carried out in 2017, 36 training sessions with 232 participations. In addition to the action resulting from external regulatory forces, such as the new General Data Protection Regulation (which requires the EDP Group to an additional focus on investments and operations in information security), EDP is guided by excellence terms of reference, with the obtainment of ISO 27001 certification in safety operations in its final phase. Regarding security risk communication, EDP adopted a metric based on BitSight Security Rating. The adopted rating, defined as the Group's KPI for this area, monitors EDP Group's behaviour in the cyberspace, specifically checking aspects such as the security of its public sites, access from its networks to dangerous locations or the communication of machines infected by criminal nets. EDP Group set a target for 2017 to reach 640, having reached 650.

## **INCLUSION OF VULNERABLE GROUPS**

As part of EDP's commitments to Human and Employment rights ([www.edp.com](http://www.edp.com)> sustainability> social dimension> human rights), EDP applied to all its Business Units the Human and Labour Rights Monitoring Programme, encompassing companies, facilities, new projects, mergers and acquisitions, as well as operations with significant human rights impact potential.

The activities most exposed to possible impacts on Human and Labour Rights are those related to the construction of infrastructures that can have an impact on the placement of indigenous people and populations. This issue is particularly relevant in Brazil, where the São Manoel Hydropower Plant is near its conclusion. Monitoring plans are established for these facilities to proactively follow the guidelines of the National Indian Foundation (Funai), including and expressly respect for all aspects of human rights and the commitment to listen to local communities. The São Manoel hydro power plant is located in a region that covers an area of indirect influence with indigenous lands of the Kayabi, Munduruku and Apiaká ethnic groups. Adequate studies were requested and approved by Funai, in particular the Indigenous Component Study and the Basic Indigenous Environmental Plan (PBAI), prepared with the participation of indigenous peoples. Three PBAI were established, one for each ethnic group. Each plan contains 17 environmental programmes approved by Funai prior to the start of construction work on the São Manoel hydro plant. In the process of implementing the programmes, Management Councils were created, with representatives of EDP Brazil, Funai and each of the indigenous peoples covered, which made it possible to follow needs closely and to improve the actions and resources envisaged.

With the objective of ensuring that information reaches traditional communities in a clear and timely manner on the stages of construction and operation, communication is reinforced through the Indigenous Interaction and Social Communication Program, namely through the distribution of bulletins, advertising pieces and radio information.

The São Manoel Hydro Power Plant was the scene of demonstrations by indigenous people dissatisfied with government policies that seek through the occupation of projects of high national relevance, such as the São Manoel power station, to draw the attention of the press and the Government to a set of demands related to the demarcation and homologation of indigenous lands - however, in the cases mentioned, without specific claims against the São Manoel enterprise.

Recent experiences with indigenous groups enabled EDP to become aware of the actors involved and their demands, which will provide, with the support of the Federal Government, agreements enabling the installation of the Tapajós Complex hydro power plants.

## **DIVERSITY AND EQUAL OPPORTUNITIES**

Aligned with the Diversity Policy (page 151), in 2017, EDP sought to strengthen its position in the areas of diversity and inclusion, its Strategic Plan having been recognised in the Diversity Management category of the European Excellence Awards in HR. EDP developed an action plan with 20 initiatives and principles relevant to Diversity and Inclusion, which will be implemented in 2016 and end in 2018 when 80% of the measures will have been carried out.

In Portugal, projects such as Tagga o Teu Futuro (Tag Your Future) and Inspiring Career Camp have contributed to creating awareness amongst more than 4,500 young students in Portugal, conveying the message that regardless of gender, colour, race, physical condition or creed, nobody should give up their dreams for the future. At EDP, combining

our differences means winning in the future. The "Subconscious Bias" training was therefore set up for more than 500 managers and senior managers, who were awarded the Seal of Diversity from the Portuguese Charter for Diversity.

EDP Spain is officially committed to the fundamental principles of equal opportunities and anti-discrimination by signing up to the "Diversity Charter" ("Charter de la Diversidad"). EDP Renováveis has also participated with us in the "Women and Engineering" project, in which the company's engineers tutored engineering students over 4 months. This project, launched by the "Real Academia de Engenharia", intends to overcome the gender barrier existing in technical degrees, increasing awareness of the knowledge of the "real" world, from the earliest stages of education. EDP Brasil is one of the signatories of the WEPs (Women Empowerment Principles) - in partnership with UN Women. A highlight of 2017 was the diagnosis performed to identify opportunities for actions and improvements in the rate of women and inclusion of people with disabilities.

It should also be noted that the female presence in the organization remained stable in relation to the previous year, at 24%, as well as the total number of women in management positions, at 25%. In generational terms, in 2017 for the first time in the Group's history Generation Y surpassed other generations, becoming the most represented at 36% of the organization's workers. EDP's workforce already includes 41 different nationalities. EDP maintains a 2% inclusion target of people with special needs at the Group level.

## **CONCILIAR PROGRAMME**

EDP has a set of initiatives that aim to promote balance and conciliation between the various life plans of employees - professional, family and social - based on the Conciliation Programme. This is an international programme, present in Portugal, Spain and Brazil. In 2017, the Conciliation Programme, through its 18 initiatives, directly impacted more than 1,600 people. In articulation with the Volunteer Program of EDP, and as a conciliation measure, employees are entitled to 4 hours a month for participating in voluntary actions proposed by themselves and in addition to the projects promoted by the company.

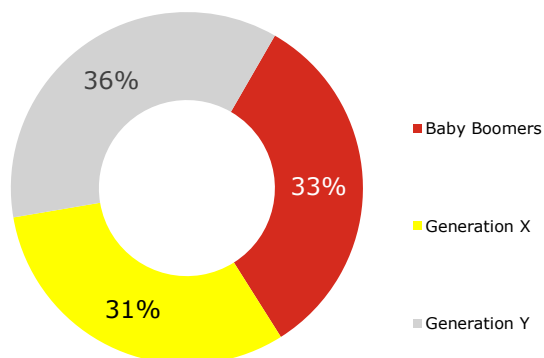
Of note is the Work Smarter project at EDP Renováveis. An initiative that aims to help employees better prepare their daily lives by increasing their productivity and promoting a better reconciliation of work with the other plans of their lives. At EDP Brasil, the "Employees" app was launched, a platform that allows employees to enjoy discounts at more than 11 thousand establishments. EDP Spain launched the "EDP es Conciliación" project, a set of free benefits and services available not only to employees, but also to their families, in order to facilitate their day-to-day life and solve problems such as assistance domicile in sickness situations, specialized treatments, administrative management, information and technology support, social assistance, among others.

## **CORRUPTION/BRIBERY/FRAUD/MONEY/LAUNDERING**

EDP has implemented a model for assessing and mitigating risks associated with illegal acts, which consists of analysing existing risks, identifying potential improvements, designing action plans and implementing and monitoring controls when necessary. These controls, particularly those that impact financial reporting, are reviewed and monitored by internal teams and are integrated in the Internal Financial Reporting Control System (SCIRF) of EDP Group.

Since 2010, SCIRF has been certified by the external auditor, currently supported by the COSO 2013 methodology.

### **EMPLOYEES DISTRIBUTION BY GENERATION**

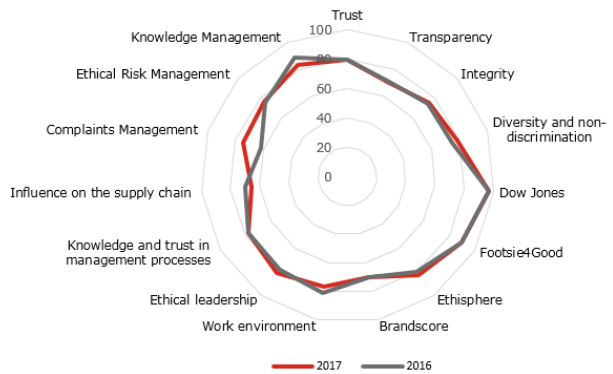




## ETHICAL CULTURE PROMOTION

The EDP Group's ethical culture promotion programme encompasses all Business Units, involving not only our employees and hierarchies, from their entry to the end of their professional career in the Group, but also the employees of our suppliers (page 61). It is aligned with business strategies, supported by global and sectoral training and awareness-raising activities, highlighting the fundamental role of hierarchies in promoting ethical culture within the Group. The effectiveness of this programme is measured annually and internally by the Ethicis index and, externally, by the Ethics Quotient of the Ethisphere Institute.

**ETHICIS - CORPORATE ETHICAL PERFORMANCE INDEX**



For more information consult the Annual Ethics Ombudsman Report on the EDP website ([www.edp.com](http://www.edp.com) > edp > about us > ethics).

## RESPONSIBLE POLITICAL INVOLVEMENT

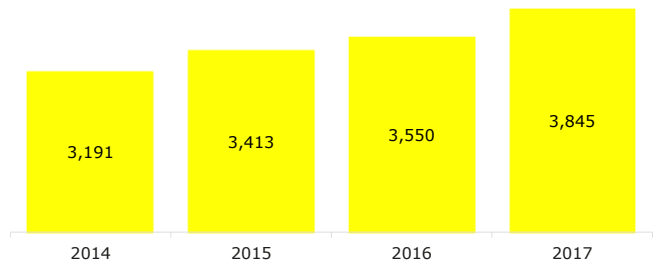
EDP develops contacts with policy makers in the energy value chain, both at national and at European level. EDP's position with these institutions is one of transparency and collaboration. The approach to institutions (national, European and international) is based on the principles of action stipulated in the company's internal provisions, in particular the principles of integrity and transparency set out in the Code of Ethics.

EDP is in the European Union Transparency Register, which consists of a database of interest groups whose aim is to raise awareness among decision-makers in European institutions on a number of topics, by appointing a representative for this purpose.

In 2017, the values of these activities represent charges of 3.8 million euros, relating to 139 sectoral and industrial associations in all geographical areas where EDP operates. Shares in the UNESA, American Wind Energy Association, ELECPOR, Instituto Acende Brasil and SC Partners represent approximately 43% of the charges for EDP's interest representation activities.

Although some of the legal regimes in countries where the EDP Group operates permit it, none of the Group companies made monetary or in-kind contributions to any political parties. The absence of such contributions by Group companies is consistent with the internal values enshrined in the EDP Group's Code of Ethics, under which "employees undertake not to make, on behalf of the company, monetary or other contributions to political parties". For its part, "EDP undertakes, where this is permitted by law, to allow the creation of properly regulated mechanisms for employee participation in political processes, which may include monetary contributions on a voluntary and personal basis".

**COSTS OF INTERESTS REPRESENTATION ACTIVITIES (k€)**



## **BUILDING THE EXTENDED COMPANY**

### **MORE THAN TEN THOUSAND EDP SERVICE PROVIDERS WILL RECEIVE TRAINING ON ETHICS**

#### **CONTEXT**

A company responsible for the impact of its activity cannot fall short of taking into account those caused in and by its supply chain. In this context, EDP has defined a Sustainable Supply Chain Management Policy which defines its risk management goals, among other things. Of particular importance are the risks of bad ethical practices in suppliers who act on behalf of, or work on the premises of the company and are seen by customers and the different stakeholders with whom they interact as part of the "extended company".

"The value generated by EDP Group is also largely determined by the performance of its suppliers. We are connected. Our success is also the success of all those we work with, directly or indirectly. We share risks that we must be able to identify and manage together."

António Martins da Costa, Member of the EBD

Once the ethics training for all Group employees had been completed in 2015, it was seen as fundamental to extend it to the supply chain, in order to promote behaviour in accordance with the ethical principles and commitments of the EDP Group; to reduce the risk of bad ethical practices, in particular those that may result in non-compliance or damage to the Group's reputation; and to publicise the Code of Ethics, the EDP Supplier Code of Conduct and EDP's ethical complaints channel.

#### **SOLUTION**

##### **A DIVERSIFIED, MOTIVATED INTERNAL TEAM**

Based on a coordinating core composed of the Ethics Ombudsman's Office, EDP University, the Sustainability Department and the Global Procurement Unit of EDP Valor, an internal team was set up involving the Business Units (BU) and the departments in charge of service agreements in priority areas, namely suppliers acting on behalf of EDP; suppliers working at EDP's facilities; and suppliers who have access to EDP's customer and/or business data. During the process, about thirty people were invited to participate in the team.

The work carried out resulted in the identification of approximately 400 suppliers and 11,000 trainees.

Once the beneficiaries were identified, it was necessary to target the different types of activity undertaken by each of them, in order to determine the number of customised versions required, i.e. versions tailored to groups of trainees. This was a complex work: the activities could involve services as varied as cleaning; accounting; meter reading; sale of services; construction and maintenance of networks; and systems management. The training to be designed also had to consider the different types of service providers, from large enterprises to micro-enterprises and even individual entrepreneurs.

The starting point was the online training developed for EDP employees, reduced from 90 to 45 minutes, maintaining the structure of the first two modules: the importance of business ethics and how EDP ethics are managed, so that suppliers got to know not only the code of ethics, but also aspects related to the receipt and handling of complaints.

The main difference in terms of content lay in the third module - Acting ethically. In addition to a video message from the person responsible for the contracts concerned in each version, three practical cases were proposed, depicting everyday situations, with decision alternatives covered by the Code of Ethics. All the cases were presented in a "novella" format, with real photos and frames, to make them more realistic.



## **A STRONG SUPPLIER TURN-OUT**

In addition to the need for the involvement of the BUs in risk definition and content development, the diversity of activities and trainees' characteristics required a strong participation by suppliers in the process of co-design of educational content.

This involvement took place in 2016, at the EDPartners meeting, where the project was presented and the willingness of EDP to ensure this involvement was indicated, both in the design and validation of content, and in the definition of implementation dynamics.

This was followed by an initial invitation to top managers and training managers to a meeting where the project was presented in detail, as well as the content of the online training, which would be adapted for on-site training. In a second phase, work sessions were scheduled to identify areas of activity in detail; content to be adapted; practical cases; and the training implementation plan, in particular with regard to teacher training. In order to facilitate input, a pre-formatted form was sent to each company, which included, among other things, the identification of topics/cases that were representative of the most common ethical issues, with the greatest impact, in their area of activity.

This work resulted in the definition of 16 customised versions, two training formats (online and on-site), and the need to train teachers was identified, not only for suppliers, but also, in some cases, for EDP.

## **SUPPORTED IMPLEMENTATION**

While for the online version, made available on EDP's training platform CampusOnline it was sufficient to adapt the access and control mechanisms already in place, a much greater involvement of the providers was necessary for the on-site format, entailing several training sessions for trainers, where the need to adapt the mechanics to the target audience (number and literacy) was discussed in each session, and the training kit validated. For both formats, monitoring, evaluation and control mechanisms were established with the suppliers and Business Units involved.

Similar methodologies and mechanisms were defined for cases in which suppliers must ensure that their sub-contractors would be trained too.

"Although corporate ethics can be influenced by cultural aspects or by the organization itself, the truth is that it is highly dependent on the individual's behavior. That is why, it was with great surprise and satisfaction that we accepted the EDP Group's invitation to jointly adapt a course on business ethics, so present in the daily life of any company. Effective interaction with the entire supply chain has established the evidence of a real effort to create a collective link of progress. Together we grow better."

Rui Vieira, Manager of Cargomix - Transportes Lda.

## **RESULTS**

The project began in 2016, with the definition of its framework and architecture and the launch of the pilot. In 2017 all the customised versions were developed, all the trainers were trained, and the first versions were launched, covering 270 trainees in the online format and 550 in the on-site format, with a total training workload of approximately 1,000 hours. The extended implementation of the remaining versions and the start of their deployment to sub-contractors will take place in 2018.

We know that ethical risk in the supply chain is not eliminated through a training programme, even if, as is the case, it relies on the strong involvement of its beneficiaries. However, we can say that this is a fundamental project in the strengthening of ethical culture in the "Extended EDP", the most effective way to minimise the risks at stake. We also believe that the project contributes significantly to the strengthening of relations and increased trust with the suppliers involved.

## **ÉTICAEDP| SUPPLIERS IN FIGURES**

100 people involved (35 in-house and 65 from suppliers); 400 suppliers (17% already trained); 11,000 trainees; 100 trainers; 350 teacher training hours; 16 customised versions; 40 practical cases; €150.000 invested.

## 03 BUSINESS SUSTAINABILITY

Over the past years, EDP has integrated environmental and social issues in their business model and strategy by definition and deployment of corporate policies (page 151). Consistent with this approach of long-term value creation, EDP has a Corporate Governance model that meets the various stakeholders' expectations.

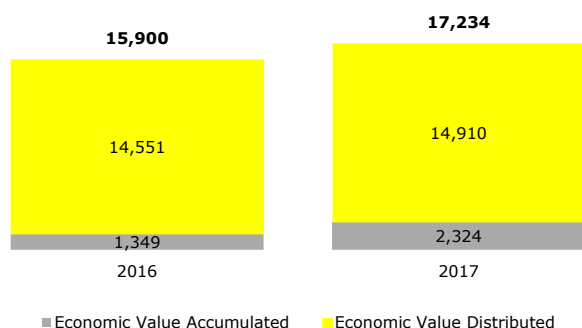
The EDP's strategy is sustained by the company's ability to balance growth with financial deleveraging and to focus on profitability and deliver attractive returns. The chapter on Strategy (page 39) in this report defines the targets for these goals of the strategic agenda (focused growth; financial deleveraging; keep low risk profile; reinforce efficiency and attractive returns).

EDP's commitment to focused growth represents an expected increase in EBITDA of about 3% per year by 2020. EBITDA amounted to 3,990 thousand Euros in 2017, up 6% on 2016. This EBITDA adjusted for non-recurrent gains, such as the sale of hydropower plants in Brazil in 2016 and the sale of the gas distribution business in Spain in 2017, fell by 5% as against 2016. This was driven by the scarce water availability in 2017, particularly when compared to a very wet 2016, and by the exclusion of the gas distribution business in Iberia from the consolidated accounts, as a result of its sale in 2017.

The financial deleveraging effort sought to reinforce the visibility of freeing cashflow on the medium term, through a strict control of investment, together with the asset rotation policy adopted by EDP Renováveis and the partnership with CTG. This prudent financial management policy allows EDP to control the net debt/EBITDA ratio in order to accomplish the objective of ~3.0x by 2020. In 2017 this ratio stood at 3.3x, compared with the 4.2x of 2016, which shows the positive evolution of this ratio.

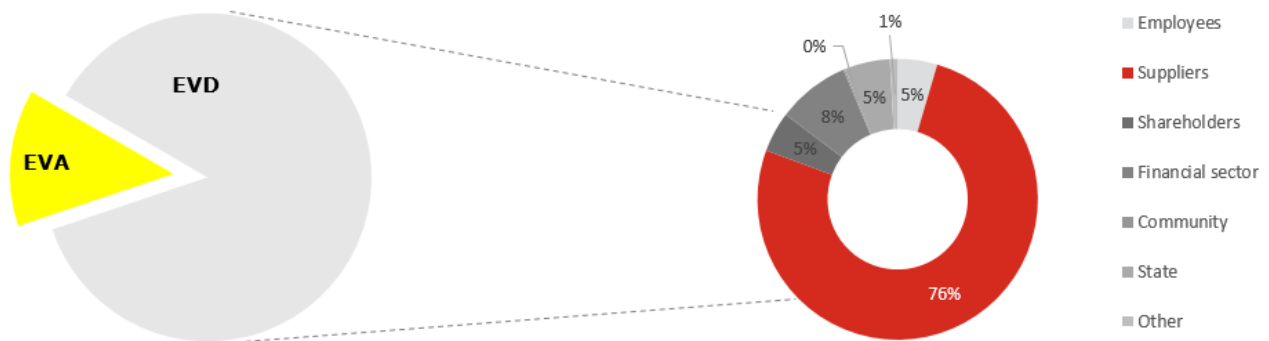
The maintenance of low risk profile that characterises EDP remains a priority pillar, particularly with regard to its differentiation as the best integrated and regulated European utility, and rests on a commitment to maintain the weight of its regulated activities at around 75% of total EBITDA by 2020. For this purpose, EDP will try to secure long-term energy sales contracts, as well as to diversify its business portfolio. In 2017, the EBITDA Regulated/LT Contracted was 84%, while that in 2016 was 86%. This year, EBITDA decreased mostly influenced by the sale of the gas distribution business in Portugal and Spain. Note that 91% of the operational investment in 2017 was focused to regulated or long-term contracted activities.

### ECONOMIC VALUE GENERATED (M€)



In 2017, the Economic Value Generated (EVG) reached 17,234 million Euros, which is comparable with 15,900 million Euros in 2016. This value includes turnover and other income. In 2017, 87% of the EVG was distributed in a total amount of 14,910 million Euros. The Economic Value Accumulated – EVA (difference between EVG and EVD – Economic Value Distributed) corresponds to the remaining 13% and includes retained earnings and non-payable costs.

In 2017, the Economic Value Generated is broken down as follows:



The objective of maintaining a position of leadership in terms of efficiency has been strengthened, supported by the development of a culture of continuous improvement based on programmes spread across the Group and the execution of a new cost reduction programme, OPEX IV. The goal of this programme is to achieve savings of 200 million Euros per year by 2020, and has been achieved in 2017 savings of 141 million Euros (+36 million Euros comparing with 2016).

In this context, EDP has been able to achieve consistent results based on its low risk profile, with net profits attributable to shareholders of 1,113 thousand Euros (up 16% from 2016). The EDP Group continues to present a resilient business model, with a strong performance, based on the delivery of its commitments, the quality of its assets, stable returns, sound risk management and market diversification. The net result was largely impacted by the gains from the sale of Naturgas. This result adjusted for the abovementioned non-recurrent effects decreased by 8%.

EDP pursues a sustained annual policy of dividend distribution which on the one hand, seeks to reconcile a strict compliance with relevant legal and statutory provisions, and on the other, sharing with its shareholders a significant portion of the value created by the Group, in line with the company's and the market's actual conditions. The pursuit of this policy aims at allowing shareholders to obtain an appropriate return on their investment without compromising the continued value of the company. As such, at the latest dividend distribution in May 2017, a dividend value of 0.19 Euros was assigned per share, which is in line with the provisions of the 2016-2020 activity plan.

There are numerous economic and financial factors that influence the EDP share price both positively and negatively, which are external to the company. However, EDP considers that, with its strategic options and a prudent management policy, it creates sustainability in its business activities and strengthens the trust its shareholders place in its business model.

| EDP Share price (Euronext Lisbon - €) | 2017  | 2016  | 2015  | 2014  |
|---------------------------------------|-------|-------|-------|-------|
| Closing share price                   | 2.885 | 2.894 | 3.321 | 3.218 |
| Highest share price                   | 3.030 | 3.267 | 3.731 | 3.748 |
| Average share price                   | 2.892 | 2.949 | 3.370 | 3.319 |
| Lowest share price                    | 2.860 | 2.568 | 2.975 | 2.210 |



## **WINDFLOAT**

Investing in innovative technologies is part of EDP's strategy to ensure growth options and the medium and long-term sustainability of business.

One of the company's most iconic projects is Windfloat. It was a worldwide pioneer project in testing the technical solutions for building wind farms offshore in deep ocean water (more than 40m deep), based in the oil and gas industry experience, which will be supporting multi-MW wind turbines in offshore applications.

The floating platform is semi-submersible and is anchored to the seabed. Its stability is due to the use of "water entrapment plates" on the bottom of the three pillars, associated with a static and dynamic ballast system. WindFloat adapts to any type of offshore wind turbine. It is built entirely onshore - including the installation of the turbine - thus avoiding the use of the scarce sea resources.

The first WindFloat unit was tested in Portugal, off the Póvoa do Varzim (Aguçadoura) coast, and proved the technical viability of the adopted solutions.

This unit operated for more than 5 years, produced more than 17 GWh and survived waves of 17m high. In its first operation year it generated enough energy to supply 1,300 households.

After successfully reaching the end of the first phase of its life cycle, WindFloat was decommissioned with a reduced environmental impact.

Presently, EDP Renováveis is developing two pre-commercial farms using the WindFloat technology:

- WindFloat Atlantic, to be installed in Viana do Castelo, Portugal, which will be the first wind power floating plant using this technology at a world scale, with a 25 MW capacity, and
- "Les éoliennes flottantes du golfe du Lion" Project, with 24 MW, to be installed in France, in the Mediterranean Sea.

These projects will demonstrate the low risk profile and the economic competitiveness of this technology in the different markets, preparing the way for future commercial size offshore windfarms.

The offshore floating wind power should reach an energy production cost, competitive with the other renewable technologies, before 2025.

The offshore floating wind power market is estimated to be able to reach around 10 GW along the next decade.



## **04 COMMUNICATION AND TRANSPARENCY**

The rights of customers and the obligations of the EDP Group's subsidiaries relating to electricity and gas supply are for the most part covered by national legislation or regulations of the Energy Services Regulatory Authorities. EDP is a signatory of the APAN (Portuguese Advertisers Association) Commitment Charter on responsible marketing communication ([www.apan.pt](http://www.apan.pt)> *comunicação responsável*> *carta de compromissos*).

EDP is also associated with APPM (Portuguese Association of Marketing Professionals) which has a Code of Conduct for Marketing Professionals aimed at promoting and maintaining high professional integrity standards: [www.appm.pt](http://www.appm.pt)> *associados*> *código de conduta*. EDP is also a member of APCE (Portuguese Association of Corporate Communication) which has a "Code of Conduct for Institutional Communication and Public Relations Managers", which is a framework for good practice and ethical conduct.

Information from the EDP Group is managed in a way that ensures its credibility vis-à-vis its clients and other stakeholders, namely through compliance with current legislation and regulations in the geographies in which it operates and a commitment to personal data confidentiality, protection and legitimacy. These commitments are reflected in the EDP Group's Code of Ethics and in the Codes of Conduct of its companies, in the Information Security Policy and the EDP Group's Principles and Policies on Data Governance ([www.edp.com](http://www.edp.com)> *edp*> *about us*> *principles and policies*).

To ensure coherence in customer service across all channels, EDP has a training policy in place that covers more than 3,000 service providers which are in daily contact with customers, developing specific client-focused topics, skills and effectiveness. It also provides an internal communication tool ([kwiki.edp.pt](http://kwiki.edp.pt)) which enables processes, procedures, alerts and forms of operation to be communicated transversally in order to ensure homogeneity and consistency.

### **FISCAL MISSION**

The EDP Group considers that it is an ethical and civic duty to share in the financing of the general functions of the States in which it operates, through the payment of taxes, contributions and other payable levies, contributing to the citizens' well-being, the sustainable development of the Group's local business and the creation of value for shareholders.

According its mission and tax policy EDP Group is committed to ensure full compliance with the tax obligations provided in the respective legislation and resulting from the economic and social activities of the EDP Group in each country, through taxes, contributions and other payable levies, in faithful compliance with the spirit and letter of the law. This mission and tax policy are publicised on the EDP website ([www.edp.com](http://www.edp.com)> *edp*> *about us*> *principles and policies*> *edp group fiscal policy*) and mentioned in the EDP Group's Reports and Accounts. This shows that EDP Group is ruled by transparency in what concerns the adoption of Fiscal Policy.

In what concerns transfer prices, the Group's policy is to abide by the international rules, guidelines and best practice applicable in the various geographies where the Group operates.

The EDP Group's Executive Board of Directors is called to the decision-making process for higher tax impact operations, ensuring that these contribute to creating long-term value for shareholders.

The Group has a risk management policy in place whose objective is to identify, quantify, manage, monitor and mitigate, among others, tax risks, namely the risk of assessment of tax contingencies.

Specifically, EDP has a Financial Matters Committee/Audit Committee, whose main mission, upon delegation by the General and Supervisory Board, includes the permanent monitoring and supervision of any matters related to the internal control system over financial information and the risk management process, particularly in its fiscal aspects.

At corporate level, in liaison with the various Business Units and, whenever necessary, with competent external advisors, the company regularly undertakes identification and quantitative assessment exercises of its main fiscal risks, and carefully monitors the development of any external events with a potential material impact on the Group.

## **COMMUNICATION, RESPONSIBLE MARKETING AND TRANSPARENCY**

The Specific Compliance Programme was approved in April 2017, to avoid any compromise on compliance by the EDP Group companies in Portugal with the legal requirements on competition. This programme's overall objective is to ensure that contracts signed by EDP comply with competition rules. A similar prevention and mitigation approach on practices that restrict competition will be extended to the other geographies during 2018, without prejudice to the codes and manuals already applied.

In the first semester of 2017, EDP and its subsidiary EDP Comercial were notified by the Competition Authority (AdC) of an enforceable judgement under a legal action related to competition restrictive practices, which resulted in EDP being ordered to pay a fine of 2.9 million Euros, and EDP Comercial a fine of 25.8 million Euros.

AdC's decision concerned a number of aspects of the EDP Continente Plan, entered into with Modelo Continente Hipermercados, which was in force for a limited period of time in 2012, with significant benefits for consumers.

These notifications came as a surprise to the companies concerned which, right from the start of the Plan, informed AdC about the agreement and have always been guided in their work by a strict compliance with the law. Indeed, the EDP Continente Plan even contributed to boosting competition in the energy market (as ERSE acknowledged) since it translated into actual discounts for consumers and was followed by other similar initiatives by other operators. In this context, EDP SA and EDP Comercial appealed against AdC's enforceable judgement in June 2017.

## **FISCAL TRANSPARENCY**

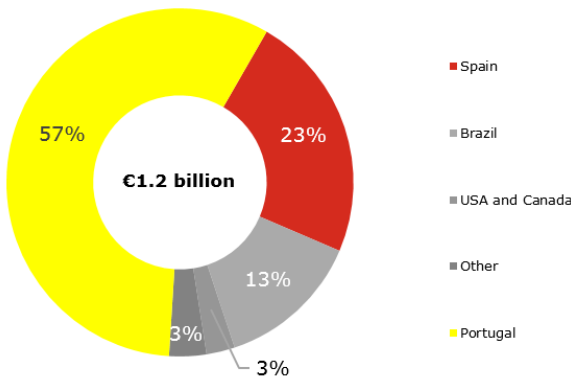
EDP Group describes in its Reports and Accounts the main characteristics of the tax systems applicable in the countries where it operates, such as nominal income tax rates, the legal framework for tax losses/benefits, the policy on transfer prices and the most relevant legislative changes applicable. The information publicly disclosed on this matter also includes an analysis of the reconciliation between the nominal and the actual tax rate applicable to the EDP Group. [\[DP1\]](#)

| <b>NOMINAL INCOME TAX RATES APPLICABLE IN THE COUNTRIES WHERE EDP GROUP OPERATES</b> |           |
|--|-----------|
| <b>Europe</b>  |           |
| Portugal   | 21%-29.5% |
| Spain  | 25%-28%   |
| Netherlands  | 25%       |
| <b>America</b>   |           |
| Brazil   | 34%       |
| United States of America   | 38.20%    |

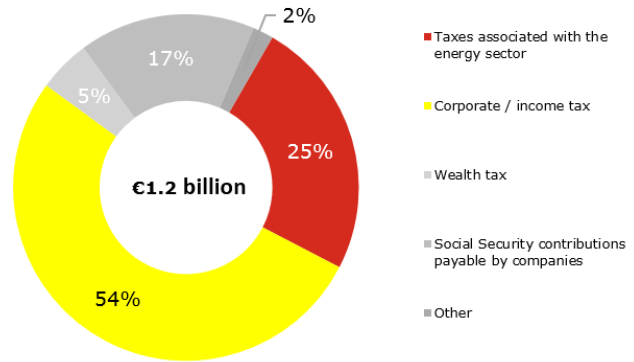
Source: EDP Group 2017 Annual Report

In 2017, EDP Group’s contribution to the public revenues of the various countries where it is present amounted to nearly 4.2 billion Euros, of which 1.2 billion Euros corresponded to levies and contributions bear by EDP Group, and 3.1 billion Euros to levies and contributions supplied to the State on behalf of other economic agents, as follows:

**TAXES INCURRED BY THE EDP GROUP BY GEOGRAPHY**



**TAXES INCURRED BY THE EDP GROUP BY TYPE OF CONTRIBUTION**

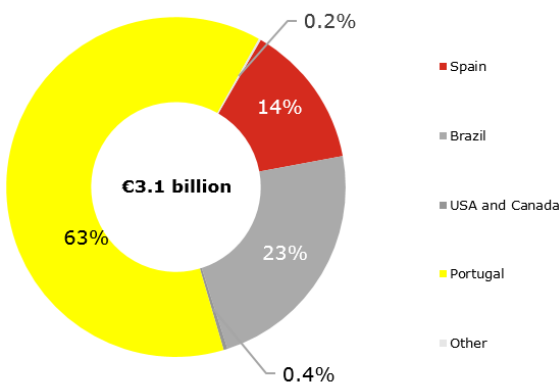


The 57% of taxes paid by the EDP Group in Portugal include 481 million Euros in corporate/income tax, 84 million Euros in social security contributions payable by companies, 61 million Euros in social tariffs and 37 million Euros in other types of taxes.

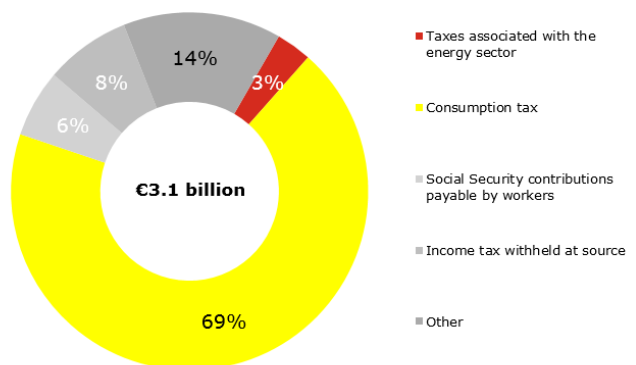
As regards the Extraordinary Contribution to the Energy Sector (CESE) specifically - an extraordinary contribution levied on a group of entities which are part of the Portuguese energy sector, created in 2014, which has been successively extended to this day, it should be noted that in 2017, EDP:

- Challenged legally the payment of the CESE for 2014, 2015, 2016 and 2017, amounting to 250,8 million Euros, on the ground of its unconstitutionality and illegality;
- Contrary to the procedure adopted by EDP in 2014, 2015 and 2016 for the payment of CESE, the company did not pay CESE 2017, once that contrary to the law, it was not being channelled to the sector.

**TAXES COLLECTED BY EDP GROUP AND SUPPLIED TO THE STATE (COST OF OTHER OPERATORS) BY GEOGRAPHY**



**TAXES COLLECTED BY EDP GROUP AND SUPPLIED TO THE STATE (COST OF OTHER OPERATORS) BY TYPE OF CONTRIBUTION**





## ENERGY PRICING

EDP included on its website ([www.edp.pt/particulares/apoio-ao-cliente/composicao-dos-precos-de-electricidade](http://www.edp.pt/particulares/apoio-ao-cliente/composicao-dos-precos-de-electricidade)) and on youtube ([www.youtube.com/watch?v=N58v7421sKY](https://www.youtube.com/watch?v=N58v7421sKY)) information that helps clients understand better how electricity prices are formed, an important topic to improve transparency and to create a trusting relationship with consumers.

The price of electricity is composed of three items:

- Energy - includes electricity production and marketing costs and arises from market-formed prices
- Network access tariffs:
  - Includes the cost of the networks required for electricity transportation and distribution from producers to the consumption site
  - Includes General Economic Interest Costs (CIEG)
- Fees and taxes include VAT, audio-visual fee and electrical energy facilities operating tax on behalf of the Directorate General of Energy and Geology.



### EXAMPLE FOR THE ELECTRICITY SECTOR (WITHOUT FEES AND TAXES)

| STRUCTURE OF REGULATED TARIFF      | DESCRIPTION  | APPLICABILITY                 |
|------------------------------------|--|-------------------------------|
| Energy                             | Energy purchase costs for clients in the regulated market.   | Regulated Market              |
| Sales/Marketing Transport          | EDPSU marketing costs.   | Regulated Market              |
| Distribution                       | Costs of transport and remuneration of the REN asset base.   | Regulated Market, Free Market |
| CIEG and other energy policy costs | Costs of distribution and remuneration of the EDPD asset base.   | Regulated Market, Free Market |
|                                    | Extra cost of special regime production. Costs related to guarantee of supply. Amortisation of tariff deficits. Autonomous regions convergence costs. Other costs. | Regulated Market, Free Market |

BTN 2017 Tariff

Regulated Market    Free Market

# **05 RESEARCH, DEVELOPMENT AND INNOVATION**

**65 M€**

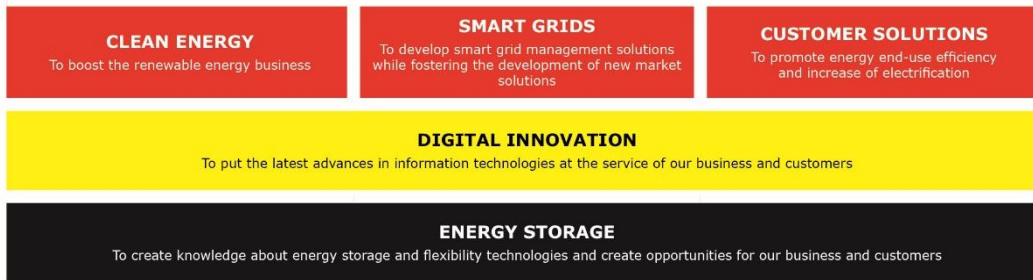
investment in RDI in 2017

The energy sector is undergoing profound change, and innovation is one of the key tools for sustained growth, which is why it is such a priority for both EDP and its stakeholders. Indeed, innovation ensures a more competitive market position, improved customer experience and significant cost savings.

EDP's main objective is to promote a value-creating innovation for the EDP Group, through new technologies, products, services or business models, in order to gain competitive advantages for the Group. The practical implementation of this objective also contributes to an image of EDP as a company at the forefront of the development and implementation of innovative solutions

## **STRATEGIC FRAMEWORK**

Research, Development and Innovation (RDI) activity is structured around a strategy based on five main action lines, which aim to reinforce the Group's business strategy throughout the value chain.



In 2015, EDP made a commitment to invest 200 million Euros in RDI by 2020 (cumulative from 2015), in clean energy generation technologies, energy efficiency and smart grids. In 2017, EDP was involved in more than a hundred RDI projects, a total investment of 65 million Euros. These projects include the regulatory required initiatives developed in Brazil by production and distribution companies (0.4% and 0.2% of net operating revenue, respectively), amounting to R\$ 23 million. With the 2017 result, total EDP Group investment since 2015 has reached 137 million Euros.

## **IMPLEMENTATION**

RDI activity is an important source of competitive advantage for EDP and in order to maximize its impact, the balance between equity finance and competitive public financing is essential. The Horizon 2020 Programme (H2020) is one of the main R&D project funding programmes used by the Group. The partnerships established in this area reinforce EDP's relationship with Scientific-Technological Research Organizations, Research Centres and Incubators and assign it a leading technological role in areas such as renewable energies, energy storage or the grids of the future.

**20 H2020 Projects in 2017**

**200+ Reference partners**





In 2017, the following ongoing projects were of note:

- Floating Photovoltaic (page 73): pioneering project in Portugal for a floating photovoltaic solar power plant, installed in the reservoir of the river Rabagão. With 840 solar panels occupying an area of 2,500 m<sup>2</sup>, the plant has an installed capacity of approximately 220 kWp and estimated annual output of around 300 MWh.
- DOMINOES: H2020 project aiming at the creation of a platform for demand response services in the distribution network through the use of local energy markets. This project foresees the participation of prosumers in these markets, providing flexibility for the network operator or as a source of other market services, including the ability to trade energy between them with possible use of Blockchain technology.
- Distributed Generation with Storage: a project carried out jointly with the Federal University of Santa Catarina (UFSC), for the use of distributed urban generation with decentralized photovoltaic solar systems and short-term storage. The initiative also evaluates auxiliary services for grid stability and impacts, as well as enabling new business models through distributed solar generation.
- Storage: in Spain EDP has a test bench of energy storage technologies, where it performs tests of an innovative redox flow battery. This work is part of a portfolio of projects involving different EDP Group storage technologies;
- STOCARE: demonstration pilot project, in Romania, to define and specify a storage system with a battery connected to the grid, incorporated in a wind farm. The project identifies critical aspects related to real-time system maintenance operations and evaluates the technical capacities for increasing the flexibility of the plant's operations.

## **OPEN INNOVATION**

It is strategic for the Group to strengthen its position in open innovation through collaboration with innovation-driven stakeholders: universities, R&D centres, incubators, accelerators, start-ups, innovation competitions, among others, to enhance the company's presence in leading global innovation hotspots.

It should also be mentioned that one of the main focuses of EDP Inovação's activity in Portugal has been the support for startups, which has proved critical for the development and introduction of innovative technologies in EDP's different business divisions. EDP Starter's incubation programme and the various acceleration programmes and sourcing initiatives developed over the years have been fundamental. 2017 was also marked by the presence of EDP in the Web Summit and by the foundation, together with 8 international utilities, of the Free Electrons acceleration program. All this effort for seeking opportunities culminates with EDP Ventures, a venture capital fund that will invest around 25 million Euros in clean tech projects.

## **PHOTOVOLTAIC SOLAR FLOATING PRODUCTION COMBINED WITH HYDROPOWER**

### **PILOT INSTALLATION IN ALTO RABAGÃO RESERVOIR CONFIRMS POTENTIAL**

#### **EXECUTIVE SUMMARY**

Recognizing the potential of photovoltaic solar energy in the framework of the present and future development of electricity production, as well as the possible synergy and complementarity with the hydropower route, EDP Produção, in partnership with EDP Renováveis and EDP Comercial, has carried out the installation of a floating pilot photovoltaic conversion unit at the Alto do Rabagão reservoir. Comprising 840 photovoltaic panels, it has an overall peak power of 220 kW (maximum), with an expected annual electricity production in the order of 300 MWh, equivalent to the typical annual consumption of 80 households. The energy produced by this pilot plant is transferred to the electricity grid through the substation of the neighbouring hydro power plant and its interconnection line. It does therefore not require an interconnection with the network itself, with the respective costs and technical restrictions, sharing an infrastructure that is essentially underutilized due to the inherent limitation of the water resource.

#### **CONTEXT**

The Production of electricity centralized in conventional conversion facilities from water resources and fossil fuel sources, such as coal and natural gas, still prevails today both at an international level and in the specific national context. But the sources of a renewable and emission-free nature, namely wind and more recently solar, display a growth that fuels the expectation that they will replace the previous sources. Solar photovoltaic technology, whose prices have fallen dramatically, implies, in a centralized way, a significant occupation of areas of land that compete with other alternative uses. Thus, the water surfaces associated with storage solutions and management of water resources have emerged as candidates to accommodate solar energy production. With the development of these technologies, there have been frequent cases of floating solar facilities in small reservoirs that are not related to energy use. More recently, some research and development projects have also started to be reported, including hydropower dams, aiming to take advantage of energy and even environmental synergies, particularly in warm countries such as Brazil.

#### **SOLUTION**

The pilot installation of floating photovoltaic solar technology, promoted and managed by EDP Produção in Alto Rabagão reservoir, comprises 840 solar panels that occupy an area of 2,500 m<sup>2</sup>. Its installed capacity is approximately 220kWp and estimated annual output around 300 MWh, the result of a partnership between EDP Produção, EDP Renováveis and EDP Comercial. It aims to obtain a practical knowledge of the potential and limits of the technical solutions suitable for this use. The Alto Rabagão reservoir was chosen because of its adverse weather conditions and dimensions, which allowed the technology to be tested under extreme conditions. These have posed some pioneering challenges for floating support such as seasonal level variation, depth and nature of the anchoring terrain, and storm-associated waves. The mooring and anchoring solution at the bottom required particular attention and led to pioneering solutions, which proved to be effective although with the potential for economic optimization.

#### **RESULTS**

The results obtained in the first year of operation and monitoring of Alto Rabagão's floating photovoltaic solar plant exceeded expectations, with a net production of 5% higher than the expected amount, representing an increase of 15GWh. They benefited from a particularly favourable weather year for solar production, but also from the fact that the panels on the floating platform were more efficient, compared to those installed on land in the vicinity of the first ones. This advantage is explained by the lower temperature of the panels on the reservoir surface. The reliability of the facility has been high, allowing a reduced and inexpensive maintenance activity to be planned for in a more commercial-sized plant.

**IMPACTS:**

The floating platform deployment of photovoltaic conversion for centralized electricity production represents an increased use of land occupation entailed by hydropower operation. At the same time, it exempts a specific field occupation for this solar energy, which would normally compete with alternative uses. In addition to this significant and favourable impact, the floating solar platform may have a similar favourable impact on the water resource itself, reducing the effect of solar radiation on algae growth and the loss of water by evaporation into the atmosphere, which both occur more intensely in warm climates. The sharing of electricity infrastructures from the hydropower station for the discharge of solar energy to the grid is another favourable effect, not only for the economy but also for the technical ease of licensing and deployment. The analysis of the actual hydropower production profiles showed that the combination with solar energy in an appreciable size does not interfere with or hamper the former. For a higher solar production, it will even be possible to combine it with the hydropower form in order to minimize possible meteorological disturbances in solar production, giving dispatchability to the combined production, even more so if a pumping capacity is available.

**LOOKING FORWARD**

The potential for future use of the synergy and complementarity between hydropower and floating photovoltaic solar energy is confirmed by the assessment provided by the pilot installation at Alto de Rabagão. In order for the floating solution to be consolidated and assert itself with effective sustainability, it is, however, indispensable to approximate the costs of electricity in the floating solution to those of the conventional solution on land. The primary factor in this approach is the cost of the floating platform that supports the panels. Secondly, there is the mooring solution: although less important in economic terms, it has a non-negligible potential in that approach. Optimizing the efficiency of photovoltaic panels via cooling may also open some channel of exploration.

EDP Produção maintains its research activity with university research bodies in these three areas, which anticipates some significant progress with the aim of conferring viability to the floating solution of photovoltaic solar power plants



## **06 DIGITAL TRANSFORMATION**

The technological paradigm shift has completely altered consumer perceptions. Today, customers' experiences with companies that are major global technology players (e.g. Google, Amazon, Facebook, Apple) or purely digital entities (e.g. Netflix, Spotify, Uber, Airbnb) have an enormous influence on consumer expectations in other economic areas.

The EDP Group has already started its cross-cutting digitization strategy. Examples of the strategy include the following:

**SIAD-AERO (BRAZIL):** autonomous cooperative system for planning and execution of power asset inspection, able to capture and process images in the visible, infrared and ultraviolet bands, for automatic identification of anomalies through the combined and optimal use of unmanned aerial platforms. The project involves the development of two Drones (Fixed Wing and Mobile Wing) and of all the systems required for flight planning and processing and analysis of the collected information.

**X.FIT - FUTURE, INNOVATION, TRANSFORMATION (PORTUGAL):** during 2017 the foundations were laid for the creation of a Monitoring and Diagnosis Centre for conventional generation assets in Iberia, through a pilot based on GE's PREDIX tool. This initiative will provide for more efficient management of energy generation assets, to optimize their operation and redefine the maintenance strategy based on predictive analytics and artificial intelligence.

**SIT (SEVERAL COUNTRIES):** this project is based on the use of advanced statistical tools, supported by Machine Learning algorithms, for upstream detection of possible faults in critical components. The identified alarms are then converted into work orders for preventive interventions in the field. The scope of this technique has gradually been extended to cover all directly operated assets.

**LV SCADA (SPAIN):** aims to make the information collected via smart meters and sensors at processing stations available in the SCADA program, superimposed on the grid's geographical information system. The information will be used for substantial optimization of the distribution grid and for integration of resources distributed.

**INTERACTIVE DIGITAL INVOICE (PORTUGAL):** in 2017 the interactive invoice was launched. This is based on the new paper invoice, which fully reflects principles of clarity and transparency for the customer. It is an interactive PDF which the customer can use to obtain more detailed information about the various invoice items ([www.edp.pt/particulares](http://www.edp.pt/particulares)> [apoio ao cliente](http://www.edp.pt/apoio_ao_cliente)> [factura interactiva](http://www.edp.pt/factura_interactiva) edp).

**SMART HOMES SERVICES (PORTUGAL):** EDP provides smart homes solutions (solar power, electric mobility, batteries and [edp re:dy](http://www.edp.pt/re_dy)). See [www.edp.pt/particulares/energia](http://www.edp.pt/particulares/energia).

**DIGITAL INTERFACES FOR ENERGY CONTRACT (PORTUGAL):** in 2017, content was created to explain the price composition to customers and how they can query this information in detail on their invoices: see youtube ([www.youtube.com/watch?v=N58v7421sKY](https://www.youtube.com/watch?v=N58v7421sKY)) and in the EDP helpcentre ([www.edp.pt/particulares/apoio ao cliente/composição dos preços de electricidade](http://www.edp.pt/particulares/apoio_ao_cliente/composicao_dos_preços_de_electricidade)). See page 70.

**ROBOTIZATION OF INTERNAL PROCESSES (PORTUGAL AND BRAZIL):** EDP recently launched its move into robotics solutions for automating a wide range of repetitive and rule-based manual activities, such as: extraction of information from documents, completion of surveys or performing calculations. For more detail see page 77.

However, it is essential to increase the pace of use of the full potential of digitization to position the company as a benchmark in utilities, a sector that will undergo one of the biggest paradigm shifts due to the increasing electrification of society. Major growth in sustainable mobility - notably the increasing use of electric vehicles - the search for renewable energy generation solutions and the increase in urbanization and large cities will completely transform the way consumers relate to energy suppliers.



In order to prepare for this development, in November 2017 EDP started the "edp X" project to consolidate the various initiatives and competences in this area across the EDP Group.

## EDP X PROJECT

A centralized digital acceleration programme for the whole Group with three main objectives:

- Enhanced coherence and alignment in the different digital initiatives scattered throughout the organization, to ensure synergies, including through the creation of more skills centres;
- A sustainable reduction in costs and promotion of the launch of new technical solutions to increase profitability;
- Ensuring digital cultural alignment by implementing a new organization and space suitable for addressing digital challenges and opportunities.

Increasing internal and external digital performance is one of the EDP Group's new priorities. It is in this context that the "edp X" Project has been launched - this is a group-wide centralized digital acceleration programme with highly specific objectives.

Edp X, EDP's Digital Acceleration Programme, is a ground-breaking project which will affect the whole EDP value chain, including conventional and renewable generation, energy trading, transport and distribution and EDP Group corporate and business support.

It is being developed in a number of countries, which will mean EDP can leverage the competencies of the group in the various markets in which it operates, especially Portugal, Spain, Brazil and the United States of America.

The project will last six months and will be run in partnership with leading digital development companies. The first phase involves an exhaustive survey of current initiatives and digital capabilities in the group's various areas and business units. The remaining weeks will focus on defining EDP digital acceleration initiatives. These initiatives will seek to develop EDP's current businesses and explore new businesses made possible by digital. This work will be distributed over three different work blocks:

- Stream Customer: focused on customer contact points in marketing and distribution. It leverages digital technologies in order to create customized multi-channel interaction, a better customer experience and drive new business opportunities.
- Stream Assets & Operations: focused on Production, Distribution and Renewables. It automates routine tasks and optimizes operations on the ground using the Internet of Things, robotics, cognitive computation and artificial intelligence. It increases productivity and enhances the value of assets centred on innovation.
- Stream Enterprise: focused on support and corporate areas (e.g. human resources, information technology, shared services). It leads to new operating models and business processes, optimizes the costs and efficiency of corporate functions and transforms the organization by leveraging new digital capabilities.

The edp X programme is being developed across several countries, which makes it possible to leverage the skills available to the EDP Group in the various markets in which it operates.

The EDP X programme will define EDP's internal capacity building plan for digital acceleration, which will be complemented by the Group's Integrated Digital Roadmap.

## **EDP BRASIL - A PIONEER IN THE DIGITAL TRANSFORMATION OF THE BRAZILIAN ELECTRICITY SECTOR**

The 4<sup>th</sup> Industrial Revolution requires a rapid digitization of business sustainability processes, risk mitigation and constant improvements in customer service. In this sense, investment in new technologies and training of employees to adapt to the future of work is essential for the sustainable development of communities and of EDP itself. That is why the company is investing in the digitization of processes and the training of its teams through robot software and the Centre of Excellence in Robotization.

### **CONTEXT**

The growing and rapid technological advances of the 4th Industrial Revolution, the prospect of deep transformations in operational activities and the employment market, the need to modernize the energy sector and the constant effort to deliver the best service to our customers require the modernization of business. In this sense, the robotization of processes and the training of employees in skills such as programming and deployment of robots emerge as an imperative to adapt to this scenario, especially in the Brazilian electricity sector, which is strongly regulated and traditionally conservative regarding the incorporation of new technologies.

### **SOLUTION**

The implementation of R1SP (Robot 1 Shared Services) started the automation process of EDP Brasil's internal processes. Robot software is beginning to be used in the Shared Services Centre (CSP) for completing tax forms, bank reconciliation and invoice receipt. The new technology is supported and complemented by the Centre for Excellence in Robotization (CER), which enables employees in various areas to detect viable internal processes for robotization, offering them the opportunity to improve the methodology for analysing the results of the processes that will be executed by the robot. EDP is the first company in the Brazilian electricity sector to create a multidisciplinary group focused on robotization, with a qualified team dedicated to automating and managing the digital workforce.

### **IMPACTS**

The objective of robotization is to mitigate risks in critical internal processes with a high processing volume. In this way, automation through robot software will increase the consistency and reliability of processes, impacting on both the quality of the company's internal operation and the end customer service, providing a more agile and secure service network. Process automation, coupled with the training and development centre, enables employees to redirect their efforts dedicated to repetitive processes for analytical and creative tasks.

### **RESULTS**

In the first few months of operation, R1SP displayed high efficiency gains, finishing in less than five hours tasks that previously took a month. This improvement is already noticed by the stakeholders affected in the processing chain, increasing their satisfaction. It is expected that the return of the initial investment of R\$1 million (250 thousand Euros) in this technology will occur in less than a year, especially with the reduction of overtime costs. Throughout 2017, 42 robot processes were implemented. The plan is to expand the system for business processes and other business units. The CER, comprising of a core of five employees, trained and qualified 15 employees in 2017.

**LOOKING FORWARD**

EDP Brasil's leadership in the digital transformation of the Brazilian electricity sector, together with the development and training of its employees, reinforces its commitment to the Group's Sustainability principles and to UN Sustainable Development Objectives.

With a view to the development and modernization of the Brazilian electricity sector beyond the digitization of processes, EDP will also invest in initiatives that will enable the sustainable future of work in this new relationship between human beings and technology. The company has therefore announced a partnership with EY and the University of São Paulo to invest in studies aimed at identifying, measuring and mitigating the socioeconomic and cultural impacts of new technologies, enabling it to define the new profile for the employees and management bodies of companies in relation to the changes brought about by the digital revolution.

In addition, it has signed up to the Brazilian Business Pact for the Humanized Digitization of Labour, whose objective is to mobilize Brazilian business leaders for a humanizing movement to digitize work, involving all society and stakeholders through an ecosystem of co-operative discussion.

## **07 SUPPLIER MANAGEMENT**

The management of sustainability in the relationship with its suppliers is a strategic factor in EDP Group's activity. The management process privileges the construction of a relationship of trust with suppliers, based on a partnership approach based on principles of ethics, transparency and sustainability. The priorities of sustainability in management are defined through the "Sustainable Procurement Policy" and the "Supplier Code of Conduct".

### **PRIORITIES**

The priorities of sustainability in supplier management include the:

- Development of activities that promote the sharing of best purchasing practices in the EDP Group;
- Contribution to the growth and profitability of the EDP Group through the promotion of initiatives for the development and continuous improvement of the supply chain;
- Systematic monitoring of suppliers' performance and level of risk;
- Dissemination and implementation of the EDP Group's sustainability policies in the acquisition of goods and services;
- Adoption of a responsible environmental policy that respects the environment by mitigating the adverse impacts of its activity.

### **SUSTAINABILITY OBJECTIVES**

Sustainability objectives are operationalized through the following targets by the year 2020:

- Systematically reduce the accidents of contractors and service providers;
- Protect Human Rights in the supply chain, according to the Ruggie - Global Compact methodology;
- Audit contractors and service providers with sustainability risks;
- Evaluate 100% of suppliers critical to Sustainability criteria;
- Ensure environmental, safety and occupational health certification of 100% of suppliers exposed to high risks.

### **MINIMUM REQUIREMENTS**

The Global Procurement Unit (UPG) ensures the integrated coordination of registration, selection, qualification, consolidation of evaluation and risk analysis of suppliers. The sustainability risk assessment analyses four vectors: country, economic activity, contract (via the ESG EDP impact matrix) and supplier (via self-assessments, audits and sources of external information).

EDP establishes minimum requirements for all suppliers ("pass or fail" rules). Suppliers must accept and comply with the sustainability requirements defined by the Group and listed in the purchasing documents (Code of Conduct, General Conditions of Purchase and Contract Terms). Proposal specifications include performance-related sustainability criteria - mandatory and non-negotiable specifications. For the qualification processes, management systems, certifications, certificates and audits are required depending on the specific risk of a supply.

As a consequence, and in accordance with its Low Risk Policy, EDP does not work with high-risk suppliers. Throughout the consultation process, high-risk suppliers are excluded.



## **VENDOR TARGETING**

EDP segments the minimum sustainability requirements specific to each contract, using criteria of criticality. Each contracted activity is typified in relation to the supplier's access to EDP customers, EDP's technical equipment/workplaces, sensitive data, exposure to risks of Prevention, Health and Safety, Environmental risks and Ethical risks, Employment and Human Rights.

## **SUPPLY CHAIN IMPACTS**

The EDP Group studies and monitors the impacts of its supply chain. In direct suppliers, gender inequality is the highest risk, accounting for 18.34% of the purchasing volume, followed by 10.3% related to corruption risks and 7% linked to political instability, ineffectiveness of justice and fragility of public services. The environmental impact of EDP on CO<sub>2</sub> emissions (see analysis scope 2 and 3, page 98) is very much determined by the extraction and transport of raw materials.

The risk exposure of indirect suppliers contrasts sharply with that of direct suppliers. Here the figures range from 0.54% for child labour and 0.39% for forced labour to 7.9%, 1.4% and 13.4% respectively for health and safety, overtime work and low wages. As a result, EDP's supply chain sustainability management involves the development of processes to ensure the direct supplier's commitment to improving the sustainability of its own supply chain.

## **2017 BALANCE SHEET**

In 2017, the unification of sustainability requirements in the form of the EDP Supplier Code of Conduct constituted a first step towards extending to indirect suppliers the rules applied to direct suppliers. In this context, it is also worth highlighting EDP's support, within the BCSD business association, for the creation of the Statement of Principles regarding sustainability to be adopted by any company.

In 2017, EDP broadened further the consultation of its suppliers, extending the methodology to all geographical areas in which the EDP group operates. Also worthy of note is the extending of the EDPartners initiative to the Brazilian market, an initiative that awards good sustainability practices in relation to customers, innovation, environment and social responsibility.

In 2018, the EDP Group will renew the Supplier Registration and Management system, in order to integrate Procurement and Contractual Relationship information, adding financial, economic, environmental and social data, both in terms of supplier selection and performance. Within the same scope, the Sustainability Protocol will be developed in the Supply Chain, in order to optimize existing methodologies in a single methodology and platform.

### **MAIN REFERENCES**

[www.edp.com](http://www.edp.com)> edp> about us> principles and policies> edp supplier code of conduct

[www.edp.com](http://www.edp.com)> edp> about us> principles and policies> sustainable procurement practices

[www.edp.com](http://www.edp.com)> suppliers> sustainable procurement

## **EDP SUPPLIER CODE OF CONDUCT**

### **PROMOTION OF SUSTAINABILITY IN THE SELECTION AND MANAGEMENT OF SUPPLIERS**

Suppliers are key agents in the success of the companies' business plans for the impact their practices and performance may have on the reputation and business continuity of the contracting company. As such, compliance with EDP's sustainability goals implies sustainability criteria in the selection and management of suppliers in order to simply ensure that their supply chain is in line with EDP's principles and priorities. The adoption of the Supplier Code of Conduct ensures that the management of suppliers takes into account the sustainability principles defined by EDP.

#### **CONTEXT**

Market globalisation, the growing weight of outsourcing, the expansion of the EDP Group's business into geographies with different standards and practices and, in this context, the emergence of climate challenge and the need to protect human rights, among others, recommend that companies adopt supplier management policies that cover not only suppliers acting on their behalf, but also all direct and indirect suppliers. The promotion of good practice by indirect suppliers is only possible if direct suppliers propagate the principles and requirements of sustainability across their own supply chain.

#### **APPROACH**

The adoption of a universal Code of Conduct for all suppliers, irrespective of context and contractual nature, within a wider adoption programme of ISO 20400, has been identified as the best solution. Existing contractual rules of respect for EDP's policies, namely the Code of Ethics and Environmental, Prevention and Safety Policies, have therefore been reviewed and brought together into a single document.

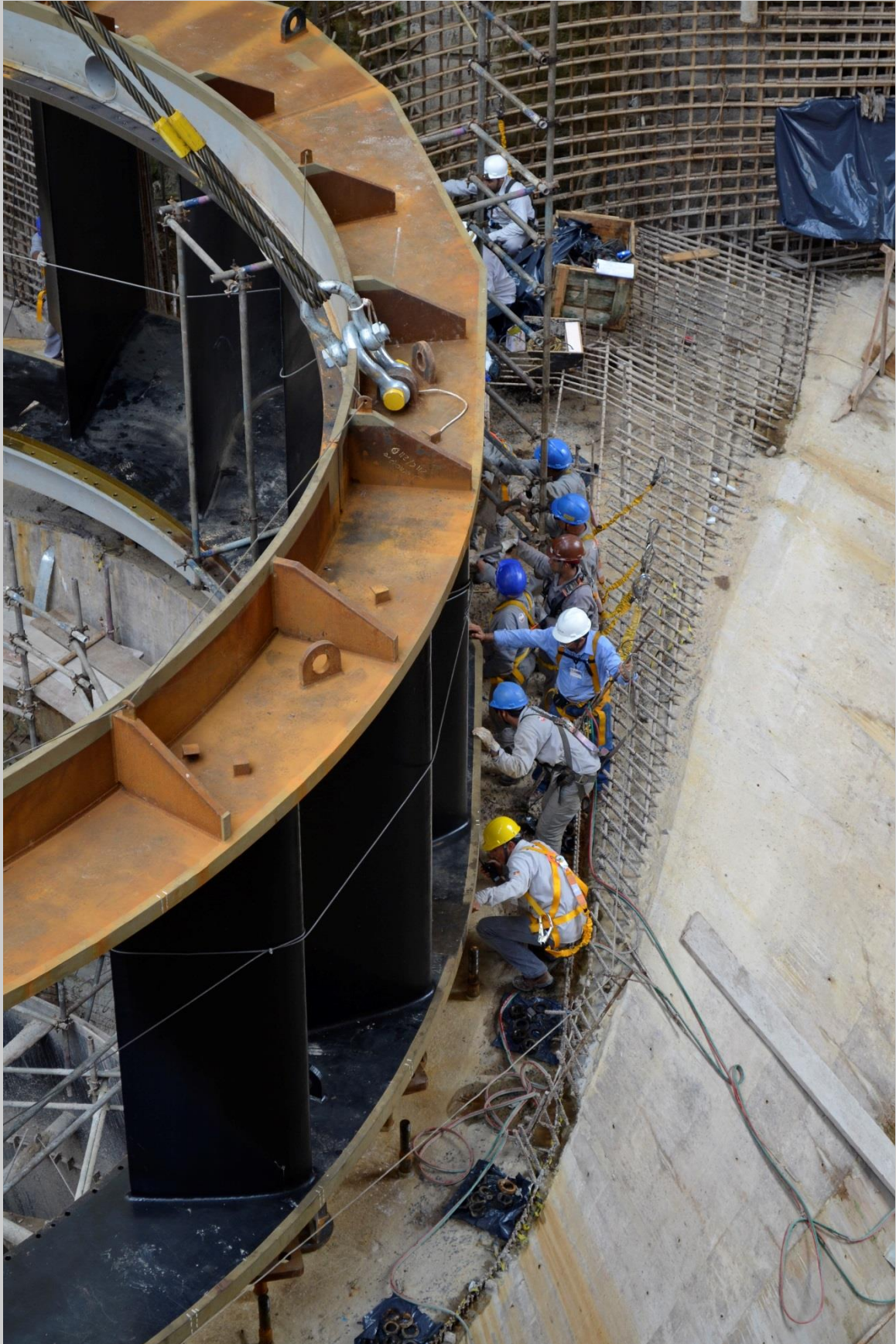
With its Code of Conduct, EDP has adopted a sustainability model across all geographies, all suppliers and all supplies, ensuring uniform treatment and higher minimum requirements in the selection and evaluation of suppliers' performance across the board. But the main impact will be the propagation of sustainability principles beyond direct suppliers to the extent that these companies adopt similar codes of conduct and implement them with their direct suppliers. There will therefore be a multiplying effect of sustainability across global supply chains.

The EDP Supplier Code of Conduct is applied to all the new suppliers regardless of the importance of their supplies and is part of every contract as a contractual clause. This provision enables the practices and performance of supplying companies to be evaluated according to a transparent, shared set of rules, which ensures objective reviews and helps to identify critical areas to be improved.

#### **LOOKING FORWARD**

In EDP's view, companies must undertake the commitment to promoting sustainability in their area of influence. EDP's expectation is that its suppliers adopt similar Codes of Conduct and also promote with their supply chains the adoption of good management practices, encompassing ethics, legal compliance, respect and human and labour rights promotion principles, developing methods and procedures to ensure the protection of biodiversity, the circular economy, the continuing reduction of emissions and waste and the health and safety of their employees and service providers, and specifically ensuring respect for the interests of citizens and local communities.

In this spirit, together with the associate companies of BCSD-Portugal, EDP has launched a sustainability management Charter of Principles, approved in November 2017, which can be adopted by every company and made into their guide to good practice, applying it to their direct suppliers and triggering a global corporate movement for continuous improvement towards a sustainable society.



# 08 CUSTOMER SERVICE AND SATISFACTION

The growing competitiveness in the energy and services supply market increasingly requires a stronger focus on the customer, especially on offer differentiation and the continuous improvement of the customer experience.

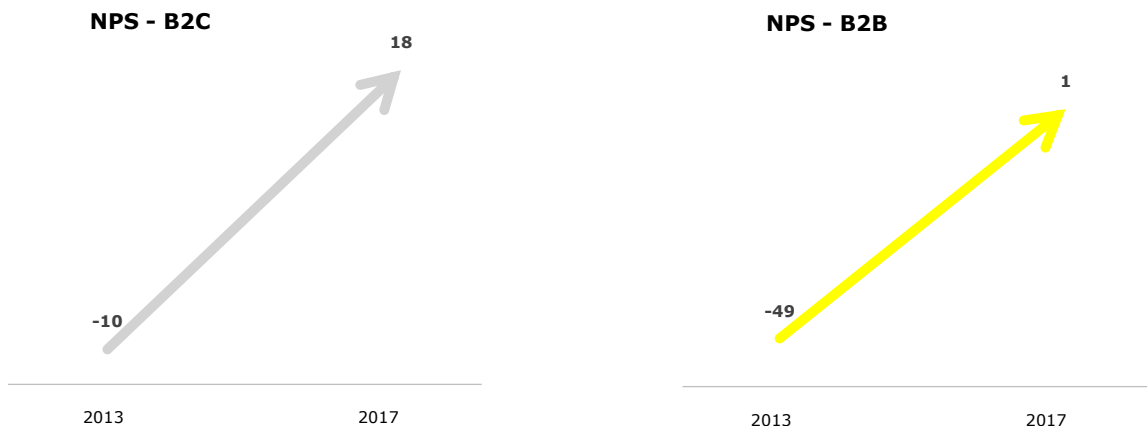
In an era of smart networks and in a context where the customer is more proactive, demanding and technological, it becomes indispensable to evolve to an ever more digital interaction, to ensure their maximum satisfaction.

The energy solutions offered by EDP aim to meet the specific needs of different customer segments through a diversified offer of products and services and the provision of optimised, targeted communication channels for a quality, efficient response.

## CUSTOMER SATISFACTION

Customer consultation regarding the quality of the services offered and the experience during the service is a priority for introducing improvements to the processes. Surveys are therefore conducted in partnership with certified external entities, which are based on satisfaction indicators such as the Satisfaction with Energy Supply (electricity and/or gas) and Global Satisfaction (page 133).

In 2017, the percentage of customers satisfied or very satisfied with EDP was 74%, slightly below 2016, however without changing the commitment to achieve the target set for 2020: global customer satisfaction of more than 80%. When considering NPS (Net Promoter Score) - an indicator that measures the willingness of customers to recommend a company's products or services to others -, there is an improvement of 28 points for domestic customers and 50 points for business customers since 2013, the year in which the implementation of the customer experience improvement program began.



## COMPLAINT AND CLAIM MANAGEMENT

Overall, the improvements implemented in EDP's Customer Experience Program have substantially reduced the number of complaints per thousand contracts by about 50% since 2013. During the same period, it was possible to substantially optimize the complains' resolution process, reducing more than 30% the average resolution time. In nowadays, more than 90% of cases are being solved on the first contact.

In Portugal, the Customer Ombudsman is the independent entity that evaluates cases submitted by customers when the responses to the complaints made to the services did not meet their expectations.

The Customer Ombudsman expresses his opinion on the supply of energy and the provision of services by EDP companies, namely: contract compliance, consumption estimates, invoicing and claims for damages resulting directly from the service provided.

In 2017 the Customer Ombudsman received 1,571 complaints, of which 71% related to electricity complaints and 17% to dual contracts. Most complaints (68%) were related to Contracts and Reading/Billing/Collection. The response time to customer has been reduced by 1 business day, improving this indicator by more than 60% since 2011.

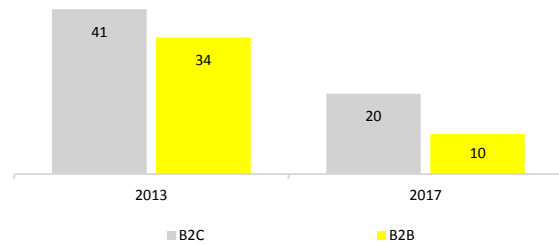
## ENERGY PRICES

In the Iberian Peninsula, energy supply is free, and consumers can contract any supply company. However, there are still the last resort suppliers. In 2017, electricity customers in Portugal began to be able to return to the regulated market or to have access to a regime similar to that of the regulated tariffs. It is, however, expected that regulated prices will be abolished in December 2020.

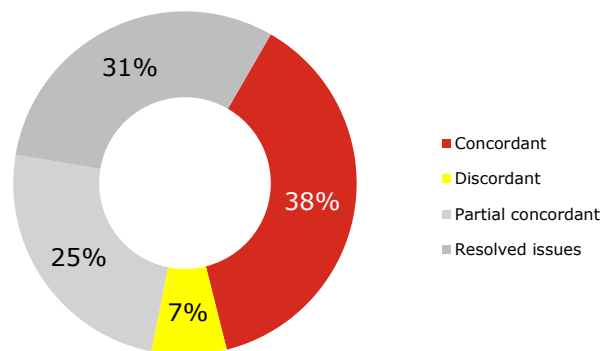
According to a 2017 Eurelectric study, half of the costs invoiced to customers in Iberia correspond to taxes and policy costs. The remain is roughly divided between the cost of electricity and the use of the networks.

In Brazil, taxes account for about 39% of the costs invoiced to the customer. The cost of electricity and the use of the networks correspond to 34% and 27% of the remaining share, respectively. Since 2015, the variable energy costs of the regulated market have been covered by additional tariff flags, which signal the actual values of electricity production to the consumers: green (no tariff increase), yellow and red (increases per kWh consumed). In October 2017, ANEEL undertook a review of the methodology of tariff flags. The amounts proposed entered provisionally into force in November.

**COMPLAINTS/1K CONTRACTS**



**OMBUDSMAN'S ANSWER ORIENTATION**



## **NEW ENERGY SERVICES**

In 2017, EDP continued to focus on innovating its commercial offer, launching new products and services and promoting intelligent, efficient energy management solutions. In energy efficiency services alone, about 134 million euros in revenues were generated, an increase of 44% over 2016 (page 136).

**20 M€**

**Accumulated invoicing savings with the Save2Compete Programme since its launch**

Some examples are: Integra BT for the integrated management of low-voltage installations of business customers, and hourly and prepaid tariffs in Spain; the "Casa Inteligente" (Smart Home - solar energy, electric mobility and Re:dy), the POver2me energy advice platform and Save2Compete 2.0 for SMEs in Portugal.

In Brazil, the commitment to improving and promoting the functionality of the open and reserved areas of the website continued, with the development of new edpOnline features.

## **SERVICE QUALITY**

Distribution system operators maintain a quality monitoring process of the distributed energy through network monitoring plans, allowing the adoption of mitigating measures whenever this is justified. Maintenance actions are promoted to reduce the number of occurrences and limit their impacts. In 2017, the quality indicators of the Group's distributors met the standards set by regulators.

In Portugal, 2017 was marked by several fires and adverse weather conditions. The contribution of the automation of the distribution network and the strategy of anticipation and response to exceptional events enabled, through the Crisis Response Operational Plan of the Distribution Network, the necessary resources to be marshalled in order to minimise the customer service restoration times.

## **DISTRIBUTED GENERATION AND SELF-SUPPLY**

Looking into a future in which production will be increasingly decentralised, EDP offers distributed generation solutions from renewable sources tailored to the customer's profile and the local characteristics, based on photovoltaic systems under self-supply schemes.

**17.2 MWp**

**Photovoltaic systems installed in Portugal, Spain and Brazil**

EDP in Portugal installed 3,700 photovoltaic solar panels in 3 buildings of Millennium BCP, allowing an annual production of around 1.3 GWh, and avoiding the emission of 572 tons of CO<sub>2</sub>. With more than 12,000 photovoltaic solar systems installed in homes and companies, EDP has an installed capacity of about 15 MWp.

In 2016, EDP Brasil became part of the photovoltaic distributed generation market. In 2017, 9 solar projects were agreed, totalling 10.7 MWp of installed capacity.





## **NEW COMMERCIAL OFFICES IN SPAIN IMPROVES CUSTOMER SERVICE**

### **IMPROVE CUSTOMER EXPERIENCE AND CONVEY THE COMPANY'S VALUES**

EDP is undertaking a comprehensive upgrade of all its commercial offices in Spain, which has taken into account the customer's experience both in the physical part of the office and in relation to the steps to be taken. The objectives of this new project are several and are included within the edp365 customer strategy: greater proximity and customer differentiation, greater flexibility and efficiency, enhancing the communication of products and services with innovative spaces with a digital approach and, most importantly, achieving excellence in care, improving the customer experience.

### **CONTEXT**

EDP Spain had a network of its own and external customer service offices, as a result of its historical development and asset purchase processes, with a completely heterogeneous image and timetable. The different realities in each geographical area are complemented by the demand for offices in expansion areas as an element that creates customer loyalty.

Commercial offices must be used as a communication channel through which EDP's values and messages (products, existing channels, available services, free telephone, etc.) can be transferred to customers. In this context, its image and that of the people attended in them are the reflection of EDP in society, which is why the new office model focuses on putting the Customer at the centre of all decisions through a completely renewed network, that is more flexible and competitive and much closer.

### **SOLUTION**

Entre Between 2016 and 2017, EDP Spain refurbished the Commercial Offices of its network to put the customer at the heart of all its actions.

The first spaces to open their doors were the offices in Murcia and Gijón, in April 2016, and they concluded with the opening of the new Barakaldo office in December 2017. The total of refurbished offices was 11, with an investment of 1.5 million Euros to date, as planned in the strategy for reviewing the face-to-face customer service channel.

The new commercial offices have differentiated spaces and innovative communications media, basically with a customer service area, lounge area and digital area, with kiosks and space with tablets to access a range of company content, such as the new customer area edponline. Additionally, elements such as accessibility, music, free wifi or the scented ambience help to make the stay more pleasant and to provide the best customer experience in the office.

Moreover, one of the company's innovations is particularly significant: a new queue manager - "maître" who receives customers proactively as they arrive and, with the help of a tablet, distinguishes the customer and facilitates their identification in the lounge area, where they will be received by the customer service agents.

EDP's new offices have been designed to convey the values of the company and meet customer expectations. Every shop construction and decorative element is designed by improving and in order to improve the comfort and relaxation of the customer in their new space.





## **IMPACTS**

The project responds to the company's strategy of investing in care channels to be closer to the customer with the challenge of (i) balancing the coverage of the office network at national level and (ii) strengthening the multi-channel and customer experience strategies.

## **RESULTS**

The commercial offices, which have the highest customer-perceived quality index of all customer service channels, saw their high evaluation score reaffirmed in the first few months of operation of the new model, with an improvement in the main service levels and management indicators.

## **LOOKING AHEAD**

The opening of the commercial office in Baracaldo (Vizcaya) serves as a pilot office and will lay the foundations for future openings in Getxo and Irún. Baracaldo, with more than 100,000 inhabitants, is the most inhabited Biscayan municipality after Bilbao and the fourth in the Basque Country - only the provincial capitals are bigger.

In addition, in the first months of 2018, a pilot is planned outside the usual areas of responsibility, in areas of expansion, by opening two pilot offices in Valladolid and Getafe (Madrid).



## **09 VULNERABLE CUSTOMERS**

Energy precarity has emerged in recent years as a structural phenomenon in European Union countries. On average, 24% of the low-income population is unable to maintain a minimum level of thermal comfort in their homes. In Portugal, this figure is 43% and in Spain 18% (ONPE, Eurostat).

Customer vulnerability to energy precarity has known causes: population ageing and isolation, unemployment, structural poverty, energy inefficiency in the housing stock, inability to invest in improvements in housing energy efficiency, energy prices. Its social impacts are also well-known. Precarity exacerbates structural poverty and social exclusion and has major impacts on public health.

From a public policy perspective, the problem can be addressed by raising household incomes, regulating energy prices and improving the energy efficiency of dwellings. But subsidizing low-income households has a continuing impact on public spending without a positive effect on economic growth and does not address the structural problem. In this sense it is essential to define measures for investment in energy improvements in dwellings.

This perspective is reflected in the European political agreement of December 2017 on guidelines for the revision of the Energy Efficiency Directive for Buildings, on the introduction of the principle of help to combat energy poverty and reduce domestic energy bills by renovating old buildings.

Customer vulnerability and energy inclusion are key concerns of EDP's sustainability agenda, as defined in its Sustainable Development Principles (2008), and are addressed through three priorities: Support for vulnerable customers; Access to Energy; Fair contractual practices.

For 2018, EDP undertakes to:

- Develop the EDP Solidária programme to support Third Sector and social economy initiatives for improving the energy inclusion of vulnerable communities;
- Contribute to discussions about long-term public policy proposals to address the issue of energy poverty;
- Promote an international conference under the umbrella of the framework of the "Clean and Affordable Energy" United Nations Sustainable Development Goals;
- Continue its policy of focusing on vulnerable customers, improving channels for dialogue and energy education.

### **SUPPORT FOR VULNERABLE CUSTOMERS**

EDP claims that the support to vulnerable customers must be preceded by a set of initiatives, such as: energy efficiency actions and preventive measures addressed to avoid interruptions in energy supply, in case of default on the payment. It also claims that these measures must be incurred in a universal support system, aligned with the recommendations of the European Commission as, for instance, by being included in the Social Policy or through a solidary tariff, which costs shouldn't lead to market distortions. In line with this, EDP has three approaches for supporting vulnerable customers.

In Portugal, since 2010, legislation has provided for the application of a social tariff for electricity and natural gas. This is an access tariff discount granted to economically vulnerable customers, funded in the case of electricity by electricity producers in normal production and, in the case of natural gas, by natural gas transporters and traders.

In 2011, special social support for energy consumers (ASECE) was also created for electricity and natural gas, representing a 13.8% discount on invoice amounts, financed by the State, in order to offset the VAT increase from 6% to 23% for these customers. In 2016, the ASECE was included in the social tariff, the eligibility criteria were extended to include those in receipt of this benefit and its application was made automatic. In 2017 the number of beneficiaries



of the social tariff for electricity was more than 800,000 (of which 661,103 are EDP customers) and the discount was fixed at 33.8% on the gross price of the transitional tariffs of the regulated market.

In Spain, the social benefit (bono social) has been in place since 2009, but it only applies to vulnerable electricity consumers. Until 2017, the benefit involved the application of the tariff of last resort with a 25% discount on the Small Consumer Voluntary Price.

In 2017 a new social benefit was created, establishing new categories of recipients: vulnerable consumers, with a 25% discount, severely vulnerable consumers, with a 40% discount and consumers at risk of exclusion, with a 100% discount. These discounts are for a fixed term and cover a maximum energy consumption amount. The new benefit is not automatically assigned but generally must be requested and is subject to regular renewal. Recipients of the previous benefit have 6 months from October 2017 to apply for a transfer to the new scheme. In December 2017, the number of beneficiaries of the old social benefit was approximately 54,000, and the number of beneficiaries of the new scheme was approximately 3,000.

In Brazil, the Social Tariff is a benefit created by the Federal Government for low-income families. The tariff discount applies to the residential class of electricity distributors, and varies from 10% to 65%, depending on the consumption of each household, up to a maximum of 220 kWh/month. Indigenous and quilombo families that meet the defined requirements are entitled, in turn, to a 100% discount up to a consumption limit of 50 kWh/month. Also in Brazil, consumers must apply for the social tariff, it is not automatically applied.

## **FAIR CONTRACTUAL PRACTICES**

The Customer Ombudsman and the EDP Group Compliance Programme are the voluntary structural measures used to control and check fair practices in contract procurement and management. In this area, EDP also undertakes to increase the measures available for vulnerable customers.

In this context, customer vulnerability is associated with people who, due to their age, health, social situation or personal circumstances, need a specialized approach.

EDP guarantees differentiated treatment for customers with visual, hearing, oral communication or olfactory disabilities or who depend on electrical equipment for survival or mobility.

To protect customers who lose their jobs or are temporarily unfit for work or disabled, EDP provides the Secure Invoice service.

EDP also monitors electric shock accidents in the grid and invests continually in educational initiatives to ensure the safe use of electricity by consumers.

## **ACCESS TO ENERGY**

Universal access to sustainable energy is one of the United Nations goals endorsed by EDP in 2015 when the Sustainable Development Goals were launched. This goal is supported by a global non-profit initiative, Sustainable Energy for All (SEforALL), which promotes partnerships and mobilizes financial resources to achieve universal access to sustainable energy by 2030, with a focus on:

- Ensuring universal access to modern energy services;
- Doubling the overall rate of energy efficiency improvement; and
- Doubling the proportion of renewable energy in the overall energy mix.

EDP's CEO - António Mexia - has been chairman of SEforALL's Board of Directors since April 2017.

## **THE ENERGIA SOLIDÁRIA INITIATIVE IMPROVES THE QUALITY OF LIFE OF 200 FAMILIES IN SPAIN**

### **FUNDACIÓN EDP SUPPORTS VULNERABLE CONSUMERS**

The Energia Solidária initiative has been developed in Spain since 2015 under the leadership of the EDP Fundación EDP. Its main objective is to increase the safety, well-being and energy efficiency of disadvantaged families and EDP's partner Non-Governmental Organisations (NGOs) in this initiative.

#### **CONTEXT**

Improving energy efficiency is the most effective way of reducing households' energy insecurity. At the beginning of the decade, the effects of the economic crisis particularly felt in the Iberian countries were joined by a growing need to take measures to reduce CO<sub>2</sub> emissions, the main factors responsible for climate change. In Spain, the EDP Group took on the responsibility of finding savings solutions for the most needy families.

#### **SOLUTION**

The Fundación EDP took the initiative within the scope of the mission defined in 2015 and renewed for the period 2018-20, according to which this EDP Group entity is responsible for promoting social sustainability actions. For the Energia Solidária project, the Fundación joined the Operations and Customer Service Area of EDP Spain, for which its employees contributed as volunteers with their skills and time.

Based on a partnership with Cáritas and the Red Cross, two of the largest social support organisations in Spain, the project begins by identifying potential targets for intervention. The families indicated by the NGOs are visited by EDP technicians. A housing energy audit is carried out, following which a team composed of a volunteer, a technician and an NGO representative discusses improvements to be made with the family concerned, and supports their implementation. Where appropriate, training actions are also delivered to encourage more efficient energy consumption.

The project also includes the facilities of the two NGO partners and of some of the beneficiary organisations of EDP Solidária, the EDP Group foundations' social innovation programme.

Efficiency measures implemented:

- Lighting: Replacement with LED systems
- Equipment: Standby Elimination
- Domestic hot water: Installation of economisers
- Air conditioning: Installation of thermostatic mixer; Replacement of heaters with more efficient ones; Replacement of atmospheric boilers with condensation boilers; Installation of digital environment chronothermostat; Installation of thermostatic selector on radiators;
- Thermal: Installation of insulation tape on windows
- Safety: Maintenance of the electrical board; Replacement of differential and automatic devices.



## **RESULTS**

In 2017, the project generated average savings of 17% in beneficiary families' consumption.

|                    | <b>UN.</b> | <b>TOTAL</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> |
|--------------------|------------|--------------|-------------|-------------|-------------|
| Families benefited | #          | 178          | 25          | 90          | 63          |
| Centres benefited  | #          | 32           | 23          | 8           | 1           |
| Beneficiaries      | #          | 22,481       | 19,988      | 1,237       | 1,256       |
| Investment         | €          | 437,000      | 174,000     | 145,000     | 118,000     |

## **LOOKING FORWARD**

Consolidation of the initiative, extending it to more social organisations covered by EDP Solidária. The aim is to enhance the social impact, gaining synergies with the EDP Fundación's social anchor programme. The objective will be to combine the Energia Solidária actions with other lines of social intervention such as the promotion of employability in areas related to energy efficiency and renewable energies.

The engagement of employees will also be strengthened, as their participation has had very positive results for all the parties involved.

At the same time, the extension of the geographical coverage will be promoted, in line with the commercial presence of the EDP brand. The project, born in the incumbency markets of Asturias, the Basque Country and Cantabria, has, in the meantime, advanced to Galicia and Madrid. This year, it should move further Southwards, reaching the Seville region.

# 10 ENVIRONMENTAL MANAGEMENT

Protection of the environment is an integral part of the Group's Environmental Policy, reviewed in 2017. Under this policy, a number of general management commitments are undertaken, such as the prevention of pollution, and an emphasis is put on three strategic priorities: fighting climate change, protecting biodiversity and using natural resources sustainably, in particular water resources. In the context of the Group's materiality process, these are also the material topics identified.

Since 2008, EDP has maintained a corporate management system certified under the ISO 14 001:2004, which covers "the corporate management of environmental policies, environmental strategic plans, environmental reporting and environmental performance of the organisations within the EDP Group", embracing the operational environmental management systems, which today account for 130 of the Group's assets.

## PREVENTION OF POLLUTION AND EMERGENCY RESPONSE

In order to prevent the environmental impacts and reduce risks arising from its activities, EDP strives to implement the best technologies available. All coal-fired thermal plants have dust extractors, desulphurisation processes and NOX reduction processes, such as low NOX burners, and denitrification processes when primary measures are not sufficient. Thermal power plants have continuous monitoring for air emissions and previously treated wastewater, and are subject to strict environmental licences which take into account the sensitiveness of their surroundings.

Additionally, EDP facilities have emergency plans in place for the different risk scenarios applicable. Employees and service providers are trained on these practices and the scenarios are regularly tested by emergency drills (page 119).

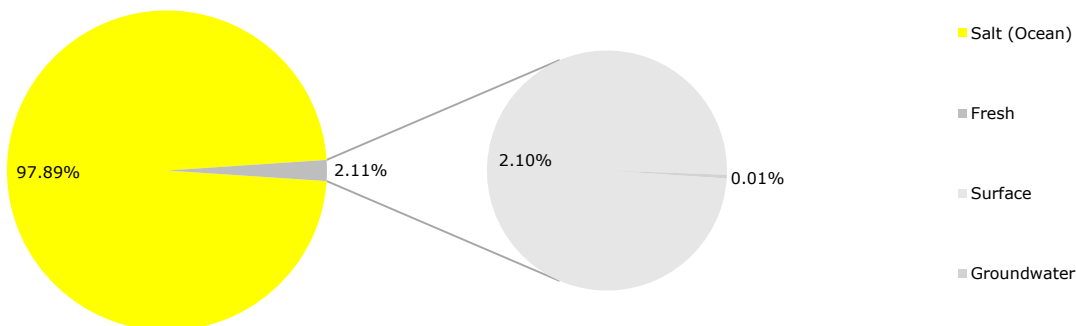
EDP has procedures for the identification and processing of near misses, in order to prevent any negative impact. In 2017, 90 near misses were identified and the corresponding preventive measures were implemented.

## SUSTAINABLE USE OF NATURAL RESOURCES

### WATER RESOURCES

Water is a key resource for EDP's activity, particularly for those hydropower and thermal power plants that depend on its quantity and quality for their proper operation.

WATER COLLECTED BY SOURCE



EDP monitors potential shortages, controls the quality of water and sediment, and the impact of the management of this resource on biodiversity, for which it ensures a number of minimisation activities, such as the release of ecological flows, the transfer and transport of fish and the support of scientific research on these topics. Also in water courses with good quality, EDP continues the practice of monitoring and implementation of ecological flows.

In Brazil, the Pecém power plant is located in the State of Ceará, a water stress area. Aware of this situation, EDP has sought to implement circuit optimisation initiatives to reduce the collection of this resource. In 2017 there was a 8.6% reduction in the specific consumption.

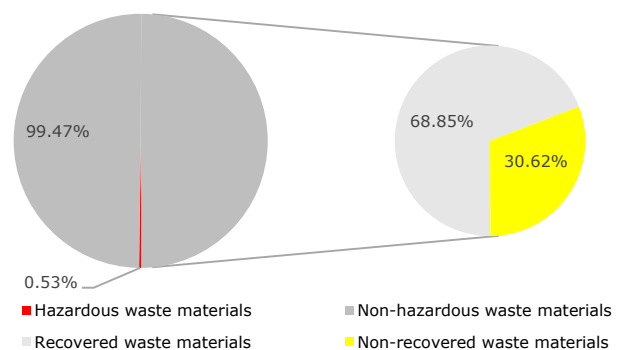
The CDP Water report has been published annually since 2009, describing in greater detail the ongoing initiatives. This report can be read at [www.edp.com](http://www.edp.com)> sustainability> environmental dimension> natural resources> water.

## WASTE MATERIALS

The protection of natural resources depends on an appropriate reduction and management of the waste produced.

The activity of the whole EDP Group produces roughly 1% of hazardous waste. Of all waste materials produced, only 31% are not recovered. Of the 69% recovered, most is routed to the cement and construction industries (pages 134 and 140).

### WASTE MATERIALS (WASTE AND BY-PRODUCTS)



## PROTECTION OF BIODIVERSITY

The mitigation management of impacts on biodiversity results in a number of initiatives aimed at:

- Avoiding or reducing the loss of biodiversity, favouring a dynamic, far-reaching, locally participated management, with a long-term vision, pursuing a globally positive equilibrium;
- Deepening scientific knowledge about the different aspects of biodiversity, namely by establishing partnerships;

Relevant initiatives in 2017 involved the ongoing work on the release of ecological flows in Portugal, either by recently built dams (e.g. Ribeiradio-Ermida, Foz Tua and Alto Ceira) or operational dams, subject to a phased out implementation of ecological flows involving the construction of flow release devices. This scheme also involves monitoring and assessing their effectiveness, i.e. the improvement of the ecological quality of the environment, and it is expected that this plan will only be completed in 2018.

Following the construction of the latest dams for hydropower generation, EDP has focused on consolidating the information generated through Biological Information Systems, open to society, which in turn inform the international GBIF - Global Biodiversity Information Facility database, available at [www.gbif.org](http://www.gbif.org), with a view to increasing the contribution to the production of scientific knowledge.

## **EDP RENOVÁVEIS RECYCLES WIND TURBINE BLADES**

### **COOPERATION AGREEMENT WITH THE START-UP THERMAL RECYCLING OF COMPOSITES (TRC) TO SUPPORT THE DEVELOPMENT OF THE R3FIBER TECHNIQUE.**

#### **EXECUTIVE SUMMARY**

The preservation of the natural resources while practicing its activity is one of the main concerns of EDP Renováveis (EDPR). This is why the company is constantly promoting and searching new ways to create the perfect symbioses between its activities and the environment.

Being one of the world's largest wind energy producers, the sustainable management of wind energy waste is one of these great concerns. One of the main challenges of the industry is the lack of techniques to recycle wind turbine blades at the end of their useful life, which, if solved, it would turn the wind business into a circular economy cycle. The strategy of a circular economy is based on a material and energy reduction, reutilization, recuperation and recycle. This model not only focus on better managing the waste produced and recycling, but it has a higher vision of redesigning processes, products and the creation of new business models until it is reached the optimization of resources utilization.

Following the concept of circular economy, EDPR made a cooperation agreement with Thermal Recycling of Composites (TRC) for the implementation of a wind turbine blade recycling program based on the development of the new R3FIBER system, a technology which will allow full recycle of turbine blades out of use, optimizing and maximizing the environmental positive impacts of wind energy from a life cycle approach. Wind turbines' recycling at the end of their service life avoids impacts associated to raw materials' extraction, providing significant environmental benefits and contributing to create a circular economy.

The pilot has started in Spain with the recycling of a damaged turbine blade and if this plan succeeds, it will be implemented on every EDPR's wind farms that requires any blade replacement. This is an important initiative since in Spain, the fourth country worldwide regarding installed wind power capacity, has 60% of its wind farms with more than 15 years old, reaching the end of their cycle in a near future and turning the wind business in a circular economy.

#### **CONTEXT**

Over the last years, the wind energy production has been growing worldwide. Currently, Spain is the fourth country with more installed wind power capacity in the world, behind China, the United States and Germany.

EDPR, as a global leader in the renewable energy sector and the world's fourth-largest wind energy producer, believes in the responsibility of turning the wind power business, which is one of the most environmentally friendly ways of producing energy, into the its maximum sustainability optimization.

The new R3FIBER system is aligned with EDPR's Environmental Policy: proactive environmental management (generating value and duty from a socially responsible company); and the concern to protect the environment through responsible management strategies along the value chain. This new system will adequately address the key challenge in the end-of-life of the wind turbine.

The wind turbine is mainly made of recyclable material, which according to the Life cycle Assessment of EDPR's main turbine supplier it is around 80% to 90%. The missing percentage relates to the turbine's blades that are composed and manufactured by complex materials (glass or carbon fibers, thermos-hardened resins, sandwich structures, coatings, etc.), make it very hard to recycle.

This pioneering project, undertaken by EDPR and TRC, could solve the problem of dealing with this waste (which is currently dumped in landfills – the main destination for composites in Europe), reducing the environmental impact of the wind energy business.



**SOLUTION**

The R3FIBER is a system with the main goal to provide a green technology able to recycle wind turbine blades and other composites that come to end of their serviceable lives and are becoming an emergent waste. Currently, the volume of these non-hazardous wastes is not significant but with the increasing maturity of the business, it is believed that these numbers will progressively increase. The R3FIBER system will then avoid a problem which could be serious in the future.

This technology fully harnesses mass, energy and the reuse of materials. It is the only technology that creates high-quality fibers (without resins) that are suitable for reuse. It is sustainable, because it does not generate waste, and efficient because it allows for maximum energy recovery. It also allows, the recovery of fibers in reinforced composites (either glass or carbon) with different kinds of resins (mainly epoxy and phenolic) in addition to combustibles.

This technology is still an early bird and it has begun with the recycling of a damaged wind turbine blade that need to be replaced, and, in the future, with a more developed system, it will also cover blades from other EDPR wind farms that have reached the end of their life cycle.

**IMPACT**

The main objectives of this project are: (i) to create a viable technology to recycle wind blades when come to the end of their life cycle instead of being dumped in landfills; (ii) to prevent the growth of non-hazardous waste of a business that has been developing recently and to (iii) continue with the sustainability and circular economy strategies as alternatives to landfill, strengthening EDPR's commitment to the environment

**RESULTS**

The results generated until the current date are positive since in just over half a year it has generated the first material using the recycled fibers obtained from the damaged turbine blade.

**THINKING FORWARD**

This project is still on its early stages. At the moment, the goal is to (i) keep working in different lines of manufacturing material from recycled fibers until achieving its maximum optimization; (ii) Perform yield analysis of the materials obtained (in collaboration with EURECAT Technology Center); and (iii) work on the design and manufacture of prototypes in collaboration with ELISAVA (University School of Design and Engineering of Barcelona)

With the success of the integral recycle of wind turbine blades out of use in the area of Spain, this technology can be replicated in all the geographies where EDPR is performing its activity. This achievement can be essential for the transition toward a sustainable economy of preserving natural resources and reducing waste.

# **11 CLIMATE CHANGE**

The Climate Change topic is of particular relevance to EDP and is also considered as highly material by all stakeholders consulted. EDP recognises the profound impact of climate change on the future of humanity and supports the UN recommendation to limit global warming to 2°C by 2050 as stipulated in the Paris Agreement. The energy sector, one of the biggest contributors to greenhouse gas emissions, will be decisive for the decarbonisation of the economy. The power sector, in particular, through increasing electrification in sectors such as transport and buildings, together with the use of efficient low carbon technologies, will play a key role in this transition, bringing significant benefits to society and the environment.

## **STRATEGIC FRAMEWORK**

EDP aims to provide competitive energy based on low carbon solutions, ensuring sustainable economic growth and carbon neutrality by 2050. To this end, it has established a strategic framework to combat climate change, supported by five main axes, as shown schematically in the figure, and it has adopted the following objectives and targets:

- To contribute to the increase of electric power generation from renewable sources, exceeding 75% renewable installed capacity by 2020;
- To provide energy efficient products and services that contribute to the attainment by 2020 of at least 1 TWh of energy savings in our customers' consumption, accumulated since 2015;
- To invest €200M in Research, Development and Innovation by 2020 (accumulated since 2015), in clean generation technologies, energy efficiency and smart grids;
- To reduce CO<sub>2</sub> emissions intensity by 75% by 2030 compared to 2005 levels. This objective is in line with the 55% reduction target of scope 1 and 2 specific emissions by 2030 from 2015 levels, approved by the Science Based Targets initiative;
- To exceed 90% of smart meters installed in the Iberian Peninsula by 2030, within the framework of the new smart grid paradigm.



EDP has also undertaken to:

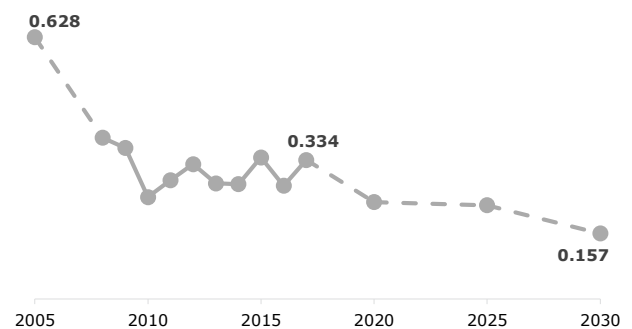
- Contribute to the supply of CO<sub>2</sub> neutral electricity in Europe by 2050 (EURELECTRIC Declaration);
- Adopt an internal carbon price;
- Use its Annual Reports to disseminate information on climate change as a fiduciary duty, in accordance with the requirements of the "Climate Change Reporting Framework (CCRF)".

## MITIGATION

EDP's activities involve the emission of significant quantities of greenhouse gases, particularly in the generation business, depending on national, regional and local circumstances. Reducing emissions is a crucial element of EDP's climate strategy. It mainly involves: increasing generation from renewable sources, promoting the strengthening of electrification, particularly in transport and buildings, and promoting improvements in energy efficiency.

In 2017, despite the increase in renewable power plants' capacity, both absolute CO<sub>2</sub> emissions and the specific emissions from EDP's electric power plants increased by 23% over the previous year, as a result of the severe drought that occurred in the Iberian Peninsula, with a hydropower index (IPH) more than 53% below the average hydrological year. In Portugal, where the presence of hydropower plants is predominant, hydropower production has dropped by around 9 TWh compared to 2016, implying a more intensive use of thermoelectric power stations (coal and gas) to meet the electricity demand. This has led to a slight shift away from the decreasing decarbonisation trajectory, which does not prevent the achievement of EDP's long-term objective.

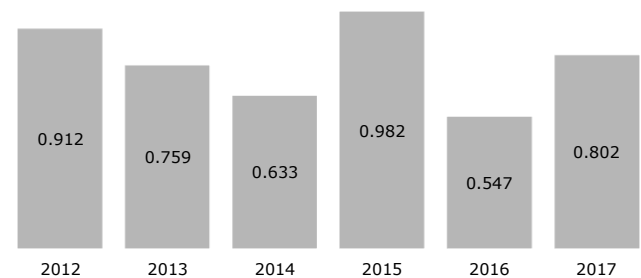
**SPECIFIC CO<sub>2</sub> EMISSIONS (t/MWh)**



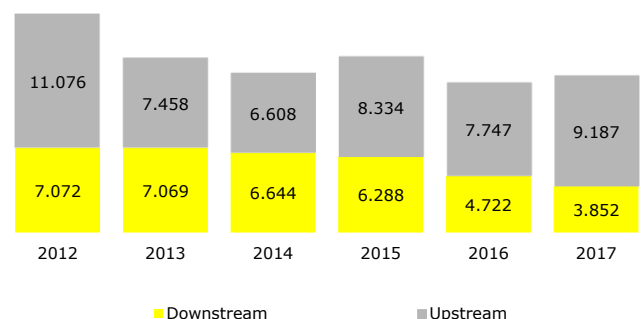
Indirect emissions in scopes 2 and 3 also increased compared to 2016:

- Scope 2 (emissions from the consumption of electricity): increased by 47% compared to 2016. In Portugal, where EDP is the concessionaire for distribution network, the large reduction in hydropower production, mostly held by EDP, led to an increase in the distribution of electricity produced by third parties and, as a consequence, to the increase in emissions associated with that portion of losses of distributed electricity not produced by EDP. Together with the increase in carbon intensity in the country, this justifies the growth of emissions in scope 2. Note that the category of emissions associated with distribution losses represents 99% of the EDP Group emissions in scope 2.
- Scope 3 (other indirect emissions upstream and downstream of the value chain): increased only 4.6% compared to 2016. Upstream activities related to EDP production business - energy and fuels - which account for 70% of the total scope 3 emissions, have grown due to increased use of fossil fuels for electricity generation. Moreover, downstream activities, in particular supply of natural gas, fell by 18% compared to 2016, due to the reduction in the volume of gas sold in the wholesale market in Spain.

**SCOPE 2 EMISSIONS (MTCO<sub>2</sub>)**



**SCOPE 3 EMISSIONS (MTCO<sub>2</sub>)**



Another important vector of mitigation is to promote energy end-use efficiency improvement, to which EDP is strongly committed. For its materiality, this theme is further elaborated on page 105.

## **CO<sub>2</sub> REDUCTION TARGETS SCIENTIFICALLY RECOGNISED**

EDP's commitment to reducing CO<sub>2</sub> emissions is a scientifically valuable contribution to combating climate change. The recognition by the Science Based Target initiative (SBTi) is the first awarded to a Portuguese company.

At stake is the validation of the targets set by EDP, a reduction of 55% of the combined specific scope 1 and 2 emissions by 2030 compared to 2015, plus a 25% reduction of absolute scope 3 emissions by 2030 compared to 2015<sup>1</sup>.



### **CONTEXT**

Climate Change is one of the greatest natural challenges facing humanity, requiring societies and businesses to accelerate their transformation for a more sustainable world. EDP's strategy is based on a strong investment in new renewable capacity, as well as a growing supply of new energy services, where decarbonisation, through both energy efficiency and electrification, are decisive instruments for achieving the level of ambition expressed in the Paris Agreement.

In this agreement, 197 countries pledged to work to keep a global temperature rise this century well below 2°C degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. At the

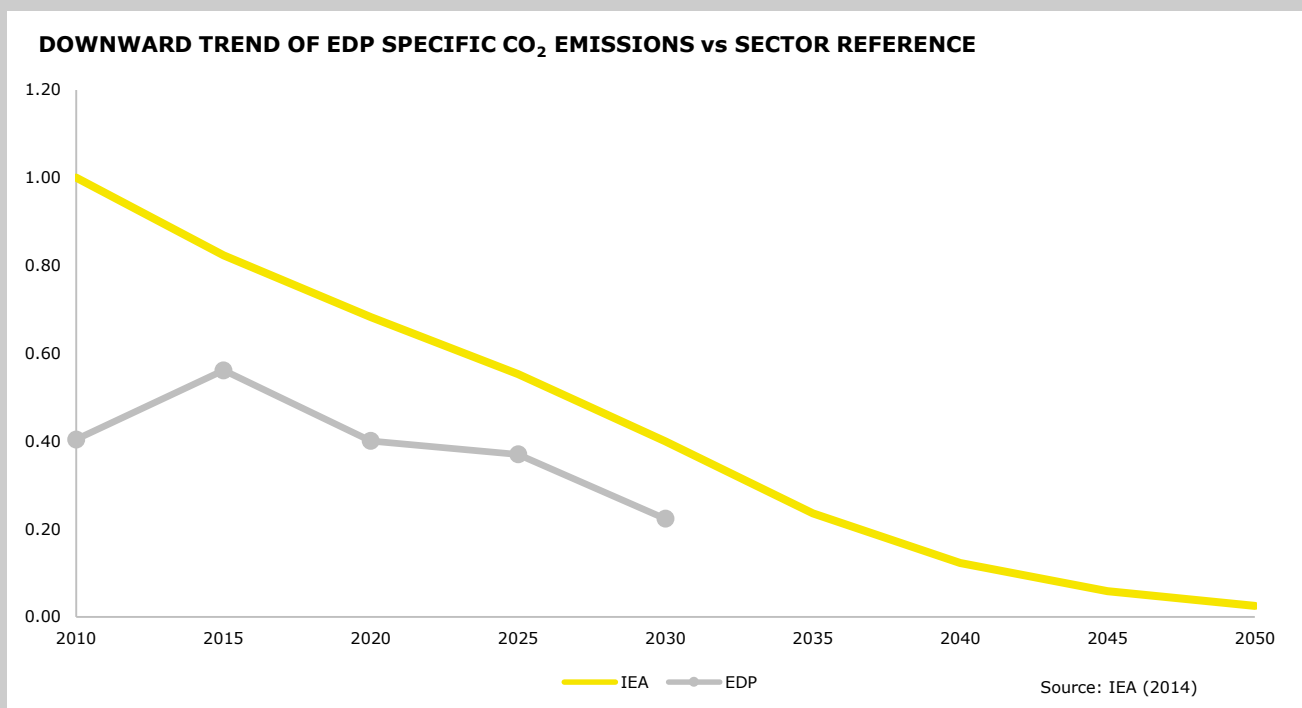
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<sup>1</sup> This target is aligned with the public commitment announced by EDP in 2015 to reduce 75% of its CO<sub>2</sub> specific emissions by 2030, from 2005 levels. This commitment only included scope 1 emissions

same time, the role of the private sector in this effort is also recognised, and companies around the world have responded to a call for greater proactivity and commitment.

**IMPACTS AND RESULTS**

EDP has responded to this invitation by committing itself to reduce its specific CO<sub>2</sub> emissions by 75% by 2030 compared to 2005. Other companies have undertaken public commitments and the challenge is to assess their level of ambition. The Science Based Target initiative has been launched, led by CDP, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF), in collaboration with We Mean Business (WMB), to recognise companies whose commitments are aligned with the recommendations of the United Nations Intergovernmental Panel on Climate Change (IPCC), and the International Energy Agency. This latter entity has projected the evolution that the electricity sector (generation and emissions) will have to follow to contribute to global warming levels below 2°C, the baseline scenario of the Paris Agreement.



**LOOKING FORWARD**

The targets embraced by EDP were recognised in early 2017, making it one of the few world utility companies to demonstrate a strategy aligned with the necessary reduction of CO<sub>2</sub> emissions required by the Paris Agreement. In the future, other specific commitments that help the decarbonisation process will be taken and along the way, EDP will support the initiative either by disseminating it or by supporting other companies to gain recognition, thereby enhancing the active role that the private sector plays in this field.



## **12 PROMOTION OF RENEWABLE ENERGY**

**74%**

Installed capacity in renewable power plants

The production of electricity from renewable sources through investment in new wind, solar and hydro capacity, is the main growth strategy of EDP's business, and considered to be one of the most important topics for stakeholders. According to the current 2016-2020 Business Plan, EDP plans to install 3.5 GW of additional capacity, with an average net investment of 1.4 billion Euros/year, 70% of which is renewables.

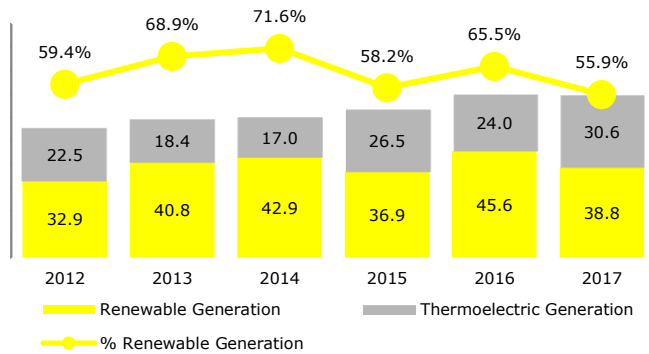
In 2017, the Portuguese hydropower programme proceeded (+1,043 MW with the start-up of the repowering in Venda Nova III and the Foz Tua plant) and the 1st group of the S. Manoel plant in Brazil (58 MW out of a total 233 MW when completed). Meanwhile, installed capacity in wind and solar parks increased by 624 MW (74 MW in Europe, 423 MW in North America and 127 MW in Brazil), reaching 10.7 GW. Thanks to these new assets, installed capacity in renewable power plants has increased to 19.7 GW, now accounting for 74% of the EDP Group's total capacity and approaching the target of 75% by 2020.



Foz Tua Hydroelectric Power Plant

With regard to the electricity produced by renewable power plants in 2017, there was a decrease of around 10 TWh in hydropower production compared to 2016, as a consequence of the severe drought that occurred in the Iberian Peninsula, and in Portugal in particular, where the hydropower index (HPI) was only 0.47, or 53% below the average hydrological year. The increase in production by the wind and solar parks compared to 2016 was 3.1 TWh, but insufficient to compensate for the loss of hydropower generation. For these reasons, the share of electricity produced from renewable sources fell from 66% in 2016 to 56% in 2017.

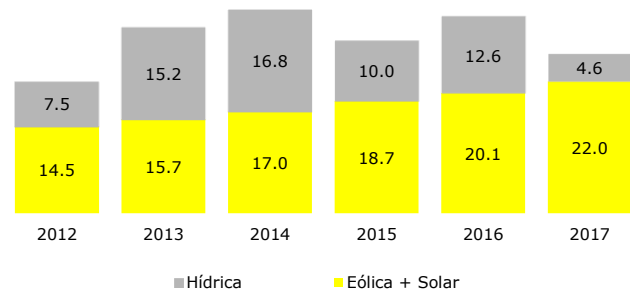
**GENERATION FROM RENEWABLE SOURCES (TWh)**



EDP Renováveis has been focusing on the establishment of long-term contracts for the acquisition of energy produced in renewable power plants by private companies, at a pre-agreed price during a pre-defined period of time, typically between 10 and 15 years - the so-called "Corporate Power Purchase Agreements". These low-risk instruments provide predictability and visibility into future gains that would otherwise be exposed to price volatility in the energy market. For more information, see page 103.

In addition to the recognised environmental benefits and the strong contribution to the mitigation of greenhouse gas emissions, the generation of electricity from renewable sources replaces production from fossil fuels, thus avoiding negative impacts on the environment. The "CO<sub>2</sub> avoided" indicator is meant to reflect this fact and represents the amount of CO<sub>2</sub> that would have been emitted if the power had been produced at thermolectric plants by fossil fuels combustion (coal, gas, oil). Hydropower contribution excludes pumping, since there is no guarantee that it comes from renewable sources. In 2017, CO<sub>2</sub> avoided amounted to 26.6 million tons (Mt), down 6 Mt on 2016, again due to the aforementioned low hydropower production.

**CO<sub>2</sub> AVOID EMISSIONS (Mt)**



## **COMPANIES ACCELERATE GLOBAL RENEWABLES DEMAND**

### **EDP RENOVÁVEIS FOCUSES ON DIRECT SALES TO BUSINESS CUSTOMERS**

EDP Renováveis (EDPR) has signed a contract to sell energy to the US subsidiary of Nestle's agri-food giant. Announced in February and valid for 15 years, this long-term Power Purchase Agreement (PPA) is another step in Renewables' strategy to increase direct electricity sales to large companies. Interesting in terms of the predictability of cash flows it guarantees, this model is expanding at EDP Renewables. It started in the United States, but in the meantime, PPAs have already been signed in Mexico and even in Spain, where the company inaugurated the PPA market with a green energy supply for the Calidad Pascual dairy company.

#### **CONTEXT**

Climate change is increasingly at the top of the global agenda. The Paris Accord has clarified scenarios, risks and established a global framework for action. In response, some of the world's largest companies have been committing to decarbonisation targets publicly.

The corporate PPA market has grown significantly in recent years, with around 19 GW of business signed since 2008. According to Bloomberg New Energy Finance, in 2017 5.4 GW were contracted. The US is the preferred market for corporate PPAs, with around 11.3 GW of agreements signed, according to Bloomberg. The success of the model is due to the compatible framework, volatile and sometimes high electricity prices, the existence of projects with abundant resources and wide availability of skills in the structuring of electricity transactions.

The first entrants in the corporate renewable PPA market were some of the largest technology companies in the world, including Google, Facebook or Amazon. However, the market has recently seen the arrival of a diverse range of companies, including retailers and industrialists, as well as other agents such as city councils, universities and hospitals, who are also taking advantage of the opportunities.

In Europe, the corporate PPA market has experienced a slow start but has grown at a considerable pace over the past five years. Today, more than 3 GW of corporate PPAs have been structured in Europe, with the United Kingdom, the Scandinavian countries and the Netherlands being the largest markets.

Many private companies are setting demanding energy and sustainability goals through international collaborative initiatives, such as RE100. The 122 allied global companies consume 159 TWh of electricity annually, the equivalent of the 24th country in the world ranking. Of this total, more than 50TWh (equal to all electricity consumption in Portugal) is already assured by renewable sources and the objective of each of the participants is to reach 100% of renewable consumption.

Renewable producers, in particular wind and solar, are responding to this demand by designing advantageous solutions for both sides.

#### **SOLUTION**

A Corporate PPA is a contract under which a private company or public institution (other than a public utility) agrees to purchase electricity directly from an energy producer instead of a traditional supplier for a pre-paid price agreed over a pre-agreed period of time, usually between 10 and 15 years. It differs from the traditional utility PPA in the sense that the buyer is not an electricity distributor or a supplier but the final consumer.

Corporate renewable PPAs provide an opportunity for corporations to meet their sustainability strategy commitments, using renewable energy, reducing their carbon footprint and increasing their reputation and brand value.

Corporate renewable PPAs also improve cost predictability, which is especially important in the context of volatile or increasing energy prices, through the ability to price for a long-term period and avoid carbon and environmental



penalties, meeting current and future regulatory requirements. Following the increasing competitiveness of renewable energy technologies, the latest PPAs signed around the world have offered very attractive and stable prices to buyers.

From the point of view of renewable power plants, corporate PPAs bring predictability and visibility into future earnings that otherwise will be exposed to market volatility.

**RESULTS**

EDPR has already signed contracts with the US companies Bloomberg, Amazon Web Services, Home Depot, General Motors, Philips, and Mexico's Peñoles.

**IMPACTS**

Long-term contracts, including those signed directly with corporate clients, are an important risk management tool and improve the financing conditions of investment projects. The predictability of revenues has contributed to the sustained growth of the company.



## 13 ENERGY EFFICIENCY

Promoting energy efficiency improvement is a major priority both for EDP and for its stakeholders. Together with renewable energies it represents one of the key areas of the EDP strategy for combating climate change. Increasing the use of renewable energy sources is vital for strengthening electrification as a key instrument for the decarbonization of the economy, mainly in non-carbon markets. Leveraging electrification may also be achieved by promoting energy efficiency improvement throughout the value chain and, in this context, the key themes are:

- The supply of energy efficiency products and services to our customers in different sectors and to society in general;
- The promotion of electric mobility;
- Internal initiatives for the optimization of power generation efficiency, reduction of distribution losses and in support activities (buildings and fleet).

In this strategic area, EDP has taken on a commitment to achieve at least 1 TWh of electricity savings in our customers' consumption between 2015 and 2020.

### ENERGY EFFICIENCY PRODUCTS AND SERVICES



Active promotion of energy efficiency improvement and demand-side management, together with anticipation of customer needs, is one of the EDP Group's main commitments. In this context, EDP has adapted its organizational structures, business models and operational plans to strengthen its leadership position in the global energy market, by developing and offering its customers innovative products and services (P&S) in the areas of energy efficiency and distributed generation.

These products and services include:

- Energy efficiency improvement projects: supply of more efficient equipment and lighting (LED bulbs, street lighting, high performance engines, electronic speed drives, heat pumps), integrated energy services (e.g., Save to Compete, Cuota Ahorro, E:efficient). It is worth mentioning, in 2017, the extension of the Save to Compete programme to SMEs;
- Energy audits, certification systems and energy management systems (e.g., Re:dy);
- Regulatory programs, either voluntary (Plan for the Promotion of Electricity Consumption Efficiency - PPEC - in Portugal), or mandatory (schemes in Spain and Brazil);
- Intangible measures (awareness raising campaigns, education projects).

In 2017, the P&S made available to customers in Portugal, Spain and Brazil generated energy savings of 214 GWh, thus avoiding 85 kt of CO<sub>2</sub> emissions. Total accumulated savings since 2015 have now reached 494 GWh, avoiding 199 kt of CO<sub>2</sub> emissions. It is expected that the target set for 2020 (savings of 1 TWh) will be largely exceeded. These indicators do not include the measures implemented by EDP under the PPEC, in which the accumulated savings since the start of the programme in 2007 have already reached around 4 TWh, with 1.6 Mt of CO<sub>2</sub> emissions avoided.



## ELECTRIC MOBILITY

Sustainable mobility will be developed primarily through the electrification of transport. On the pathway to decarbonisation, changing from fossil fuels to electricity is the most sustainable long-term solution, as it improves vehicle performance (electric vehicles are more efficient), reduces the use of natural resources and the consequent CO<sub>2</sub> emissions, improves air quality and reduces noise pollution, which results in huge potential benefits for the citizen's health.

In this area, EDP has been acting on two fronts:

- Internally, through a vehicle fleet renewal plan, promoting the increasing introduction of electric and hybrid plug-in vehicles in the light fleet segment, embracing the commitment to the electrification of 100% of the fleet by 2030.
- Externally, through active participation in national electric mobility programmes, EDP partnered with 14 automobile brands. In Portugal, EDP is one of the main operators of the MOBI.E charging infrastructure and offers a range of commercial services, both for charging electric cars in the public domain and for residential customers.

### **In Brazil, EDP and BMW create an electrical corridor between Rio de Janeiro and São Paulo**

The initiative provides for the installation of six charging stations by the end of Quarter 1 2018, for the supply of electric vehicles between the capitals of the two states.

**"Moving towards electrification of mobility is inevitable and EDP wishes to be at the forefront of this transformation"**, Miguel Setas, President of EDP Brasil.

## INTERNAL EFFICIENCY

The following list highlights the internal initiatives carried out in 2017 aiming at improving energy performance of EDP's office buildings, reductions of electricity distribution losses and improved efficiency of powerplants and fleet:

- In EDP Renováveis, 100% of electricity consumption in wind farms (backfeed power) and offices in Spain and the USA is renewable;
- Energy class improvement of the office buildings, through the installation of high efficiency equipment and photovoltaic solar systems for self-consumption: in Portugal, 384 kW of photovoltaic power is installed in 21 office buildings;
- Reduction of electricity distribution grid losses: strategic objective for distribution companies, particularly in Portugal and Brazil, with an emphasis on commercial losses;
- The renewal of the fleet to more efficient vehicles, including electric and hybrid vehicles. Since 2010, the number of electric vehicles has grown tenfold representing, by the end of 2017, 3% of the fleet. Also, the primary energy consumption decreased by 19% and CO<sub>2</sub> emissions by 23%;
- The overall performance of the thermoelectric plants has increased from 45.1% in 2016 to 45.6%, due to the more favourable operating conditions of the CCGT powerplants.

**100% renewable**

**Electricity consumed in EDP Renováveis' offices and wind farms in Spain and in the United States**

## **INTELLIGENT COUNTERS PROMOTE ENERGY EFFICIENCY**

### **LEADING THE TRANSFORMATION IN ELECTRICITY DISTRIBUTION IN SPAIN THROUGH THE DIGITIZATION OF EDP'S HC ENERGÍA NETWORKS**

#### **EXECUTIVE SUMMARY**

Based on the legal obligation to replace all type 5 media equipment (contracted capacity <15 kW) with others to permit a time break-down and remote management, EDP HC Energía has developed the InovGrid project. Through this project, it has completed not only the implementation, commissioning and operation of the new remote measurement and remote management equipment, but also applications have been developed to improve the operations of the power grid and provide customers / marketers with information on consumption to enable savings (Mis Consumos website, [www.edphcenergia.es](http://www.edphcenergia.es)> mis consumos).

#### **CONTEXT**

Order ITC / 3860/2007, dated 28 December, which reviews electricity tariffs as of 1 January, 2008, subsequently amended by Order IET / 290/2012, of 16 February, establishes the obligation to replace all type 5 equipment (contracted capacity <15 kW) with equipment that permits a time break-down and remote management by 31 December 2018.

EDP HC Energía wanted to go further and optimize the new infrastructure by using it for other purposes to improve the operation of the power distribution grid and to provide customers / marketers with more and better information on consumption to make energy savings, distributed generation and deployment of electric vehicles possible.

#### **SOLUTION**

Through the InovGrid project, EDP HC Energía has established the basis for improving asset management, service quality and information support to customers and, through these milestones, it can be said that EDP is leading the transformation in electrical distribution in Spain.

First, the plan for the replacement of traditional meters with remotely managed devices, so-called smart meters, has been implemented. Additionally, 6,500 hubs have been installed. These are devices that enable the connection and data transmission between the company's meters and central services, which really allows us to speak of "network digitization".

This digitization offers greater control of the load of the facilities, which minimizes the risk of overloads, provides faster speeds in the resolution of incidents in the grid and improves the information supplied to customers.

Finally, EDP's pioneering incorporation of the low-voltage grid in the systems will in the long term enable the incorporation of distributed generation and the deployment of the electric vehicle.

#### **IMPACTS**

- Compliance with equipment replacement regulatory milestones;
- Efficiency in investment;
- Installation and orderly commissioning of equipment;
- To achieve a high degree of availability of the equipment to allow the collection of information and the completion of service orders with a high success rate;
- To develop and implement applications of the new equipment to improve the operations of the power grid and provide customers / marketers with information for the best use of electric power.



## **RESULTS**

To date, 94.4% of meters have been replaced, with the campaign forecast to close in April 2018, eight months before the legal deadline.

Also proceed the installation of 7,000 hubs and TCP / IP communications equipment, for network monitoring, that allows better controlled and optimized installations, with better security in grid management using sensors in the transformation centres with 4 alarms (Intrusion, Fire, Flood and Temperature) as well as video surveillance camera.

Efficiency in operations through cost reductions has also been improve:

- LV fault location avoids 1,100 repair visits / year (-0.2 million Euros) and consumes 30 minutes less per incident;
- MV faults, the new information available makes it possible to have a warning alarm and limits the fault location area, resulting in an estimated TIEPI gain of about 3 minutes / year;
- Time data file.

## **LOOKING AHEAD**

Looking ahead:

- Install new alarms on the BT grid:
  - Neutral loss alarm.
  - Over and under voltage alarm;
  - LV phase cut-out alarm.
- Fault prediction through Machine Learning;
- Fraud detection through data analysis;
- Progress in advanced LV grid monitoring:
  - Be prepared for the growth challenges of distributed generation and electric cars.
- Make greater use of tools for asset management and quality of service;
- Improve the information provided to customers connected to our networks.

# **14 COMMUNITY ENGAGEMENT AND DEVELOPMENT**

The EDP Group undertakes Social Investment programmes and activities that combine the satisfaction of social needs and the central themes of each business, as a way of contributing to the sustainable development of the geographies in which it operates. The effective creation of value for society requires the company to target its social investment activities in a meaningful way, allowing it to capitalise on its strengths, its brand and its employees in order to maximise the impact on the beneficiaries.

This is why, through its Foundations in Portugal, Spain and Brazil and its different businesses, the Group undertakes a number of social investment programmes, both within those communities directly impacted by EDP projects, and through social initiatives freely chosen by the company and voluntary work.

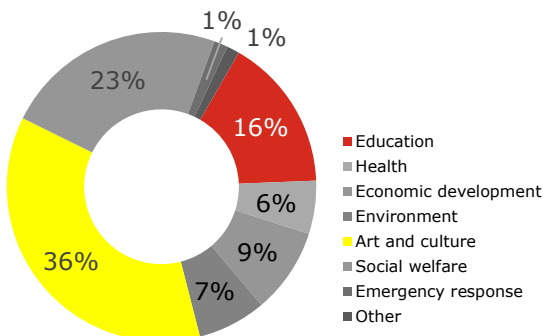
The EDP Group's investment in the community is based on its Social Investment Policy, which comprises four key priorities: (1) to promote access to art and culture and to protect cultural heritage; (2) to promote social inclusion and the adoption of sustainable livelihoods, enhancing energy inclusion and access to energy; (3) to protect natural heritage and biodiversity; (4) to promote energy efficiency, renewable energy and de-carbonisation. Through its Social Investment Policy, EDP actively contributes to the United Nations's Sustainable Development Goals, namely for ODS11, ODS13 and ODS15. EDP evaluates the projects in which it is involved within its social investment policy, through the international LBG methodology (Measuring Community Investment). Using this model, EDP promotes the structured dissemination of its decisions and enables discussion of the results and benefits for communities.

## **CITIZENSHIP**

EDP promotes various voluntary social investment initiatives as a way to both actively contributing to the sustainable development of society and to affirming its strategic vision. In 2017, EDP approved a review of its Social Investment Policy, establishing the objectives, commitments and strategies that guide social responsibility programmes and activities in society, expressed through its own collaborative initiatives, donations and volunteer work ([www.edp.com](http://www.edp.com) > a edp> sobre nós> princípios e políticas> política de investimento social).

EDP's global voluntary investment in 2017 amounted to 28,403 thousand euros, contributing to 486 projects, 105 fewer than the previous year. These values express the company's option to reduce the dispersal of its investment in the community, from 45,366 euros per project in 2016 to an average of 58,443 euros per project.

### **SOCIAL INVESTMENT BY NATURE**



In 2017, with regard to art and culture, we highlight the continuous support to the visual arts, music and dance, developed within the scope of the Museum of Art, Architecture and Technology (MAAT), which enables various artistic projects to reach more than a million people. In terms of social inclusion, the EDP Solidária programme stands out. This aims to support projects promoted by organisations of the Third Sector under three axes: Health, Social Inclusion and Education, which accounted for a contribution in 2017 of 2.3 million Euros and helped 168 organisations. Under the axis of natural heritage and biodiversity protection, the programmes for the reintroduction of the Osprey in Portugal, and the planting of tree species in vast territorial areas are worthy of note.



## **VOLUNTEERING**

Volunteer work is a fundamental pillar of the relationship of the EDP Group with the communities and, at the same time, of the development and motivation of its employees. The EDP Volunteer Programme proposed a new strategy by 2020, approved at the end of 2017, defining as priorities the alignment with the business and an increased impact of skills-based volunteering projects.

In 2017, the EDP Volunteer Programme involved 2,294 volunteer employees, who contributed 24,932 hours within their working hours and 9,416 hours outside working hours. Since the EDP Group's Volunteer Programme is inclusive, 624 retired company volunteers, friends, family and partners were also involved, contributing a total of 2,918 volunteers and 40,647 hours.

In the wake of the fires that ravaged Portugal and Hurricane Harvey in Houston, EDP mobilised its people through the Volunteer Programme to support affected populations.

In Portugal, 398 EDP volunteers used their skills to support the emergency response, as well as reconstruction projects, in a total of 11,951 volunteer hours. In Houston, 159 EDP volunteers worked together to provide emergency support through rebuilding homes, working in shelters, collecting and delivering goods, in a total of about 1,270 volunteer hours.

## **COMMUNITY ENGAGEMENT**

The EDP Group promotes active, transparent engagement with local stakeholders, supported by its Stakeholder Relations Policy ([www.edp.com](http://www.edp.com)> edp> about edp> principles and policies), with the aim of managing this impact and strengthening the positive outcomes of its activity, through the building of partnerships and enduring long-term relationships. During 2017, several initiatives were undertaken with the local communities in EDP projects in different fields, fundamentally focused on social inclusion; stimulating the development of local businesses; raising awareness of environmental protection; and the development of skills.

In 2017, the EDP Rural and Closer2You initiatives, carried out by EDP Renováveis, were particularly notable. The first, undertaken in Brazil in partnership with SEBRAE, involved 65 farmers in the vicinity of the Baixa do Feijão wind farms, and aimed at enabling them to produce and sell their products in order to increase their household income. The second, launched in Romania in 2016 and extended in 2017 to Poland, Portugal and Brazil, involved the refurbishment of five houses, with the aim of improving the living conditions of vulnerable families in the surroundings of the company's wind farms, namely at the level of electricity supply, thermal comfort, running water and other housing improvements.

In the construction of its new developments, EDP seeks to avoid the need to resettle affected communities. Even so, in 2017, the construction of the Mogi-Suzano Distribution Line (88/138kV) in São Paulo, Brazil involved compensation to 64 families and the resettlement of 7 families. In addition, 56 families affected by the construction of Pinheiros distribution line were indemnified, in state of Espírito Santo – Brazil.

The area of indirect influence of the region where the São Manoel Hydropower project is located covers indigenous territories of the Kayabi, Munduruku and Apiaká ethnic groups. Three basic Environmental Plans for Indigenous Peoples (PBAIs), approved by the National Indian Foundation (Funai), were developed under the project's licensing. For more detail on this topic, please see Inclusion of Vulnerable Groups, included in the chapter of Ethics and Human Rights, developed on this report (page 58).



## **NEW EDP GROUP VOLUNTEER PROGRAMME STRATEGY**

### **DESIGN OF THE VOLUNTEER PROGRAMME STRATEGY UNTIL 2020**

#### **EXECUTIVE SUMMARY**

Since its inception in 2011, more than 30,000 participants have joined EDP's Volunteer Programme, giving more than 225,000 volunteer hours, and partnerships with more than 1,800 organizations have been established, impacting the lives of more than 1 million people. Over the years, the Programme has gained its own space within EDP, involving employees in the various countries where EDP is present, and challenging EDP retired employees, their families, friends and partners to participate in voluntary work. Currently, 20% of EDP's employees are volunteers through the company.

In view of EDP's commitment to 8 of the 17 Sustainable Development Goals, the evidence that new generations entering the labour market increasingly favour the involvement of a company with social causes, as well as new trends in corporate pro-bono work, it became clear that the Programme faced external challenges that represented an opportunity to grow internally and externally and to adopt a new strategy. This opportunity became even clearer after work was done to identify the most inspiring practices of corporate volunteer work according to current trends, which showed how companies today align their volunteer programmes with their corporate social responsibility strategies, empowering them and enhancing the skills of their people and the expertise of their businesses.

#### **CONTEXT**

During 2017, in collaboration with the teams that manage volunteer work in the different geographies, and the counterparts and managers of volunteer projects in Portugal, together with the promotion of focus groups in Portugal to listen to employees on the topic, it was possible to identify the most critical issues that should be addressed by the new strategy.







The need became clear to balance human and financial investment in large voluntary campaigns, involving a large number of volunteers, with investment in skills-based volunteer projects, which require a greater investment of volunteer hours, with greater impact on society. In addition, the need to further the involvement of top management in the promotion and recognition of the topic and to communicate volunteering as a pillar of EDP's social responsibility strategy was reinforced.

### **SOLUTION**

The new strategy of the EDP Volunteer Programme advocates a global approach in line with the business strategy, people's skills and their development, and with clearer areas of intervention and investment.

By 2020, the Programme will commit itself to the following goals:

- 20% of employees involved in volunteer initiatives;
- 20,000 hours of work per year dedicated to volunteer work;
- An increase of 10% per year in the number of skills-based volunteer hours;
- 3 new projects linked to the Group's expertise.

### **IMPACTS**

With a revised mission consisting of the "Engagement of our people in the activation of our social responsibility, contributing to the development of the communities where we operate, sharing what we are and do best", the strategy of the Volunteer Programme until 2020 will have as priorities:

- Increase the impact of voluntary projects by aligning them with business expertise and people skills;
- Setting goals and indicators to measure and tell the story of our impact;
- Align the Programme with the new strategy in the different countries where EDP is present.
- Involving and recognising EDP volunteers.

### **RESULTS**

In 2017, in partnership with the teams that manage volunteer projects in the different EDP Group business units, work began on aligning reporting indicators, as well as sharing practices with a focus on skills-based volunteer work and the response to the goals of sustainable development.

Investment in skills-based volunteer work was strengthened throughout the year, especially in Portugal, as was the promotion of volunteer work in corporate development programmes.

The annual balance is of 2,918 volunteers among EDP employees and friends, who shared their energy with the communities where the company operates through more than 40,000 hours of volunteer work.

Our volunteer force has also mobilised to help the populations affected by the fires in Portugal and Hurricane Harvey in Houston. In Portugal, 398 EDP volunteers used their skills to support the emergency response, as well as reconstruction projects, in a total of 11,951 volunteer hours. In Houston, 159 EDP volunteers worked together to provide emergency support through rebuilding homes, working in shelters, collecting and delivering goods, in a total of about 1,270 volunteer hours.

### **LOOKING FORWARD**

The EDP Volunteer Programme will continue to actively contribute to EDP's sustainability and social responsibility strategy, in line with our social investment policy, as well as to enhance talent and develop the skills of our people to change the communities in which we operate.

# 15 PEOPLE MANAGEMENT

People Management in the EDP Group focuses on creating favourable conditions for the contribution of employees to the success and sustainability of the business in an overarching way, across all Group companies. For this reason, the Group's Human Resources strategy, embodied in the Corporate People Plan, is designed in alignment with the Business Plan and seeks to develop and continually value all employees and their alignment with the company's values and culture.

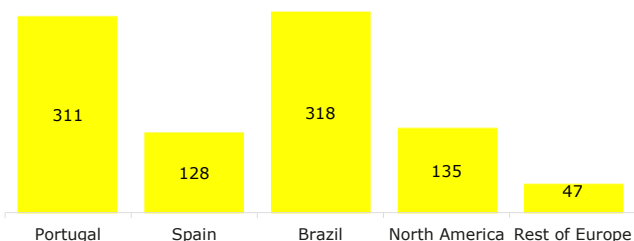
The Corporate People Plan 2016-2020 addresses contemporary and transformational challenges in people management with the aim of supporting the overall evolution of the business by transforming leadership, performance and development models in an increasingly digital work environment. This strategic plan consists of three main areas - generational renewal, leadership transformation and talent growth - and two supporting areas - the continuous search for efficiency in processes and decisions, and the development of the profile and role of Human Resources professionals as agents of change. These five priorities are reflected in a range of initiatives implemented through the culture, leadership and the actual employee, who has the main responsibility for his/her development and career movements.

By creating a positive and differentiating experience throughout the Group's life cycle, we foster a culture that attracts and empowers talent, stimulates personal and professional development, recognizes and rewards excellence and merit, values experience and creates an environment of well-being and productivity. The return on investment of the strategic initiatives defined under this plan is measured through 3 key instruments - the People Scorecard (specific indicators and metrics for the different activity areas), the climate study, and external recognition and assessments.

## ATTRACTING, DEVELOPING AND RETAINING TALENT

### ATTRACTING AND RECRUITING

#### RECRUITMENTS BY GEOGRAPHY(#)



The EDP Group seeks to attract talent by developing a series of initiatives with external stakeholders, such as student associations, universities and other entities. In addition to the usual jobshops and partnerships, 2017 featured the EDP Open Day - an innovative event in the market that opened the doors of the Electricity Museum to 200 students from 10 top schools in Portugal, providing an opportunity to meet 9 Group companies (including EDP Renováveis) - and the EDP PowerTrade University Competition - an energy planning competition for students from the Iberian peninsula which awarded 2 prizes to students with EDP Renováveis in Madrid. EDP Renováveis has organized a series of sessions in universities with the purpose of publicizing its business with a special focus on female engineering students. In EDP Spain, participation in the Asturias employment forums (University of Oviedo and University of Deusto) was reflected in 402 applications, while EDP Brazil participated in the POLI - University of São Paulo - Talent Attraction and Recruitment Fair, which received 6 thousand visitors in 2 event days leading to 49 new recruitments.



These initiatives resulted in 31,111 applications in the different group countries, representing growth of 9% compared to the previous year. EDP promotes the approach of candidates to the job market and the creation of a recruitment pipeline through a range of different internships in the different countries. In two thousand and seventeen 978 internships were hosted – 536 professional internships, 380 student internships and 62 summer internships.

The EDP Group's talent attraction plan led to the recruitment of a large number of new employees to meet business needs: 939 employees joined the company (31% female, up from 24% represented in the total workforce), representing growth of 30% year on year, with 92% of these new recruitments to permanent positions.

## **TRAINING AND SUCCESSION PLAN**

For training in Portugal, 308,320 euros were invested in external training through benchmark educational institutions. These training courses are post-degree level, such as postgraduates or masters courses, and in 2017, they were attended by 74 employees, who benefited from company grants for the delivery of the training. This benefit is a form of recognition for employees, contributing to their retention in the EDP Group.

The challenges of generational renewal and the need for active management of talent in the various business units of the EDP Group led to the definition of the Group's Talent Management Model, which is based on analysis of the critical nature of roles.

Under this model, a talent matrix has been defined for all Group Companies and succession planning has been put in place for all EDP Group management positions. In Top Senior Management (54 positions) 100 successors have been identified, 20% of whom are women. In Senior Management (114 positions), 203 successors have been identified, with representation of women increasing to 30%.

The intention is for the exercise be extended in 2018 to the whole macrostructure and all managers and to specialist positions. A digital tool developed for that purpose, hosted on the company's collaborative portal, is already in use.

## **DEVELOPMENT**

During 2017, EDP provided 473,078 hours' training for the development of its employees.

Given the goal of developing skills to facilitate the transition between segments or life cycle phases, we would highlight four programmes:

- The course "Network Operating Electricians", which aims to equip employees with technical and communication skills in their entry phase to EDP. 22 employees were involved in 2017;
- The "Lead Now Programme", which prepares new leaders, based on the "Amplify" competency model. This programme has a training component, and in the case of Portugal and Spain, it involves Coaching and self-knowledge tools. 28 employees in Portugal, 121 in Spain and 85 in Brazil were involved;
- The "Enhance Experience", a knowledge management programme, for employees with more than 30 years' experience, in which 68 employees shared their knowledge with over 10,300 employees;
- Planning Retirement which addresses the employee's final phase in EDP, preparing the transition from working life to retirement. 182 employees participated in 2017.

Note to the Meaningful Conversations programme, a one-off training initiative, based on the outcomes of a climate study but not part of the school's overall provision. This course was for all leaders and sought to stimulate a culture of meritocracy, transparency and continuous feedback. During the 5,715 hours of training, participants had the opportunity to develop attitudes and skills suitable for holding and managing significant conversations to enhance differentiation of performance and the creation of development opportunities. This programme was initiated in 2016 and extended throughout 2017. It covered 854 group leaders from all countries.

## **SWITCH – MOBILITY AS A DEVELOPMENT PROCESS**

The SWITCH programme promotes employee mobility within the EDP Group and is one of the key on the job development tools. The programme leverages the presence of the Group in different business units of the value chain of the sector and in multiple countries and provides challenges and opportunities for employees, enhancing development not only of technical aspects and work experience, but also the acquisition of new learning in different business units and the development of the network of contacts and formal and informal networking.

In addition to long-term mobility, which involved 957 employees in 2017, with a change of role / activity for 8% of all EDP Group employees, the SWITCH programme also covers the short-term mobility of employees to other areas / companies with specific projects and needs. In this context, during 2017, 28 short-term mobility events took place, lasting 3 - 6 months (20 in Portugal, 3 in Spain and 5 in Brazil), a noteworthy example being the highly specific project with the partner World Business Council for Sustainable Development (WBCSD), involving 1 EDP Group employee, selected as Manager Utilities & Renewables for a period of 6 months in Geneva and Lisbon.

### **BENEFITS**

The EDP Group awards all employees, from all countries, a package of benefits aligned with their needs and associated with their life cycle and family life.

The package includes benefits common to practically all countries: 1) Access to health and safety systems in addition to the public health services of each country; and 2) complementary retirement, personal injury and life insurance plans, among other benefits.

In addition to these benefits, the EDP Group also assigns flexible benefits plans to a wide group of employees, adapted to the legislation of each country. In Portugal, employees covered by the Flexible Benefits Plan (Flex Social Plan), in addition to the above common benefits, have an additional amount available and they can therefore choose from a total of 14 different benefits, funded by this amount. In Spain and the UK also, employees can opt for flexible and maximized pay, by converting part of their annual wage into about 4 benefits that are eligible for tax savings.

## **LABOUR RELATIONS**

EDP maintains a constructive and cooperative relationship with official bodies and the workers' representatives - the workers' committees and trade unions. This relationship is managed, in each country, by local teams guaranteeing daily contact and proximity with the various entities.

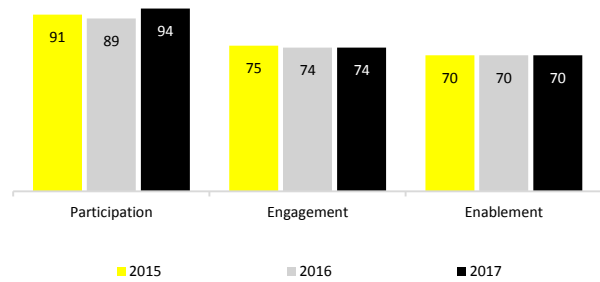
The collective regulation instruments in the countries where EDP operates do not include specific deadlines for reporting the company's operational changes to employees. However, EDP reports organizational changes with an impact on employees, both to the employees themselves and to their representative organizations (which in some countries goes beyond what is stipulated in the national labour law). At the end of 2017, 43% of EDP Group employees were unionized, the largest percentage in Portugal (the country with the largest number of employees).

|                                  | <b>TOTAL</b> | <b>Portugal</b> | <b>Spain</b> | <b>Brazil</b> | <b>North America</b> | <b>Rest of Europe</b> |
|----------------------------------|--------------|-----------------|--------------|---------------|----------------------|-----------------------|
| Collective Bargaining Agreements | 91%          | 99%             | 79%          | 99%           | 0%                   | 43%                   |

## ORGANIZACIONAL CLIMATE

The Organizational Climate reveals the Engagement and perception of organizational support (enablement) of employees, which directly affects their well-being and productivity. EDP Group employee participation in the 2017 Climate Study was 94%, 5 percentage points higher than the previous year. It was found that 75% of employees feel engaged with the company, an increase of 1% over the previous year. This result is in line with the target defined in the 2020 Objectives for the EDP Group and is 2% above the results obtained by companies with superior performance (73%)<sup>2</sup>. It was also concluded that 70% of employees have a high valuation of organizational support, a figure that has remained stable since 2015.

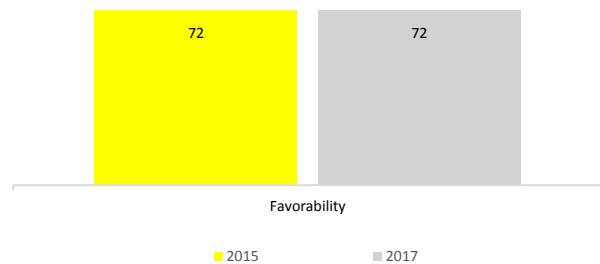
### RESULTS OF THE EDP GROUP CLIMATE STUDY (%)



## WORKLOAD PER PERSON

In the 2017 Climate Study, 72% of employees state that the amount of work expected of them is reasonable. This figure is in line with the 2015 results and puts the EDP Group 6% above the general market norm for this aspect, in relation to the benchmark<sup>2</sup>.

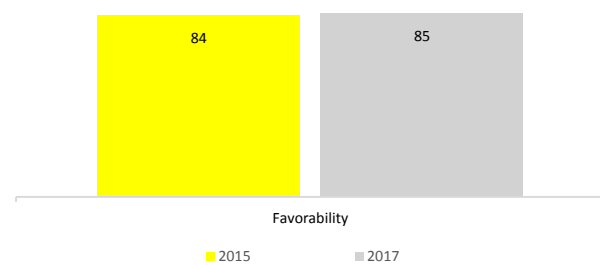
### THE AMOUNT OF WORK EXPECTED OF ME IS REASONABLE (%)<sup>3</sup>



## EMPLOYMENT STABILITY

The EDP Group's Climate Survey 2017 revealed that 85% of employees believe that, in the current context, EDP provides employment stability, a 1% increase compared to 2015. According to the benchmark, this result is 27% above the general market norm<sup>2</sup>.

### IN THE CURRENT CONTEXT, EDP PROVIDES ME EMPLOYMENT STABILITY (%)<sup>3</sup>



<sup>2</sup> In accordance with the Korn Ferry HayGroup's reference standards.

<sup>3</sup> This question is part of the extended climate study, which is carried out every two years, so it is not possible to report the results for 2016.

## **EDP GROUP DIGITAL EMPLOYEE EXPERIENCE**

### **DESIGN OF THE EDP EMPLOYEE LIFE CYCLE JOURNEY**

The EDP Group is committed to making the Employee Experience an outstanding experience in the different countries and companies. The aim is for all occasions for interaction with employees, from the application phase to becoming former employees, to be positive and outstanding experiences.

The Employee Experience project seeks to map the employee's experience in order to identify the current EDP Employee journeys and design those of the future during their life cycle in the Company.

#### **CONTEXT**

Generational Renewal and, therefore, the increase in the number of Millennial employees in EDP's workforce, digital transformation and new technologies, represent challenges related to new ways of working and experiencing the organization in a multi-generational context.

Based on the People Plan 2016-2020 and the results of the organizational climate study, we identified opportunities for improvement that led us to develop the Employee Experience Journey Mapping, which was a process of research and discovery, centred on the EDP employee, in order to overcome the challenges of the employee's experience in an innovative and personalized way, by offering new products and services that are more efficient and effective.

#### **SOLUTION**

As part of this project, the different occasions in the Employee's experience during the course of his / her career at EDP were analysed, to ensure their overall alignment.

The implementation of this cross-cutting project involves around 300 employees from different countries, roles and management levels of the EDP Group, through surveys, individual interviews and design thinking workshops.

Accordingly, the Project has 4 phases:

- Employee Journey: Identification of the employee journey and contact points at each stage of his/her life cycle in EDP;
- Employee Perceptions: Mapping of the journeys, based on the positive and negative perceptions of Employees;
- Employee Aspirations: Design of ideal journeys based on employee inputs;
- Future Journeys: Proposals for new journeys and initiatives (digital and non-digital) that meet the aspirations of Employees, based on real case studies.

#### **IMPACTS**

Understanding the employee experience in EDP enables us to design journeys and initiatives that meet the aspirations of employees and the company's strategy.

The employee's experience and the mapping of the journeys represent a new way of looking at human resources from the perspective of the final customers, the employee him/herself.



## **RESULTS**

A total of 9 Employee life cycle journeys were designed, 6 relating to engagement and 3 to enablement. Solutions have been identified for these journeys to leverage the Employee's experience. They are reflected in Process Improvement Initiatives and Digital Initiatives to be implemented, which constitute a roadmap aligned with best market practices.

Through the Employee Experience mapping, we have developed a simpler, more rewarding and motivating EDP employee experience that promotes greater engagement, from attracting to retaining talent. In addition to this project, EDP's current retirement process in Portugal was analysed in detail, by considering the experience of EDP employees, which resulted in systematization and optimization of the process and identification of gaps compared to the benchmark model and a future vision of the process.



## **16 HEALTH AND SAFETY**

Health and Safety at work (H&S) are priorities in the EDP Group's relationship with all its employees, service providers, suppliers and customers. Both are essential factors for the premise of creating value for all stakeholders. In this area, the Group directs its action through the principles established in the Safety Policy, a document that links business units, companies and service providers, empowering the entire hierarchical structure. For the implementation of the Policy, EDP has the Corporate Safety Management System based on the OHSAS 18001 standard and the ILO-OSH 2001 recommendation of the International Labour Organization. This system can be adopted in its entirety by each of the companies/business units, or, alternatively, taken as a reference for the implementation of their systems.

With its "Zero Accidents" objective, EDP manages the question of safety on the basis of continuous improvement, measured through the definition of targets scheduled in the short and medium term. The existing strategic framework for 2020 provides for: (1) continuous frequency rate reduction in order to achieve less than 2,00 (2) 100% H&S certifications. For 2018, the focus is on promoting safe behaviours and the priority given to learning achieved through the communication of near-misses and dangerous situations. To encourage this preventive attitude, the most recent revision of the Safety Policy expressly provides that no one can be penalized for denouncing situations of potential risk to the worker's safety or health.

EDP is aware that minimizing the risks associated with work activity or the use of electricity depends, in the end, on information and behaviour. For EDP, no work situation or urgency can justify endangering someone's life.

### **SAFETY PRACTICES**

The implementation of EDP's annual H&S plan was based on a set of actions aimed at preventing occupational accidents, as measured by a reduction in the frequency rates and the severity of accidents and occupational illnesses, and included training for EDP employees and service providers (brokers, contractors, subcontractors, consultants...), the ongoing evaluation and control of labour risks and the implementation of an internal and external inspection and audit programme of EDP facilities and works.

In management of emergency situations, 484 drills were carried out across the EDP Group, covering various industrial facilities and ongoing activities, whose aim was to test the effectiveness of the respective emergency plans. These drills included the involvement of civil protection, fire and police authorities and public safety.

For EDP, the issue of prevention and people's safety is important because it is an issue that has a direct impact on people's lives. Thus, the risks arising from activities, as well as those associated with facilities and equipment, are identified. In 2017, there were 10 fatal electrical related accidents with third parties (unrelated to EDP activity) in EDP Group facilities or with EDP Group equipment. These occurred in the course of civil construction activities that led to the contact of machines/work equipment with power lines and unauthorized access to live facilities/equipment.

### **PROMOTING HEALTH AT WORK**

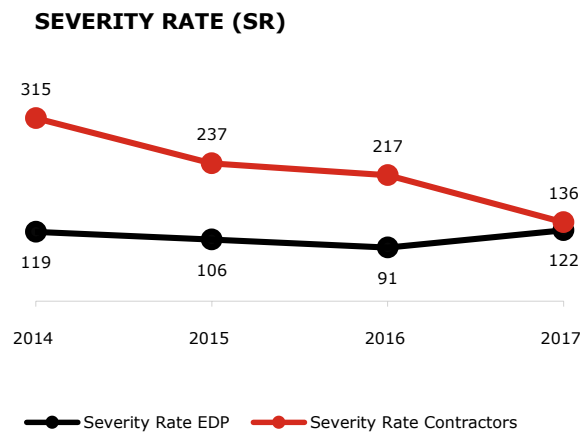
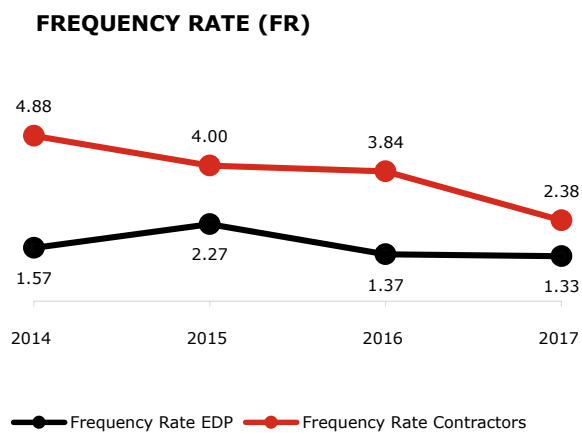
The EDP Group, through health monitoring programmes, guarantees the commitment made in the prevention of occupational illnesses, by complying with the medical examination plan, workplace visits, participation in commissions, and the implementation of preventive campaigns. During 2017, 10,400 medical examinations were carried out in the EDP Group, 470 consultations with employees who have nutrition and smoking cessation programmes, 2,153 cardiovascular screenings and 2,896 vaccination programmes against flu, hepatitis B and yellow fever that covered 2,998 employees. Also, in the ambit of the occupational health activities, were carried out tests of alcoholism and drugs detection involving 1,268 employees. In 2017, 2 cases of occupational disease were recognized without impairment in Portugal.



## SAFETY INDICATORS

In 2017, the EDP Group counted a total of 4,382 employees covered by OHSAS 18001:2007 certifications. The certification covers 86% of installed net power in production activities.

In 2017, 128 work accidents occurred in the EDP Group for all EDP employees and service providers, representing a reduction of 32% compared to 2016. The frequency and the severity rate were 2.03 work accidents, per million hours worked, in the period in question (decreased 32% compared to 2016) and 131 days lost due to work accident, per million hours worked, in the period in question (decreased 24% compared to 2016), respectively. In 2017, there were 4 fatal accidents with service providers (1 fall in height and 3 road accident).



These indicators reflect the results of the actions and initiatives implemented during the year in reinforcing preventive action and participation of service providers, namely in the areas of training and awareness (154,496 hours of OH&S training, involving 23,937 workers), risk assessment and monitoring, audits and inspections, and information reporting (41,339 audits and inspections of installations and works, 2,289 reporting of near-misses situations).

## **ENVIRONMENTAL AND SAFETY MANAGEMENT IN EDP COMERCIAL AND EDP SOLUÇÕES COMERCIAIS**

### **CERTIFICATION ACCORDING TO ISO 14001:2015 AND OHSAS 18001:2007**

Protection of the Environment and the Health and Safety at Work of Employees and Service Providers represent some of the fundamental foundations of the EDP Group's culture, embodied in the strategic objective stipulated by EDP, which specifies in PDL 20/2017 of May 16 the safety certification of all EDP Group companies until 2020.

In recent years, EDP Comercial (EDPC) and EDP Soluções Comerciais (EDPSC) have experienced an increase in services rendered, which translates into greater operational activity through the collaboration of external bodies who are business partners. The occupational risks to which the Employees and Service Providers of these companies are exposed are a subject of concern. Occupational Health and Safety (OH&S) must therefore be guaranteed in all activities undertaken. In addition, new equipment provided by the Organization to industrial and domestic customers requires environmental and occupational risk assessments, namely in the strategic thinking and planning phases of the operations, and thereby incorporating a Life Cycle perspective.

Thus, in order to comply with corporate guidelines on sustainability and corporate social responsibility, in 2016 an Integrated Environmental and Safety Management System (SIGAS) was implemented and certified in EDPC, which in 2018 will be extended to include the management of the environment and the safety of activities carried out in EDPSC. The project will be coordinated by EDPC's the Environmental and Safety Department of the (AAS) of the Institutional Relations, Communication and HR Direction (DICRH), with the co-operation of (i) managers of the Business Units affected by both companies, (ii) EDP Imobiliária, (iii) EDP Valor and (iv) Direção de Sustentabilidade.

#### **CONTEXT**

In recent years, EDP Comercial (EDPC) and EDP Soluções Comerciais (EDPSC) have experienced an increase in customer services, which translates into greater operational activity through the collaboration of external bodies who are business partners. The scalable growth of the energy services business that is envisaged, and the search for effectiveness and efficiency in Contractor performance in EDPC and EDPSC, will necessarily require a greater control of the Environment and Occupational Health and Safety areas in terms of contracting and sub-contracting undertaken by the Organization.

Considering that, currently, EDPC and EDPSC have a total of (i) approximately 750 Employees; (ii) 45 stores and offices; (iii) 260 agents distributed throughout the country; and (iv) more than 5,000 Service Provider Employees, the objective is to guarantee the implementation, maintenance and continuous improvement of mechanisms that allow the management of environment and safety in all activities undertaken in EDPC and EDPSC.

#### **SOLUTION**

The implementation of SIGAS in EDPC and EDPSC in accordance with ISO 14001:2015 and OHSAS 18001:2007, in order to ensure environmental and occupational risk control in both organizations, is being phased in from 2013, with the project expected to be completed in October 2018. Between 2013 and 2014, the Environmental Management System (SGA) was implemented in EDPC, with a fundamentally strategic scope. Between 2014 and 2015, the scope of the SGA was broadened to include all activities undertaken in EDPC. In 2016, the SGA implemented in EDPC was transitioned according to the ISO 14001: 2004 benchmark for the new benchmark, ISO 14001:2015. At the end of 2016, the Safety Management component in the existing SGA was included, constituting the SIGAS of EDPC. The System was duly audited and certified by Lloyds Quality Register Assurance (LQRA) in October 2016, in accordance with the aforementioned benchmarks. In 2017, the System was consolidated and extended to include all activities undertaken in EDPSC. In 2018, all SIGAS components will be effectively implemented in EDPSC in order to guarantee the extension of the scope of the existing certification in EDPC, to include both companies.

**IMPACTS**

The main objectives of the project are to guarantee (i) zero work accidents and (ii) zero environmental accidents in the activities carried out by EDPC and EDPSC, as well as (iii) maintenance of the environmental and safety certification of the EDPC and the (iv) certification of the EDPSC in these same benchmarks. In addition, (v) the monitoring of legal, reputational, environmental, and occupational risks, as well as (vi) the monitoring of companies, persons and equipment related to EDPC and EDPSC activities, the (vii) empowerment of resources, (viii) providing information relevant to the sustainability report, and (ix) safeguarding the interests of the Organization, are complementary objectives of the project.

**RESULTS**

The results obtained to date are quite positive, and the following may be listed: (i) no fines or environmental and safety penalties have been recorded in EDPC; (ii) measures have been implemented to avoid complaints, accidents and near misses, through (a) environmental and safety inspections carried out by the IEP and ISQ, and co-ordinated by the DICRH-AAS, (b) environmental and safety inductions before new employees begin work (c) Document Management with GEDOC, (d) reinforcement of the DICRH-AAS with permanent staff and trainees to support the team, (e) VODAFONE ReadyCheckGo.

**LOOKING FORWARD**

By maintaining (and maturing) SIGAS in EDPC and by extending the management system to the EDPSC, it will be possible to promote more sustainable leadership practices, which are key to the monitoring of environmental and safety risks in both companies. The participation of organization managers in training, awareness-raising and information activities related to environment and safety issues, as well as in the start-up and feedback meetings with Suppliers, Employees, Clients and other social partners, will ensure the continuous improvement of the management system, and the creation of shared value for all.

**THE**  
**LIVING ENERGY**  
**BOOK**

by *edp*





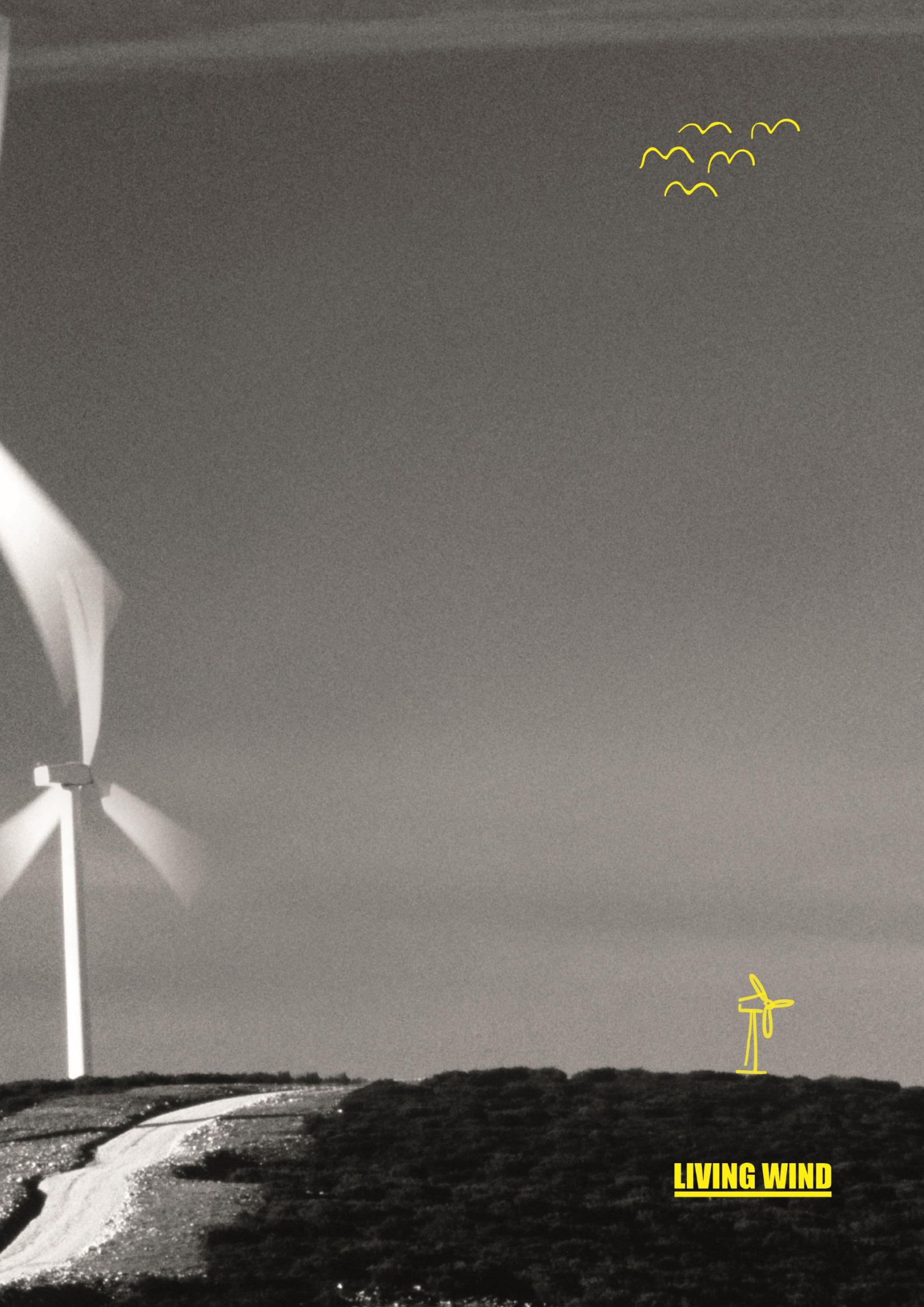
# 04

## INDICATORS

|                        |     |
|------------------------|-----|
| Sustainability Indices | 127 |
| Tables of Indicators   | 129 |







**LIVING WIND**

# **SUSTAINABILITY INDICES**

EDP is present in some sustainability indices, in particular the following:

## **SRI ANALYST: ROBECOSAM**

- Eligible index: S&P Global BMI
- Sustainability indexes: DJSI / Switzerland index family

This is one of the oldest sustainability indexes, which focuses on significant sustainability issues and is based on the best-in-class methodology. The composition of the indexes (e.g. World; North America; Europe; Asia Pacific; Korea) is derived from the analysis of three dimensions of sustainability: environment, social and economic. Each dimension includes several criteria, covering various issues representing important requirements to be considered in assessing the sustainability performance of a company. EDP has been a member since 2008.

| <b>ROBECOSAM</b>   | <b>2014</b>  | <b>2015</b>  | <b>2016</b>  | <b>2017</b>  |
|--------------------|--------------|--------------|--------------|--------------|
| EDP Score (*)      | 88           | 83           | 89           | 91           |
| Ranking (**)       | 1º out of 52 | 7º out of 55 | 4º out of 58 | 2º out of 64 |
| DJSI World member  | Y            | Y            | Y            | Y            |
| DJSI Europe member | Y            | N            | N            | Y            |

(\*) Score between 0 and 100

(\*\*) Electrical Utilities Peers - includes companies not comparable with EDP, e.g. only operating in electricity transmission. EDP is # 1 integrated utility in the world.

## **ESG CRITERIA**

| <b>EDP SCORE</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
|------------------|-------------|-------------|-------------|-------------|
| Economic         | 89          | 83          | 92          | 89          |
| Environmental    | 84          | 78          | 82          | 91          |
| Social           | 90          | 90          | 96          | 94          |

## **SRI ANALYST: FTSE RUSSEL**

- Eligible index: FTSE4Good Indexes
- Sustainability indexes: FTSE4Good Indexes

SRI methodology developed in partnership with the Russell indexes based on an analysis of the 3 ESG sustainability areas:

- Environmental: environmental management; climate change; water use; biodiversity; pollution and resources; supply chain;
- Social: supply chain; customer responsibility; Human Rights and Community; Labour Standards and Prevention & Security;
- Corporate governance: anti-corruption; fiscal transparency; risk management; corporate governance. EDP has been a member since 2010.

| <b>FTSE RUSSEL</b>                                     | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> |
|--|-------------|-------------|-------------|-------------|
| EDP Score (*)  | 4,2         | 4,2         | 4,1         | 4,1         |
| Percentiles (**)                                       | 94          | 95          | 94          | 92          |
| Member of FTSE 4 Good Index Series (Global and Europe) | S           | S           | S           | S           |

(\*) Score between 0 and 5

(\*\*)Position of the company relative to its peers in the Utilities Supersector



**ESG CRITERIA**

| EDP SCORE     | 2014 | 2015 | 2016 | 2017 |
|---------------|------|------|------|------|
| Governance    | 4,5  | 4,3  | 4,3  | 4,7  |
| Environmental | 3,9  | 3,7  | 3,7  | 3,7  |
| Social        | 4,3  | 4,6  | 4,4  | 4,0  |

**SRI ANALYST: CDP**

Questionnaire that evaluates companies on environmental issues and allows one to evidence the positioning of companies in the process of transition to the low carbon economy. EDP has responded since 2008.

| CDP CARBON            | 2014 | 2015 | 2016 | 2017 |
|-----------------------|------|------|------|------|
| Score Disclosure (*)  | 96   | 100  | n.a. | n.a. |
| Score Performance (*) | B    | A    | A    | A-   |

(\*) Until 2015 the CDP result covered 2 components: disclosure e performance. Since 2016 the rating has had 4 progressive categories: disclosure (D- and D), awareness (C- and C), management (B- and B) and leadership (A- and A).

**SRI ANALYST: OEKOM**

- Eligible index: FTSE4Good Indexes
- Sustainability indexes: FTSE4Good Indexes

The companies are evaluated by OEKOM research based on a pool of about 100 indicators specific to each type of industry. These come under the environmental and social dimensions. EDP has had Prime status since 2009.

| OEKOM                                 | 2014  | 2015  | 2016  | 2017  |
|---------------------------------------|-------|-------|-------|-------|
| EDP Score (*)                         | B-    | B-    | B-    | B-    |
| EDP Status                            | Prime | Prime | Prime | Prime |
| Member of Global Challenge Index (**) | N     | N     | N     | N     |

(\*) The score is between A+ (excellent performance) and D- (poor performance)

(\*\*) EDP is excluded because it owns nuclear assets.

**SRI ANALYST: MORGAN STANLEY CAPITAL INTERNATIONAL**

- Eligible index: MSCI
- Sustainability index: MCSI ESG index family

Companies are evaluated against their environmental, social and corporate governance practices and their management of the associated risks and opportunities. EDP has had AAA rating since 2012.

| MSCI          | 2014 | 2015 | 2016 | 2017 |
|---------------|------|------|------|------|
| EDP Score (*) | AAA  | AAA  | AAA  | AAA  |

EDP belongs to MSCI ACWI ESG Leaders; MCSI World ESG Index; MCSI Europe ESG Index; MCSI World Low Carbon Leaders Index and MCSI ACWI Low Carbon Leaders Index

(\*) Score varies between "AAA" and "CCC", on a 7-point scale.

## SRI ANALYST: SUSTAINALYTICS

- Eligible index: Stoxx Global 1800 Index
- Sustainability indexes: STOXX ESG & Sustainability/Switzerland and Netherlands index

Sustainalytics is a supplier of SRI information which has been operating in the market since 2009. In 2011 it created the Global ESG Leaders indices in partnership with STOXX Limited. The basis of the evaluation process is the standard defined by the DVFA (Society of Investment Professionals in Germany) and EFFAS (the European Federation of Financial Analysts Societies). EDP has been a member of these indices since 2015.

| SUSTAINALYTICS            | 2015 | 2016                      | 2017                      |
|---------------------------|------|---------------------------|---------------------------|
| EDP Score (*)             | 80   | 86                        | 85                        |
| Ranking                   | n.d. | 4 <sup>o</sup> out of 225 | 3 <sup>o</sup> out of 197 |
| STOXX ESG Leaders Indices | Y    | Y                         | Y                         |

## ESG CRITERIA

| EDP SCORE     | 2015 | 2016 | 2017 |
|---------------|------|------|------|
| Governance    | n.d. | 93   | 90   |
| Environmental | n.d. | 77   | 82   |
| Social        | n.d. | 94   | 86   |

## SRI ANALYST: VIGEO

- Eligible index: NYSE Euronext
- Sustainability indexes: VIGEO-EIRIS/France family of indices

The companies are evaluated by the analyst VIDEO SA based on the VIGEO's Equitics methodology which covers 6 areas and more than 300 indicators (environment, human resources, human rights, community engagement, behaviour in business and corporate governance).

| VIGEO         | 2012                     | 2014                     | 2016                     |
|---------------|--------------------------|--------------------------|--------------------------|
| EDP Score (*) | 56                       | 59                       | 61                       |
| Ranking (*)   | 5 <sup>o</sup> out of 34 | 9 <sup>o</sup> out of 43 | 5 <sup>o</sup> out of 48 |

EDP belongs to the ETHIBEL Sustainability Indices; ESI Excellence Global; Euronext Vigeo Family

\* comparable peers





# TABLES OF INDICATORS

## MATERIALITY

| CORPORATE GOVERNANCE          | UN | 2017 | 2016 | 2015 | 2014 |
|-------------------------------|----|------|------|------|------|
| Number of members             |    |      |      |      |      |
| EBD                           | #  | 8    | 8    | 8    | 7    |
| GSB                           | #  | 21   | 21   | 21   | 23   |
| Number of independent members |    |      |      |      |      |
| GSB                           | #  | 11   | 11   | 11   | 12   |
| Number of women               |    |      |      |      |      |
| EBD                           | #  | 0    | 0    | 0    | 0    |
| GSB                           | #  | 2    | 2    | 2    | 1    |

| ETHICS AND HUMAN RIGHTS                                    | UN   | 2017  | 2016  | 2015  | 2014  |
|--|------|-------|-------|-------|-------|
| <b>ETHICS</b>  |      |       |       |       |       |
| <b>CLAIMS</b>  |      |       |       |       |       |
| Total claims <sup>1</sup>                                  | #    | 426   | 406   | 317   | 220   |
| Claims before the Ethics Committee <sup>2</sup>            | #    | 141   | 52    | 54    | 63    |
| Complaints classification by authorship                    |      |       |       |       |       |
| Client   | #    | 21    | 12    | 15    | 23    |
| Citizen  | #    | 10    | 5     | 0     | 5     |
| Employee   | #    | 26    | 11    | 18    | 13    |
| Supplier   | #    | 10    | 4     | 1     | 0     |
| Anonymous  | #    | 74    | 20    | 20    | 22    |
| Complaints classification by category                      |      |       |       |       |       |
| Fairness of solutions                                      | #    | 1     | 5     | 2     | 5     |
| Neglect or disrespect                                      | #    | 77    | 7     | 26    | 33    |
| Transparency   | #    | 41    | 10    | 3     | 4     |
| Use of information or assets                               | #    | 11    | 29    | 21    | 14    |
| Environment and responsibility towards society             | #    | 1     | 0     | 0     | 5     |
| Fraud, corruption and bribery                              | #    | 10    | 1     | 2     | 2     |
| Actions determined by the Ethics Committee                 |      |       |       |       |       |
| Revisions/improvements of procedures                       | #    | 26    | 15    | 25    | 11    |
| Compensation of damages                                    | #    | 0     | 5     | 9     | 2     |
| Disciplinary action  | #    | 3     | 4     | 3     | 5     |
| Training   | #    | 4     | 10    | 1     | 3     |
| Other  | #    | 18    | 10    | 9     | 6     |
| <b>INFORMATION SECURITY / CYBERSECURITY</b>                |      |       |       |       |       |
| Information security incidents <sup>3</sup>                | #    | 1,624 | 686   | 150   | 80    |
| Fines for violation of privacy and loss of customers' data | #    | 4     | 6     | 7     | 3     |
| Fines for violation of privacy and loss of customers' data | 000€ | 110   | 50    | 266   | 120   |
| <b>TRANSPARENCY IN INSTITUTIONAL RELATIONS</b>             |      |       |       |       |       |
| Costs related to lobbying                                  | 000€ | 3,845 | 3,550 | 3,413 | 3,191 |
| <b>HUMAN RIGHTS</b>  |      |       |       |       |       |
| Human Rights Policy  | s/n  | s     | s     | s     | s     |
| Human Rights due diligence process                         | s/n  | s     | s     | s     | s     |

<sup>1</sup> Entries registered in the complaint channels Ethics of EDP Group

<sup>2</sup> The other claims were quickly and efficiently processed with the Business Units involved

<sup>3</sup> The evolution is explained by the greater robustness in the detection capacity of this indicator and the larger number of cyberattacks.

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| <b>BUSINESS SUSTAINABILITY</b>              | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-----------|-------------|-------------|-------------|-------------|
| <b>Economic Value Generated</b>             | 000€      | 17,234,143  | 15,899,739  | 17,277,905  | 17,672,099  |
| Turnover                                    | 000€      | 15,745,987  | 14,595,164  | 15,516,799  | 16,293,883  |
| Other income                                | 000€      | 1,488,156   | 1,304,575   | 1,761,106   | 1,378,216   |
| <b>Economic Value Distributed</b>           | 000€      | 14,910,471  | 14,550,903  | 14,242,365  | 14,476,248  |
| Employees                                   | 000€      | 680,833     | 660,616     | 652,979     | 555,438     |
| Suppliers                                   | 000€      | 11,345,442  | 9,805,006   | 10,062,093  | 10,926,754  |
| Shareholders                                | 000€      | 690,924     | 672,588     | 672,588     | 672,158     |
| Financial sector                            | 000€      | 1,248,089   | 1,790,803   | 1,768,737   | 1,532,742   |
| Community                                   | 000€      | 28,403      | 26,811      | 27,412      | 26,254      |
| State                                       | 000€      | 783,940     | 1,386,814   | 858,117     | 648,490     |
| Other                                       | 000€      | 132,839     | 208,265     | 200,439     | 114,412     |
| Economic Value Accumulated <sup>1</sup>     | 000€      | 2,323,672   | 1,348,836   | 3,035,540   | 3,195,851   |
| Gross value added per employee              | 000€/#    | 402         | 370         | 409         | 412         |
| CAPEX                                       | 000€      | 1,725,487   | 1,963,702   | 1,787,867   | 1,871,647   |
| EBITDA                                      | 000€      | 3,989,949   | 3,759,307   | 3,923,958   | 3,642,393   |
| Net Debt/EBITDA                             | x         | 3.48        | 4.24        | 4.43        | 4.68        |
| Regulated EBITDA vs. LT Contracted          | %         | 84          | 86          | 91          | 89          |
| Opex/Gross Margin                           | %         | 29          | 27          | 28          | 28          |
| Net profit attributable to EDP shareholders | 000€      | 1,113,169   | 960,561     | 912,703     | 1,040,448   |

<sup>1</sup> Includes retention of results and non-payable costs

| <b>COMMUNICATION AND TRANSPARENCY</b> | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---------------------------------------|-----------|-------------|-------------|-------------|-------------|
| Current tax                           | 000€      | 178,419     | 824,342     | 280,024     | 114,539     |
| Support from public authorities       | 000€      | 42,118      | 51,246      | 82,157      | 72,116      |

| <b>RESEARCH, DEVELOPMENT AND INNOVATION</b> | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-----------|-------------|-------------|-------------|-------------|
| Investment in RDI <sup>1</sup>              | 000€      | 64,518      | 36,145      | 35,845      | 31,641      |
| Investment in RDI/Turnover                  | %         | 0.41        | 0.25        | 0.23        | 0.19        |
| Number of employees in RDI                  | #         | 105         | 102         | 68          | 64          |

<sup>1</sup> In 2017, the calculation process of this indicator was changed.

| <b>DIGITAL TRANSFORMATION</b>                   | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-----------|-------------|-------------|-------------|-------------|
| <b>Number of meetings per videoconference</b>   |           |             |             |             |             |
| Number of meetings                              | #         | 348         | 279         | n.d.        | n.d.        |
| Use of the videoconference service <sup>1</sup> | h/ano     | 94,116      | 51,744      | n.d.        | n.d.        |
| <b>Robotisation</b>                             |           |             |             |             |             |
| Number of robotised activities                  | #         | 184         | n.d.        | n.d.        | n.d.        |
| Robotised hours/year                            | h/ano     | 196,792     | n.d.        | n.d.        | n.d.        |
| <b>Smart meters</b>                             | #         | 1,900,703   | 1,213,360   | 656,790     | n.d.        |
| Portugal  | #         | 1,269,840   | 693,049     | 242,000     | n.d.        |
| Spain   | #         | 614,863     | 506,411     | 400,890     | n.d.        |
| Brazil  | #         | 16,000      | 13,900      | 13,900      | n.d.        |
| Clients with Re:dy                              | #         | 9,973       | 5,903       | 2,146       | 200         |

<sup>1</sup> The number of hours per year of the videoconference service use in 2016 corresponds only to Portugal and Spain, not available for the other geographies.



| SUPPLIER MANAGEMENT                               | UN | 2017   | 2016   | 2015   | 2014   |
|---|----|--------|--------|--------|--------|
| <b>Suppliers Global Acquisitions</b>              |    |        |        |        |        |
| Suppliers   | #  | 16,832 | 17,078 | 18,647 | 19,439 |
| Portugal  | #  | 5,121  | 5,683  | 5,275  | 5,411  |
| Spain   | #  | 2,102  | 2,567  | 2,641  | 2,711  |
| Brazil  | #  | 4,934  | 4,705  | 4,263  | 3,438  |
| North America                                     | #  | 890    | 668    | 3,456  | 4,066  |
| Rest of the world                                 | #  | 4,212  | 4,025  | 3,545  | 3,813  |
| <b>Suppliers Global Acquisitions &gt; €75,000</b> |    |        |        |        |        |
| Suppliers   | #  | 1,165  | 2,260  | 2,010  | 2,087  |
| Portugal  | #  | 658    | 732    | 687    | 665    |
| Spain   | #  | 326    | 387    | 368    | 370    |
| Brazil  | #  | 624    | 655    | 497    | 426    |
| North America                                     | #  | 372    | 201    | 193    | 316    |
| Rest of the world                                 | #  | 290    | 323    | 304    | 310    |
| <b>Suppliers Volume of Purchases</b>              |    |        |        |        |        |
| Portugal  | MC | 3,312  | 3,235  | 2,832  | 2,720  |
| Spain   | MC | 826    | 924    | 989    | 1,136  |
| Spain   | MC | 229    | 278    | 243    | 214    |
| Brazil  | MC | 854    | 780    | 683    | 546    |
| North America                                     | MC | 1,081  | 862    | 637    | 534    |
| Rest of the world                                 | MC | 322    | 391    | 280    | 290    |
| <b>Local Suppliers Volume of Purchases</b>        |    |        |        |        |        |
| Suppliers   | %  | 97     | 94     | 92     | 97     |
| Portugal  | %  | 98     | 95     | 90     | 95     |
| Spain   | %  | 100    | 90     | 86     | 95     |
| Brazil  | %  | 98     | 90     | 88     | 100    |
| North America                                     | %  | 94     | 99     | 100    | 98     |
| Rest of the world                                 | %  | 100    | 97     | 99     | 98     |
| <b>Certified Critical Suppliers</b>               |    |        |        |        |        |
| ISO 14001   | %  | 30     | 30     | 31     | 29     |
| OHSAS 18001                                       | %  | 27     | 28     | 27     | 25     |
| <b>Fuel supply <sup>1</sup></b>                   |    |        |        |        |        |
| <b>Suppliers <sup>2</sup></b>                     |    |        |        |        |        |
| Portugal  | #  | 73     | 72     | 63     | 33     |
| Portugal  | #  | 33     | 34     | 29     | 21     |
| Spain   | #  | 34     | 30     | 37     | 12     |
| Brazil  | #  | 6      | 11     | 5      | 0      |
| <b>Turnover</b>                                   |    |        |        |        |        |
| Portugal  | MC | 1,444  | 986    | 1,365  | 349    |
| Portugal  | MC | 521    | 370    | 427    | 208    |
| Spain   | MC | 756    | 479    | 808    | 141    |
| Brazil  | MC | 167    | 137    | 129    | 0      |
| <b>Local</b>                                      |    |        |        |        |        |
| Portugal  | %  | 50     | 57     | 38     | 45     |
| Portugal  | %  | 36     | 48     | 55     | 33     |
| Spain   | %  | 68     | 74     | 36     | 66     |
| Brazil  | %  | 12     | 22     | 0      | 0      |
| <b>Certified fuel suppliers</b>                   |    |        |        |        |        |
| ISO 9001  | %  | 77     | 83     | n.d.   | 45     |
| ISO 14001   | %  | 78     | 82     | n.d.   | 41     |
| OHSAS 18001                                       | %  | 78     | 78     | n.d.   | 36     |
| <b>Coal origin</b>                                |    |        |        |        |        |
| Colombia  | %  | 79     | 92     | 96     | 1      |
| USA   | %  | 8      | 1      | 1      | 0      |
| South Africa                                      | %  | 2      | 4      | n.a.   | 0      |
| Russia  | %  | 11     | 1      | 2      | 0      |
| Spain   | %  | n.d.   | 1      | 1      | n.a.   |
| Ukraine   | %  | n.a.   | n.a.   | n.a.   | 0      |

<sup>1</sup> In the total number of Group EDP suppliers, the companies which have business in more than one geography are counted only once.

<sup>2</sup> Includes fuel purchases and associated services.

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| <b>CUSTOMER SERVICE AND SATISFACTION</b>                                 | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-----------|-------------|-------------|-------------|-------------|
| <b>NUMBER OF CUSTOMERS</b>   |           |             |             |             |             |
| Electricity  | #         | 9,886       | 9,806       | 9,712       | 9,693       |
| Regulated market   | #         | 4,818       | 4,941       | 5,224       | 5,918       |
| Liberalised market   | #         | 5,068       | 4,865       | 4,488       | 3,775       |
| Gas  | #         | 1,585       | 1,498       | 1,405       | 1,311       |
| Regulated market   | #         | 96          | 106         | 122         | 158         |
| Liberalised market   | #         | 1,489       | 1,392       | 1,283       | 1,153       |
| <b>CUSTOMERS SATISFACTION</b>  |           |             |             |             |             |
| Overall customers satisfaction   | %         | 74          | 77          | 77          | 78          |
| Portugal   | %         | 75          | 78          | 77          | 76          |
| Spain  | %         | 71          | 69          | 64          | 67          |
| Brazil   | %         | 74          | 78          | 79          | 83          |
| <b>CUSTOMERS BY TYPE OF USE <sup>1</sup></b>                             |           |             |             |             |             |
| <b>Electricity customers</b>   |           |             |             |             |             |
| Domestic   | %         | 87          | 87          | 87          | n.d.        |
| Industrial   | %         | 1           | 1           | 3           | n.d.        |
| Commercial   | %         | 8           | 7           | 2           | n.d.        |
| Agriculture  | %         | 2           | 3           | 3           | n.d.        |
| Other  | %         | 1           | 2           | 6           | n.d.        |
| <b>Gas customers</b>   |           |             |             |             |             |
| Domestic   | %         | 97          | 97          | 98          | n.d.        |
| Industrial   | %         | 0           | 0           | 0           | n.d.        |
| Commercial   | %         | 1           | 1           | 1           | n.d.        |
| Agriculture  | %         | 0           | 0           | 0           | n.d.        |
| Other  | %         | 1           | 2           | 1           | n.d.        |
| <b>CUSTOMER OMBUDSMAN</b>  |           |             |             |             |             |
| <b>Ombudsman's answer orientation <sup>2</sup></b>                       |           |             |             |             |             |
| Concordant   | %         | 38          | 38          | 43          | 45          |
| Discordant   | %         | 7           | 4           | 16          | 20          |
| Partial concordant   | %         | 25          | 23          | 5           | 4           |
| Resolved issues  | %         | 31          | 35          | 36          | 31          |
| <b>SERVICE QUALITY</b>   |           |             |             |             |             |
| <b>Portugal</b>  |           |             |             |             |             |
| Installed Capacity Equivalent Interruption Time <sup>3</sup>             | Min       | 53          | 50          | 54          | 60          |
| <b>Spain</b>   |           |             |             |             |             |
| Installed Capacity Equivalent Interruption Time <sup>3</sup>             | Min       | 20          | 24          | 34          | 29          |
| <b>Brazil</b>  |           |             |             |             |             |
| <b>Average Interruption Duration per Consumer</b>                        |           |             |             |             |             |
| Bandeirante  | h         | 7.9         | 9.0         | 8.4         | 7.6         |
| Escelsa  | h         | 8.6         | 9.3         | 9.1         | 10.4        |
| <b>Frequency of Interruptions per Consumer</b>                           |           |             |             |             |             |
| Bandeirante  | #         | 5.0         | 5.7         | 5.1         | 5.3         |
| Escelsa  | #         | 5.3         | 5.6         | 5.1         | 6.5         |
| <b>SERVICE RECONNECTION</b>  |           |             |             |             |             |
| <b>Electricity Supply Reconnection After Payment of Debt by Customer</b> |           |             |             |             |             |
| <b>Portugal <sup>4</sup></b>   |           |             |             |             |             |
| < 4h (urgent)  | #         | 237,312     | 244,949     | 290,727     | 310,457     |
| < 8h (other clients)   | #         | 17,834      | 12,469      | 14,090      | 13,221      |
| < 12h (clients NLV)  | #         | 1,089       | 1,431       | 1,236       | 1,493       |
| < 12h (clients NLV)  | #         | 218,389     | 231,049     | 275,401     | 295,743     |
| <b>Spain <sup>5</sup></b>  |           |             |             |             |             |
| < 24 hours   | #         | 12,553      | 12,009      | 13,147      | 13,059      |
| < 48 hours   | #         | 11,297      | 8,432       | 8,828       | 5,624       |
| between 48 hours and 1 week  | #         | 999         | 679         | 854         | 3,902       |
| > 1 week   | #         | 239         | 1,099       | 1,346       | 1,338       |
| > 1 week   | #         | 18          | 1,799       | 2,119       | 2,195       |
| <b>Brazil</b>  |           |             |             |             |             |
| < 24h  | #         | 551,875     | 473,362     | 283,973     | 296,244     |
| < 1 week   | #         | 471,847     | 427,047     | 232,812     | 225,145     |
| > 1 week   | #         | 75,431      | 43,167      | 42,114      | 65,174      |
| > 1 week   | #         | 4,597       | 3,148       | 9,047       | 5,925       |
| <b>E-VOICING</b>   |           |             |             |             |             |
| Portugal   | %         | 34          | 29          | 23          | 18          |
| Spain  | %         | 35          | 33          | 27          | 24          |
| Brazil   | %         | 15          | 8           | 1           | 0           |
| Supplementary energy services revenues <sup>6</sup>                      | 000€      | 969,740     | 912,846     | 928,578     | 894,202     |
| Fines paid for failure in supply and use of products and services        | 000€      | 3,486       | 3,690       | 4,171       | 2,229       |

<sup>1</sup> In 2014 this indicator was not divided in electricity and gas.

<sup>2</sup> Does not include gas in Portugal.

<sup>3</sup> ICEIT in MV grid, excluding extraordinary effects.

<sup>4</sup> The values include service reconnection within the deadlines set by the regulator, representing 99% of the total reconnections.

<sup>5</sup> The time periods considered concern the time elapsed between the power cut due to the customer's lack of payment and its reconnection.

<sup>6</sup> Supplementary energy services revenues include the following categories: Energy Management, Maintenance and Operation, Property/Facility Management, Energy and/or Equipment Supply, Provision of Service (example: steam) and other.



| VULNERABLE CUSTOMERS         | UN | 2017    | 2016    | 2015    | 2014    |
|------------------------------|----|---------|---------|---------|---------|
| Customers with social tariff | #  | 879,941 | 871,019 | 326,108 | 326,944 |
| Portugal                     | #  | 661,103 | 662,829 | 93,451  | 28,615  |
| Spain                        | #  | 56,961  | 59,011  | 60,041  | 63,003  |
| Brazil                       | #  | 161,877 | 149,179 | 172,616 | 235,326 |

| ENVIRONMENTAL MANAGEMENT                | UN                               | 2017      | 2016      | 2015      | 2014      |
|---|----------------------------------|-----------|-----------|-----------|-----------|
| <b>ISO 14001 CERTIFICATION</b>          |                                  |           |           |           |           |
| ISO 14001 certification <sup>1</sup>    | %                                | 88        | 91        | 89        | 95        |
| <b>PREVENTION OF POLLUTION</b>          |                                  |           |           |           |           |
| Total NOx emissions                     | kt                               |           |           |           |           |
| Portugal                                | kt                               | 6.1       | 5.2       | 5.9       | 4.6       |
| Spain                                   | kt                               | 6.0       | 5.9       | 14.6      | 11.8      |
| Brazil                                  | kt                               | 4.9       | 5.2       | 4.0       | n.a.      |
| Total SO2 emissions                     | kt                               |           |           |           |           |
| Portugal                                | kt                               | 4.3       | 3.5       | 4.9       | 3.9       |
| Spain                                   | kt                               | 8.2       | 6.5       | 13.6      | 10.5      |
| Brazil                                  | kt                               | 17.2      | 9.9       | 5.8       | n.a.      |
| Total particulate matter emissions      | kt                               |           |           |           |           |
| Portugal                                | kt                               | 0.04      | 0.04      | 0.02      | 0.04      |
| Spain                                   | kt                               | 0.56      | 0.61      | 0.94      | 0.55      |
| Brazil                                  | kt                               | 0.89      | 0.52      | 0.45      | n.a.      |
| <b>WASTEWATER</b>                       |                                  |           |           |           |           |
| Discharge into sea                      | 10 <sup>3</sup> x m <sup>3</sup> | 1,723,329 | 1,481,107 | 1,694,911 | 1,613,846 |
| Discharge into inland and estuary water | 10 <sup>3</sup> x m <sup>3</sup> | 9,014     | 4,502     | 14,471    | 7,350     |
| <b>WASTE</b>                            |                                  |           |           |           |           |
| Specific waste production               | t/GWh                            | 11.11     | 9.22      | 10.14     | 6.04      |
| <b>NATURAL RESOURCES</b>                |                                  |           |           |           |           |
| Specific fresh water usage              | 10m <sup>3</sup> /GWh            | 0.25      | 0.48      | 0.89      | 0.36      |
| <b>Fuel</b>                             |                                  |           |           |           |           |
| Coal                                    | TJ                               | 204,044   | 169,582   | 209,191   | 134,676   |
| Natural gas                             | TJ                               | 57,013    | 39,160    | 28,810    | 12,886    |
| Diesel                                  | TJ                               | 182       | 230       | 183       | 175       |
| Fuel oil                                | TJ                               | 183       | 373       | 272       | 391       |
| Waste gas                               | TJ                               | 15,016    | 10,994    | 13,634    | 13,125    |
| <b>Chemicals consumption</b>            |                                  |           |           |           |           |
| Sodium hydroxyde                        | t                                | 1,682     | 1,561     | 1,864     | 1,196     |
| Hydrochloric acid                       | t                                | 3,225     | 2,734     | 2,245     | 1,857     |
| Sodium hypochlorite                     | t                                | 3,006     | 4,268     | 2,820     | 276       |
| Ammonia                                 | t                                | 22,821    | 23,259    | 23,058    | 17,889    |
| Calcareous                              | t                                | 77,299    | 58,096    | 126,327   | 74,664    |
| Acquired oils                           | t                                | 90        | 120       | 341       | 186       |
| Environmental fines                     | 000€                             | 19        | 29        | 35        | 78        |

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.



| <b>CLIMATE CHANGE</b>   | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-----------|-------------|-------------|-------------|-------------|
| <b>HYDROPOWER INDEX</b>   |           |             |             |             |             |
| Portugal  | #         | 0.47        | 1.33        | 0.74        | 1.27        |
| Espanha   | #         | 0.52        | 1.10        | 0.82        | 1.34        |
| <b>EMISSIONS</b>  |           |             |             |             |             |
| <b>Specific CO<sub>2</sub> emissions <sup>1</sup></b>                                   |           |             |             |             |             |
| Global  | g/kWh     | 334         | 271         | 340         | 276         |
| Thermal   | g/kWh     | 756         | 787         | 813         | 971         |
| <b>CO<sub>2</sub> equivalent emissions</b>  |           |             |             |             |             |
| <b>SCOPE 1</b>  |           |             |             |             |             |
| Stationary combustion   | kt        | 23,159      | 18,931      | 21,550      | 16,551      |
| SF6 Emissions   | kt        | 10          | 8           | 8           | 7           |
| Company fleet   | kt        | 20          | 18          | 18          | 18          |
| Natural gas consumption   | kt        | 0.22        | 0.48        | 0.46        | 0.48        |
| Natural gas losses  | kt        | 0           | 5           | 6           | 4           |
| <b>SCOPE 2 (Location-based <sup>2</sup> and Market-based <sup>3</sup>) <sup>4</sup></b> |           |             |             |             |             |
| Electricity consumption in office buildings   | kt        | 0           | 0           | 2           | 1           |
| Electricity losses in distribution  | kt        | 795         | 540         | 957         | 609         |
| Renewable plants self-consumption   | kt        | 7           | 8           | 23          | 23          |
| <b>SCOPE 3</b>  |           |             |             |             |             |
| Purchased goods and services (C01)  | kt        | 54          | 55          | 53          | 37          |
| Capital Goods (C02)   | kt        | 324         | 287         | 251         | 232         |
| Fuel and energy related activities (C03)  | kt        | 8,344       | 7,091       | 7,636       | 6,185       |
| Upstream transportation and distribution (C04)  | kt        | 454         | 304         | 385         | 145         |
| Business Travels (C06)  | kt        | 11          | 11          | 9           | 8           |
| Use of sold products (C11)  | kt        | 3,852       | 4,722       | 6,288       | 6,644       |
| <b>SF6</b>  |           |             |             |             |             |
| Portugal  | kg        | 422         | 331         | 333         | 310         |
| Spain   | kg        | 307         | 213         | 194         | 188         |
| Brazil  | kg        | 59          | 40          | 65          | 38          |
| North America   | kg        | 55          | 77          | 63          | 80          |
| Rest of the world   | kg        | 0           | 0           | 5           | 3           |
|   | kg        | 0           | 1           | 5           | 1           |

<sup>1</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plant in Spain. Includes only stationary emissions.

<sup>2</sup> Based on global emission factors of each geography.

<sup>3</sup> Based in the suppliers' emission factors.

<sup>4</sup> Calculation methodology of Scope 2 was revised to avoid emissions duplication with scope 1.

| <b>PROMOTION OF RENEWABLE ENERGY</b>         | <b>UN</b>         | <b>2017</b>   | <b>2016</b>   | <b>2015</b>   | <b>2014</b>   |
|--|-------------------|---------------|---------------|---------------|---------------|
| <b>Total installed capacity</b>              | <b>MW</b>         | <b>26,597</b> | <b>25,067</b> | <b>24,208</b> | <b>22,313</b> |
| <b>Renewable installed capacity</b>          | <b>MW</b>         | <b>19,695</b> | <b>18,158</b> | <b>17,059</b> | <b>15,816</b> |
| Wind   | MW                | 10,531        | 9,969         | 9,199         | 8,067         |
| Hydro  | MW                | 8,870         | 7,946         | 7,614         | 7,510         |
| Mini-Hydro                                   | MW                | 148           | 160           | 164           | 157           |
| Solar  | MW                | 145           | 82            | 82            | 82            |
| <b>Non-renewable installed capacity</b>      | <b>MW</b>         | <b>6,902</b>  | <b>6,910</b>  | <b>7,149</b>  | <b>6,497</b>  |
| CCGT   | MW                | 3,729         | 3,736         | 3,736         | 3,736         |
| Coal   | MW                | 3,124         | 3,124         | 3,364         | 2,643         |
| Cogeneration and Waste                       | MW                | 49            | 49            | 49            | 118           |
| Renewable installed capacity                 | %                 | 74            | 72            | 70            | 70            |
| <b>Total net generation <sup>1</sup></b>     | <b>GWh</b>        | <b>69,345</b> | <b>69,634</b> | <b>63,356</b> | <b>59,919</b> |
| <b>Generation from renewable sources</b>     | <b>GWh</b>        | <b>38,762</b> | <b>45,611</b> | <b>36,875</b> | <b>42,908</b> |
| Wind   | GWh               | 27,466        | 24,334        | 21,237        | 19,695        |
| Hydro  | GWh               | 10,901        | 20,589        | 15,138        | 22,515        |
| Mini-Hydro                                   | GWh               | 240           | 549           | 349           | 631           |
| Solar  | GWh               | 155           | 139           | 151           | 67            |
| <b>Generation from non-renewable sources</b> | <b>GWh</b>        | <b>30,583</b> | <b>24,023</b> | <b>26,481</b> | <b>17,011</b> |
| CCGT   | GWh               | 8,892         | 6,103         | 4,537         | 2,101         |
| Coal   | GWh               | 21,444        | 17,665        | 21,630        | 14,543        |
| Cogeneration and Waste                       | GWh               | 247           | 255           | 314           | 367           |
| Generation from renewable sources            | %                 | 55.9          | 65.5          | 58.2          | 71.6          |
| Avoided CO <sub>2</sub> emissions            | ktCO <sub>2</sub> | 26,620        | 32,724        | 28,732        | 33,818        |

<sup>1</sup> The total net generation includes steam.



| ENERGY EFFICIENCY  | UN                | 2017    | 2016    | 2015    | 2014    |
|--|-------------------|---------|---------|---------|---------|
| <b>INTERNAL ENERGY EFFICIENCY</b>                                    |                   |         |         |         |         |
| Thermal efficiency   | %                 | 45.6    | 45.1    | 44.0    | 44.1    |
| Coal plants  | %                 | 35.6    | 35.7    | 35.1    | 35.6    |
| Natural gas combined cycle plant                                     | %                 | 53.5    | 52.5    | 51.5    | 49.0    |
| Energy intensity   | MJ/€              | 17.6    | 15.1    | 16.3    | 10.5    |
| Grid extension   | Km                | 338,179 | 337,492 | 335,686 | 333,313 |
| Overhead lines   | Km                | 284,310 | 283,904 | 282,472 | n.d.    |
| Underground lines  | Km                | 53,869  | 53,588  | 53,214  | n.d.    |
| Electricity Distribution grid losses                                 |                   |         |         |         |         |
| Technical losses   | %                 | 5.6     | 5.7     | 5.7     | 5.6     |
| Total losses   | %                 | 9.2     | 9.2     | 9.4     | 9.7     |
| <b>EXTERNAL ENERGY EFFICIENCY</b>                                    |                   |         |         |         |         |
| Savings in energy efficiency services <sup>1</sup>                   | GWh               | 214     | 155     | 126     | 70      |
| CO <sub>2</sub> avoided emissions in the final customer <sup>1</sup> | ktCO <sub>2</sub> | 85      | 68      | 46      | 24      |
| Billing of Energy Efficiency Services                                | '000€             | 134,114 | 92,975  | 79,877  | 68,080  |

<sup>1</sup> Reviewed and harmonized methodology for all geographies, applied since 2015. Excludes Consumption Efficiency Promotion Plan (PPEC) projects.

| COMMUNITY ENGAGEMENT AND DEVELOPMENT                      | UN   | 2017   | 2016   | 2015   | 2014   |
|---|------|--------|--------|--------|--------|
| <b>INVESTMENT IN THE COMMUNITY <sup>1</sup></b>           |      |        |        |        |        |
| Category  | 000€ | 27,337 | 25,424 | 25,879 | 23,939 |
| Nonstrategic investment                                   | 000€ | 822    | 1,975  | 209    | 451    |
| Strategic investment                                      | 000€ | 25,855 | 21,990 | 23,556 | 22,474 |
| Commercial initiative                                     | 000€ | 660    | 1,459  | 2,114  | 1,014  |
| Nature  | 000€ | 27,337 | 25,424 | 25,879 | 23,939 |
| Education   | 000€ | 4,384  | 3,014  | 4,316  | 4,040  |
| Health  | 000€ | 1,519  | 1,745  | 1,814  | 1,689  |
| Economic development                                      | 000€ | 2,434  | 2,637  | 1,692  | 1,438  |
| Environment   | 000€ | 1,961  | 1,617  | 2,296  | 2,004  |
| Art and culture   | 000€ | 9,923  | 10,361 | 7,234  | 8,487  |
| Social welfare  | 000€ | 6,360  | 5,226  | 3,839  | 2,997  |
| Emergency response  | 000€ | 393    | 24     | 183    | 8      |
| Other   | 000€ | 363    | 800    | 4,505  | 3,276  |
| Type  | 000€ | 27,336 | 25,424 | 25,879 | 23,939 |
| Cash contributions  | 000€ | 24,375 | 23,194 | 23,289 | 21,443 |
| Kind contributions  | 000€ | 105    | 250    | 71     | 814    |
| Working time contributions                                | 000€ | 2,856  | 1,980  | 2,519  | 1,682  |
| Management costs  | 000€ | 1,067  | 1,387  | 1,533  | 2,315  |
| Total value of contributions (including management costs) | 000€ | 28,403 | 26,811 | 27,412 | 26,254 |
| Beneficiary entities                                      | #    | 1,573  | 1,778  | 1,994  | 1,237  |
| <b>CORPORATE VOLUNTEERING <sup>2</sup></b>                |      |        |        |        |        |
| EDP Volunteers  | #    | 2,294  | 2,153  | 2,404  | 2,248  |
| EDP time used in volunteering                             | h    | 24,932 | 15,835 | 17,534 | 14,123 |
| Beneficiary entities                                      | #    | 417    | 345    | 332    | 242    |

<sup>1</sup> Determined according to the LBG methodology. Not yet validated by Corporate Citizenship. Data belonging to 2014 have been rectified after LBG's audit, with some projects valuated and management costs reduced.

<sup>2</sup> Alignment of reporting criteria in the years 2014 to 2016.

**SUSTAINABILITY REPORT**  
**EDP 2017**

| <b>PEOPLE MANAGEMENT</b>                               | <b>UN</b> | <b>2017</b> | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-----------|-------------|-------------|-------------|-------------|
| Employees  | #         | 11,657      | 11,992      | 12,084      | 11,798      |
| Female   | %         | 24          | 24          | 23          | 23          |
| Male   | %         | 76          | 76          | 77          | 77          |
| <b>Employees distribution by professional category</b> |           |             |             |             |             |
| EBD  | #         | 8           | 8           | 8           | 7           |
| Female   | #         | 0           | 0           | 0           | 0           |
| Male   | #         | 8           | 8           | 8           | 7           |
| Senior Management                                      | #         | 750         | 733         | 700         | 706         |
| Female   | #         | 166         | 155         | 145         | 135         |
| Male   | #         | 584         | 578         | 555         | 571         |
| Supervisors  | #         | 766         | 806         | 782         | 714         |
| Female   | #         | 208         | 223         | 195         | 169         |
| Male   | #         | 558         | 583         | 587         | 545         |
| Specialists  | #         | 4,093       | 3,996       | 3,896       | 3,711       |
| Female   | #         | 1,423       | 1,351       | 1,285       | 1,195       |
| Male   | #         | 2,670       | 2,645       | 2,611       | 2,516       |
| Technicians  | #         | 6,041       | 6,450       | 6,698       | 6,660       |
| Female   | #         | 1,010       | 1,100       | 1,166       | 1,197       |
| Male   | #         | 5,031       | 5,350       | 5,532       | 5,463       |
| <b>Employees distribution by age group</b>             |           |             |             |             |             |
| > 50   | #         | 4,477       | 4,910       | 5,171       | 5,267       |
| Female   | #         | 835         | 907         | 945         | 936         |
| Male   | #         | 3,642       | 4,004       | 4,226       | 4,331       |
| [30-49]  | #         | 5,632       | 5,601       | 5,423       | 5,150       |
| Female   | #         | 1,529       | 1,527       | 1,463       | 1,391       |
| Male   | #         | 4,103       | 4,075       | 3,960       | 3,759       |
| < 30   | #         | 1,549       | 1,481       | 1,490       | 1,381       |
| Female   | #         | 444         | 396         | 383         | 369         |
| Male   | #         | 1,105       | 1,085       | 1,107       | 1,012       |
| <b>Employees distribution by geography</b>             |           |             |             |             |             |
| Portugal   | %         | 54          | 54          | 55          | 57          |
| Spain  | %         | 14          | 16          | 15          | 16          |
| Brazil   | %         | 25          | 25          | 25          | 23          |
| North America  | %         | 4           | 3           | 3           | 3           |
| Rest of the world                                      | %         | 2           | 2           | 2           | 2           |
| <b>Eligible employees for retirement</b>               |           |             |             |             |             |
| EBD  | #         |             |             |             |             |
| 1 to 5 years   | #         | 1           | 1           | 0           | n.d.        |
| 5 to 10 years  | #         | 4           | 4           | 4           | n.d.        |
| Senior Management                                      |           |             |             |             |             |
| 1 to 5 years   | #         | 135         | 149         | 155         | 155         |
| 5 to 10 years  | #         | 208         | 222         | 235         | 255         |
| Supervisors  |           |             |             |             |             |
| 1 to 5 years   | #         | 79          | 106         | 103         | 94          |
| 5 to 10 years  | #         | 137         | 174         | 187         | 197         |
| Specialists  |           |             |             |             |             |
| 1 to 5 years   | #         | 414         | 409         | 375         | 339         |
| 5 to 10 years  | #         | 675         | 703         | 699         | 693         |
| Technicians  |           |             |             |             |             |
| 1 to 5 years   | #         | 1,923       | 1,999       | 1,964       | 1,872       |
| 5 to 10 years  | #         | 2,617       | 2,947       | 3,200       | 3,353       |
| <b>Ratio EDP minimum wage/National minimum wage</b>    |           |             |             |             |             |
| Portugal   | x         | 1.49        | 1.54        | 1.60        | 1.54        |
| Spain  | x         | 1.30        | 1.40        | 1.42        | 1.42        |
| Brazil   | x         | 1.43        | 1.49        | 1.58        | 1.31        |
| USA  | x         | 2.47        | 2.34        | 2.24        | 1.87        |
| <b>Reasons for leaving/geography</b>                   |           |             |             |             |             |
| End of fixed-term contracts                            | %         | 3           | 3           | 3           | 2           |
| Terminated by mutual agreement                         | %         | 4           | 3           | 6           | 1           |
| Terminated by employee                                 | %         | 14          | 17          | 18          | 16          |
| Dismissals   | %         | 22          | 28          | 25          | 23          |
| Early retirements                                      | %         | 27          | 31          | 29          | 46          |
| Age/invalidity retirement                              | %         | 6           | 10          | 10          | 6           |
| Other reasons for leaving                              | %         | 25          | 8           | 10          | 5           |



| PEOPLE MANAGEMENT                                | UN  | 2017    | 2016    | 2015    | 2014    |
|--|-----|---------|---------|---------|---------|
| <b>Salary ratio F/M by professional category</b> |     |         |         |         |         |
| <b>Technicians</b>                               |     |         |         |         |         |
| Portugal   | x   | 1.16    | 1.13    | 1.13    | 0.90    |
| Spain  | x   | 0.77    | 0.81    | 0.80    | 1.19    |
| Brazil   | x   | 0.97    | 0.99    | 1.00    | 0.97    |
| USA  | x   | 1.08    | 1.09    | 1.10    | 0.97    |
| Rest of the world                                | x   | 1.32    | 1.04    | 0.93    | 1.06    |
| <b>Specialists</b>                               |     |         |         |         |         |
| Portugal   | x   | 0.90    | 0.91    | 0.93    | 1.09    |
| Spain  | x   | 0.91    | 0.90    | 0.89    | 1.10    |
| Brazil   | x   | 0.81    | 0.78    | 0.80    | 1.23    |
| USA  | x   | 0.93    | 0.93    | 0.96    | 0.98    |
| Rest of the world                                | x   | 0.88    | 0.89    | 0.96    | 1.16    |
| <b>Supervisors</b>                               |     |         |         |         |         |
| Portugal   | x   | 0.98    | 0.96    | 0.97    | 1.01    |
| Spain  | x   | 0.85    | 0.88    | 0.86    | 1.15    |
| Brazil   | x   | 0.94    | 1.09    | 1.00    | 1.03    |
| USA  | x   | 1.02    | 1.01    | 1.11    | 0.95    |
| Rest of the world                                | x   | 1.44    | 0.78    | 0.70    | 1.52    |
| <b>Senior Management</b>                         |     |         |         |         |         |
| Portugal   | x   | 0.92    | 0.90    | 0.90    | 1.13    |
| Spain  | x   | 0.86    | 0.87    | 0.82    | 1.20    |
| Brazil   | x   | 0.86    | 0.79    | 0.81    | 1.17    |
| USA  | x   | 1.02    | 1.03    | 1.03    | 0.96    |
| Rest of the world                                | x   | 0.58    | 0.73    | 0.78    | 1.26    |
| <b>Employees satisfaction</b>                    |     |         |         |         |         |
| Engagement                                       | %   | 75      | 74      | 75      | n.d.    |
| Enablement                                       | %   | 70      | 70      | 70      | n.d.    |
| HC ROI per employee                              | %   | 0.19    | 0.17    | 0.18    | 0.27    |
| Training investment per employee                 | €/p | 372     | 496     | 485     | 550     |
| Training amount                                  | h   | 473,078 | 389,883 | 443,105 | 516,659 |
| Turnover   | %   | 9.04    | 6.38    | 6.32    | 6.32    |

| HEALTH AND SAFETY              | UN | 2017 | 2016 | 2015 | 2014 |
|--------------------------------|----|------|------|------|------|
| <b>Employees</b>               |    |      |      |      |      |
| Accidents at work <sup>1</sup> | #  | 28   | 30   | 49   | 33   |
| Fatalities                     | #  | 0    | 0    | 1    | 0    |
| Frequency rate <sup>2</sup>    | Tf | 1.33 | 1.37 | 2.27 | 1.57 |
| Severity rate <sup>3</sup>     | Tg | 122  | 91   | 106  | 119  |
| <b>Contractors</b>             |    |      |      |      |      |
| Accidents at work <sup>1</sup> | #  | 100  | 155  | 138  | 189  |
| Fatalities                     | #  | 4    | 3    | 4    | 8    |
| Frequency rate <sup>2</sup>    | Tf | 2.38 | 3.84 | 4.00 | 4.88 |
| Severity rate <sup>3</sup>     | Tg | 136  | 217  | 237  | 315  |

<sup>1</sup> Accidents at the workplace in worktime and accidents on the way to or from work, with an absence of one more calendar days and fatal accidents.

<sup>2</sup> Work accidents by a million worked hours.

<sup>3</sup> Number of calendar days lost due to work accident by a million worked hours.

## ADDITIONAL INDICATORS

### ENVIRONMENTAL INDICATORS

| 2017   | UN                               | Group     | Portugal  | Spain   | Brazil  | North America | Rest of the World |
|--|----------------------------------|-----------|-----------|---------|---------|---------------|-------------------|
| <b>ENVIRONMENTAL CERTIFICATION (ISO 14001)</b>         |                                  |           |           |         |         |               |                   |
| Certified maximum net installed capacity               | %                                | 90        | 90        | 100     | 94      | 74            | 99                |
| Certified substations installed capacity               | %                                | 50        | 46        | 100     | 27      | n.a.          | n.a.              |
| ISO 14001 Certification <sup>1</sup>                   | %                                | 88        | 87        | 99      | 94      | 74            | 99                |
| <b>PRIMARY ENERGY CONSUMPTION</b>                      |                                  |           |           |         |         |               |                   |
| Coal   | TJ                               | 276,668   | 131,848   | 95,501  | 49,298  | 17            | 4                 |
| Fuel oil   | TJ                               | 204,044   | 89,646    | 65,276  | 49,122  | n.a.          | n.a.              |
| Natural gas  | TJ                               | 183       | 126       | 57      | n.a.    | n.a.          | n.a.              |
| Blast furnace gas                                      | TJ                               | 57,013    | 41,946    | 15,063  | n.a.    | 3             | 0                 |
| Coke gas   | TJ                               | 12,897    | n.a.      | 12,897  | n.a.    | n.a.          | n.a.              |
| Diesel oil   | TJ                               | 968       | n.a.      | 968     | n.a.    | n.a.          | n.a.              |
| Iron and steel industry gas                            | TJ                               | 182       | 1         | 78      | 103     | n.a.          | n.a.              |
| Fuel for vehicle fleet                                 | TJ                               | 1,151     | n.a.      | 1,151   | n.a.    | n.a.          | n.a.              |
|  | TJ                               | 231       | 130       | 11      | 73      | 13            | 3                 |
| <b>ENERGY INTENSITY</b> <sup>2</sup>                   | MJ/EUR                           | 17.6      | 17.1      | 26.4    | 14.2    | 0.0           | 0.0               |
| <b>THERMAL POWER PLANT EFFICIENCY</b> (capacity based) | %                                | 45.6      | 48.1      | 45.6    | 34.5    | n.a.          | n.a.              |
| <b>ELECTRICITY CONSUMPTION</b>                         |                                  |           |           |         |         |               |                   |
| Generation self-consumption                            | MWh                              | 4,511,002 | 3,324,455 | 670,483 | 473,802 | 28,317        | 13,945            |
| Administrative service                                 | MWh                              | 36,189    | 26,326    | 2,737   | 5,459   | 1,435         | 231               |
| Grid losses  | %                                | 9.2       | 10.0      | 3.5     | 10.5    | n.a.          | n.a.              |
| <b>GHG EMISSION</b>                                    |                                  |           |           |         |         |               |                   |
| <b>Direct emissions (scope 1)</b>                      |                                  |           |           |         |         |               |                   |
| Stationary combustion <sup>3</sup>                     | ktCO <sub>2eq</sub>              | 23,159    | 10,746    | 7,014   | 5,398   | 1             | 0                 |
| SF6 Emissions  | ktCO <sub>2eq</sub>              | 23,129    | 10,729    | 7,008   | 5,392   | n.a.          | n.a.              |
| Company fleet  | ktCO <sub>2eq</sub>              | 10        | 7         | 1       | 1       | 0             | 0                 |
| Natural gas consumption                                | ktCO <sub>2eq</sub>              | 20        | 10        | 4       | 4       | 1             | 0                 |
| Natural gas losses                                     | ktCO <sub>2eq</sub>              | 0.22      | 0.04      | 0.00    | 0.00    | 0.17          | 0.01              |
|  | ktCO <sub>2eq</sub>              | 0         | 0         | 0       | n.a.    | n.a.          | n.a.              |
| <b>Indirect emissions (scope 2)<sup>4</sup></b>        |                                  |           |           |         |         |               |                   |
| Electricity consumption in office buildings            | ktCO <sub>2eq</sub>              | 802       | 619       | 0       | 177     | 0             | 7                 |
| Electricity losses                                     | ktCO <sub>2eq</sub>              | 0.1       | 0.0       | 0.0     | 0.0     | 0.0           | 0.1               |
| Renewable plants self-consumption                      | ktCO <sub>2eq</sub>              | 795       | 619       | 0       | 177     | 0             | 0                 |
|  | ktCO <sub>2eq</sub>              | 6.7       | 0.0       | 0.0     | 0.0     | 0.0           | 6.7               |
| <b>Other indirect emissions (scope 3)</b>              |                                  |           |           |         |         |               |                   |
| Purchased goods and services (C01)                     | ktCO <sub>2eq</sub>              | 13,039    | 4,574     | 5,264   | 2,992   | 160           | 48                |
| Capital Goods (C02)                                    | ktCO <sub>2eq</sub>              | 54        | 18        | 18      | 18      | 0             | 0                 |
| Fuel and energy related activities (C03)               | ktCO <sub>2eq</sub>              | 324       | 39        | 70      | 10      | 157           | 48                |
| Upstream transportation and distribution (C04)         | ktCO <sub>2eq</sub>              | 8,344     | 3,614     | 2,087   | 2,644   | 0             | 0                 |
| Business Travels (C06)                                 | ktCO <sub>2eq</sub>              | 454       | 106       | 29      | 319     | 0             | 0                 |
| Use of sold products (C11)                             | ktCO <sub>2eq</sub>              | 11        | 5         | 1       | 2       | 4             | 0                 |
|  | ktCO <sub>2eq</sub>              | 3,852     | 793       | 3,059   | 0       | 0             | 0                 |
| <b>GHG EMISSIONS INTENSITY</b> <sup>5</sup>            | kg CO <sub>2</sub> /EUR          | 1.5       | 1.5       | 1.9     | 1.6     | 0.0           | 0.0               |
| <b>CO<sub>2</sub> AVOID EMISSIONS</b>                  | ktCO <sub>2</sub>                | 26,620    | 4,654     | 3,301   | 1,811   | 12,459        | 4,394             |
| <b>TOTAL EMISSIONS</b>                                 |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                         | kt                               | 23,129    | 10,729    | 7,008   | 5,392   | n.a.          | n.a.              |
| NO <sub>x</sub>  | kt                               | 17.0      | 6.1       | 6.0     | 4.9     | n.a.          | n.a.              |
| SO <sub>2</sub>  | kt                               | 29.8      | 4.3       | 8.2     | 17.2    | n.a.          | n.a.              |
| Particulate matter                                     | kt                               | 149       | 0.04      | 0.56    | 0.89    | n.a.          | n.a.              |
| Mercury  | kg                               | 60        | 27        | 24      | 9       | n.a.          | n.a.              |
| SF6  | kg                               | 422       | 307       | 59      | 55      | 0             | 0                 |
| <b>SPECIFIC OVERALL EMISSIONS</b>                      |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                         | g/kWh                            | 334       | 423       | 445     | 570     | n.a.          | n.a.              |
| NO <sub>x</sub>  | g/kWh                            | 0.2       | 0.2       | 0.4     | 0.5     | n.a.          | n.a.              |
| SO <sub>2</sub>  | g/kWh                            | 0.4       | 0.2       | 0.5     | 1.8     | n.a.          | n.a.              |
| Particulate matter                                     | g/kWh                            | 0.02      | 0.00      | 0.04    | 0.09    | n.a.          | n.a.              |
| <b>SPECIFIC THERMAL EMISSIONS</b>                      |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                         | g/kWh                            | 756       | 679       | 688     | 1,173   | n.a.          | n.a.              |
| NO <sub>x</sub>  | g/kWh                            | 0.6       | 0.4       | 0.6     | 1.1     | n.a.          | n.a.              |
| SO <sub>2</sub>  | g/kWh                            | 1.0       | 0.3       | 0.8     | 3.7     | n.a.          | n.a.              |
| Particulate matter                                     | g/kWh                            | 0.05      | 0.00      | 0.05    | 0.19    | n.a.          | n.a.              |
| <b>WATER COLLECTED BY SOURCE</b>                       |                                  |           |           |         |         |               |                   |
| Ocean  | 10 <sup>3</sup> x m <sup>3</sup> | 1,721,378 | 1,219,363 | 502,014 | n.a.    | n.a.          | n.a.              |
| River/Stream   | 10 <sup>3</sup> x m <sup>3</sup> | 20,019    | 12,231    | 7,788   | n.a.    | n.a.          | n.a.              |
| Water reservoir  | 10 <sup>3</sup> x m <sup>3</sup> | 6         | n.a.      | n.a.    | 6       | n.a.          | n.a.              |
| Water hole   | 10 <sup>3</sup> x m <sup>3</sup> | 170       | 170       | 0       | 0       | n.a.          | n.a.              |
| Well   | 10 <sup>3</sup> x m <sup>3</sup> | 11        | 0         | 0       | 9       | 2             | 0                 |
| Municipal water supplies                               | 10 <sup>3</sup> x m <sup>3</sup> | 15,460    | 2,595     | 1,037   | 11,821  | 6             | 2                 |
| Other private entity                                   | 10 <sup>3</sup> x m <sup>3</sup> | 1,388     | 396       | 991     | 1       | n.a.          | 0                 |
| <b>USE OF WATER</b>                                    |                                  |           |           |         |         |               |                   |
| Cooling water  | 10 <sup>3</sup> x m <sup>3</sup> | 1,751,479 | 1,231,553 | 509,326 | 10,600  | n.a.          | n.a.              |
| Row water  | 10 <sup>3</sup> x m <sup>3</sup> | 6,729     | 3,088     | 2,464   | 1,178   | n.a.          | n.a.              |
| Potable water  | 10 <sup>3</sup> x m <sup>3</sup> | 208       | 128       | 11      | 58      | 8             | 2                 |
| <b>WASTEWATER</b>                                      |                                  |           |           |         |         |               |                   |
| Wastewater from generation with treatment              | 10 <sup>3</sup> x m <sup>3</sup> | 2,088     | 531       | 1,470   | 87      | n.a.          | n.a.              |
| Discharge into sea                                     | 10 <sup>3</sup> x m <sup>3</sup> | 1,723,329 | 1,219,822 | 502,639 | 868     | n.a.          | n.a.              |
| Discharge into inland and estuary water                | 10 <sup>3</sup> x m <sup>3</sup> | 9,014     | 7,137     | 1,877   | n.a.    | n.a.          | n.a.              |



| 2017   | UN | Group   | Portugal | Spain   | Brazil  | North America | Rest of the World |
|--|----|---------|----------|---------|---------|---------------|-------------------|
| <b>WASTE SENT TO FINAL DISPOSAL</b>                        |    |         |          |         |         |               |                   |
| Total waste  | t  | 666,771 | 35,870   | 267,896 | 361,847 | 1,065         | 94                |
| Total hazardous waste                                      | t  | 6,240   | 2,664    | 804     | 2,240   | 465           | 68                |
| Recovered Waste  | %  | 46      | 84       | 71      | 23      | 80            | 84                |
| <b>MAIN WASTE CATEGORIES</b>                               |    |         |          |         |         |               |                   |
| Fly ash  | t  | 368,019 | 684      | 234,884 | 132,450 | n.a.          | n.a.              |
| Slag   | t  | 64,829  | 24,254   | 28,682  | 11,894  | n.a.          | n.a.              |
| Used oils  | t  | 402     | 158      | 124     | 21      | 95            | 5                 |
| PCB  | t  | 36      | 7        | 29      | 0       | 0             | 0                 |
| Metals   | t  | 3,043   | 380      | 190     | 2,224   | 249           | 0                 |
| Gypsum   | t  | 4,750   | 3,114    | 1,511   | 125     | n.a.          | n.a.              |
| <b>BY-PRODUCTS<sup>7</sup></b>                             |    |         |          |         |         |               |                   |
| Gypsum   | t  | 197,668 | 136,499  | 61,169  | 0       | n.a.          | n.a.              |
| Fly Ash and slag   | t  | 311,904 | 311,904  | n.a.    | n.a.    | n.a.          | n.a.              |
| <b>DISTRIBUTION IN PROTECTED AREAS</b>                     |    |         |          |         |         |               |                   |
| <b>High voltage distribution grid in protected areas</b>   |    |         |          |         |         |               |                   |
| Overhead   | km | 1,229   | 914      | 122     | 193     | n.a.          | n.a.              |
| Underground  | km | 14      | 14       | 0       | 0       | n.a.          | n.a.              |
| <b>Medium voltage distribution grid in protected areas</b> |    |         |          |         |         |               |                   |
| Overhead   | km | 13,693  | 9,109    | 866     | 3,718   | n.a.          | n.a.              |
| Underground  | km | 12,671  | 8,141    | 818     | 3,712   | n.a.          | n.a.              |
| Substations in protected areas                             | #  | 46      | 19       | 19      | 8       | n.a.          | n.a.              |
| FLOODED AREAS BY RESERVOIRS                                | ha | 6,025   | 5,690    | 330     | 5       | n.a.          | n.a.              |
| ENVIRONMENTAL COMPLAINTS                                   | #  | 163     | 74       | 16      | 47      | 1             | 25                |

<sup>1</sup> Aggregated certification indicator due to assets with potential environmental impacts.

<sup>2</sup> Primary energy consumption by turnover.

<sup>3</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power

<sup>4</sup> Calculation according with GHG Protocol based location methodology.

<sup>5</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>6</sup> Includes only stationary combustion emissions.

<sup>7</sup> The by-product status is only attributed in Portugal and Spain.

| 2016  | UN                  | Group     | Portugal  | Spain   | Brazil  | North America | Rest of the World |
|---|---------------------|-----------|-----------|---------|---------|---------------|-------------------|
| <b>ENVIRONMENTAL CERTIFICATION (ISO 14001)</b>  |                     |           |           |         |         |               |                   |
| Certified maximum net installed capacity        | %                   | 93        | 94        | 100     | 93      | 81            | 96                |
| Certified substations installed capacity        | %                   | 41        | 39        | 100     | 6       | n.a.          | n.a.              |
| ISO 14001 Certification <sup>1</sup>            | %                   | 91        | 91        | 99      | 93      | 81            | 96                |
| <b>PRIMARY ENERGY CONSUMPTION</b>               |                     |           |           |         |         |               |                   |
| Coal  | TJ                  | 220,587   | 105,508   | 68,681  | 46,376  | 18            | 4                 |
| Fuel oil  | TJ                  | 169,582   | 78,270    | 45,156  | 46,156  | n.a.          | n.a.              |
| Natural gas                                     | TJ                  | 373       | 256       | 116     | n.a.    | n.a.          | n.a.              |
| Blast furnace gas                               | TJ                  | 39,160    | 26,837    | 12,320  | n.a.    | 3             | 0                 |
| Coke gas  | TJ                  | 8,925     | n.a.      | 8,925   | n.a.    | n.a.          | n.a.              |
| Diesel oil                                      | TJ                  | 1,125     | n.a.      | 1,125   | n.a.    | n.a.          | n.a.              |
| Iron and steel industry gas                     | TJ                  | 230       | 9         | 77      | 144     | n.a.          | n.a.              |
| Fuel for vehicle fleet                          | TJ                  | 944       | n.a.      | 944     | n.a.    | n.a.          | n.a.              |
| ENERGY INTENSITY <sup>2</sup>                   | MJ/EUR              | 248       | 136       | 17      | 77      | 15            | 4                 |
| THERMAL POWER PLANT EFFICIENCY (capacity based) | %                   | 15.1      | 13.7      | 19.0    | 18.8    | 0.0           | 0.0               |
| <b>ELECTRICITY CONSUMPTION</b>                  |                     |           |           |         |         |               |                   |
| Generation self-consumption                     | MWh                 | 45.1      | 47.4      | 45.2    | 35.4    | n.a.          | n.a.              |
| Administrative service                          | MWh                 | 3,496,546 | 2,412,524 | 567,533 | 471,808 | 29,721        | 14,960            |
| Grid losses                                     | %                   | 35,236    | 24,779    | 3,644   | 5,325   | 1,260         | 228               |
| <b>GHG EMISSION</b>                             |                     |           |           |         |         |               |                   |
| <b>Direct emissions (scope 1)</b>               |                     |           |           |         |         |               |                   |
| Stationary combustion <sup>3</sup>              | ktCO <sub>2eq</sub> | 18,931    | 8,835     | 4,908   | 5,186   | 1             | 0                 |
| SF6 Emissions                                   | ktCO <sub>2eq</sub> | 18,900    | 8,819     | 4,902   | 5,180   | n.a.          | n.a.              |
| Company fleet                                   | ktCO <sub>2eq</sub> | 8         | 5         | 1       | 2       | 0             | 0                 |
| Natural gas consumption                         | ktCO <sub>2eq</sub> | 18        | 10        | 1       | 5       | 1             | 0                 |
| Natural gas losses                              | ktCO <sub>2eq</sub> | 0.48      | 0.06      | 0.25    | 0.00    | 0.17          | 0.01              |
| <b>Indirect emissions (scope 2)<sup>4</sup></b> |                     |           |           |         |         |               |                   |
| Electricity consumption in office buildings     | ktCO <sub>2eq</sub> | 5         | 1         | 4       | n.a.    | n.a.          | n.a.              |
| Electricity losses                              | ktCO <sub>2eq</sub> | 547       | 348       | 0       | 191     | 0             | 8                 |
| Renewable plants self-consumption               | ktCO <sub>2eq</sub> | 0         | 0         | 0       | 0       | 0             | 0                 |
| <b>Other indirect emissions (scope 3)</b>       |                     |           |           |         |         |               |                   |
| Purchased goods and services (C01)              | ktCO <sub>2eq</sub> | 540       | 0         | 0       | 0       | 0             | 8                 |
| Capital Goods (C02)                             | ktCO <sub>2eq</sub> | 12,469    | 3,725     | 6,274   | 2,288   | 135           | 47                |
| Fuel and energy related activities (C03)        | ktCO <sub>2eq</sub> | 55        | 18        | 18      | 18      | 0             | 0                 |
| Upstream transportation and distribution (C04)  | ktCO <sub>2eq</sub> | 287       | 39        | 68      | 3       | 131           | 47                |
| Business Travels (C06)                          | ktCO <sub>2eq</sub> | 7,091     | 2,767     | 2,274   | 2,050   | 0             | 0                 |
| Use of sold products (C11)                      | ktCO <sub>2eq</sub> | 304       | 74        | 15      | 215     | 0             | 0                 |
|   | ktCO <sub>2eq</sub> | 11        | 4         | 1       | 2       | 4             | 0                 |
|   | ktCO <sub>2eq</sub> | 4,722     | 824       | 3,898   | 0       | 0             | 0                 |

**SUSTAINABILITY REPORT**  
**EDP 2017**

| 2016   | UN                               | Group     | Portugal  | Spain   | Brazil  | North America | Rest of the World |
|--|----------------------------------|-----------|-----------|---------|---------|---------------|-------------------|
| <b>GHG EMISSIONS INTENSITY</b> <sup>5</sup>                | kgCO <sub>2</sub> /EUR           | 1.3       | 1.2       | 1.4     | 2.2     | 0.0           | 0.0               |
| <b>CO<sub>2</sub> AVOID EMISSIONS</b>                      | ktCO <sub>2</sub>                | 32,724    | 12,206    | 4,115   | 2,245   | 10,590        | 3,567             |
| <b>TOTAL EMISSIONS</b>                                     |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                             | kt                               | 18,900    | 8,819     | 4,902   | 5,180   | n.a.          | n.a.              |
| NO <sub>x</sub>  | kt                               | 16.2      | 5.2       | 5.9     | 5.2     | n.a.          | n.a.              |
| SO <sub>2</sub>  | kt                               | 19.9      | 3.5       | 6.5     | 9.9     | n.a.          | n.a.              |
| Particulate matter   | kt                               | 1.7       | 0.04      | 0.61    | 0.52    | n.a.          | n.a.              |
| Mercury  | kg                               | 100       | 69        | 31      | 0       | n.a.          | n.a.              |
| SF <sub>6</sub>  | kg                               | 331       | 213       | 40      | 77      | 0             | 1                 |
| <b>SPECIFIC OVERALL EMISSIONS</b>                          |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                             | g/kWh                            | 271       | 285       | 369     | 543     | n.a.          | n.a.              |
| NO <sub>x</sub>  | g/kWh                            | 0.2       | 0.2       | 0.4     | 0.5     | n.a.          | n.a.              |
| SO <sub>2</sub>  | g/kWh                            | 0.3       | 0.1       | 0.5     | 1.0     | n.a.          | n.a.              |
| Particulate matter   | g/kWh                            | 0.02      | 0.00      | 0.05    | 0.05    | n.a.          | n.a.              |
| <b>SPECIFIC THERMAL EMISSIONS</b>                          |                                  |           |           |         |         |               |                   |
| CO <sub>2</sub> <sup>3,6</sup>                             | g/kWh                            | 787       | 726       | 659     | 1,169   | n.a.          | n.a.              |
| NO <sub>x</sub>  | g/kWh                            | 0.7       | 0.4       | 0.8     | 1.2     | n.a.          | n.a.              |
| SO <sub>2</sub>  | g/kWh                            | 0.8       | 0.3       | 0.9     | 2.2     | n.a.          | n.a.              |
| Particulate matter   | g/kWh                            | 0.05      | 0.00      | 0.08    | 0.12    | n.a.          | n.a.              |
| <b>WATER COLLECT BY SOURCE</b>                             |                                  |           |           |         |         |               |                   |
| Ocean  | 10 <sup>3</sup> x m <sup>3</sup> | 1,477,099 | 1,113,985 | 363,114 | n.a.    | n.a.          | n.a.              |
| River/Stream   | 10 <sup>3</sup> x m <sup>3</sup> | 16,031    | 8,163     | 7,868   | n.a.    | n.a.          | n.a.              |
| Water reservoir  | 10 <sup>3</sup> x m <sup>3</sup> | 6         | n.a.      | n.a.    | 6       | n.a.          | n.a.              |
| Water hole   | 10 <sup>3</sup> x m <sup>3</sup> | 149       | 147       | 0       | 2       | n.a.          | n.a.              |
| Well   | 10 <sup>3</sup> x m <sup>3</sup> | 12        | 0         | 0       | 10      | 2             | 0                 |
| Municipal water supplies                                   | 10 <sup>3</sup> x m <sup>3</sup> | 15,561    | 2,385     | 751     | 12,412  | 12            | 2                 |
| Other private entity                                       | 10 <sup>3</sup> x m <sup>3</sup> | 1,420     | 401       | 1,018   | 0       | 0             | 0                 |
| <b>USE OF WATER</b>  |                                  |           |           |         |         |               |                   |
| Cooling water  | 10 <sup>3</sup> x m <sup>3</sup> | 1,503,732 | 1,122,131 | 370,466 | 11,135  | n.a.          | n.a.              |
| Raw water  | 10 <sup>3</sup> x m <sup>3</sup> | 5,995     | 2,827     | 1,930   | 1,237   | n.a.          | n.a.              |
| Potable water  | 10 <sup>3</sup> x m <sup>3</sup> | 208       | 123       | 15      | 55      | 13            | 2                 |
| <b>WASTEWATER</b>  |                                  |           |           |         |         |               |                   |
| Wastewater from generation with treatment                  | 10 <sup>3</sup> x m <sup>3</sup> | 4,933     | 709       | 2,400   | 1,824   | n.a.          | n.a.              |
| Discharge into sea   | 10 <sup>3</sup> x m <sup>3</sup> | 1,481,107 | 1,114,585 | 364,698 | 1,824   | n.a.          | n.a.              |
| Discharge into inland and estuary water                    | 10 <sup>3</sup> x m <sup>3</sup> | 4,502     | 3,013     | 1,488   | n.a.    | n.a.          | n.a.              |
| <b>WASTE SENT TO FINAL DISPOSAL</b>                        |                                  |           |           |         |         |               |                   |
| Total waste  | t                                | 477,373   | 109,448   | 189,866 | 177,196 | 701           | 161               |
| Total hazard waste   | t                                | 6,443     | 3,945     | 1,103   | 996     | 299           | 99                |
| Recovered Waste  | %                                | 61        | 95        | 77      | 21      | 70            | 74                |
| <b>MAIN WASTE CATEGORIES</b>                               |                                  |           |           |         |         |               |                   |
| Fly ash  | t                                | 282,771   | 980       | 153,164 | 128,627 | n.a.          | n.a.              |
| Slag   | t                                | 12,1538   | 95,826    | 25,712  | n.a.    | n.a.          | n.a.              |
| Used oils  | t                                | 600       | 220       | 228     | 36      | 101           | 16                |
| PCB  | t                                | 86        | 0         | 86      | 0       | 0             | 0                 |
| Metals   | t                                | 5,621     | 654       | 3,219   | 1,584   | 153           | 11                |
| Gypsum   | t                                | 6,721     | 4,321     | 2,239   | 161     | n.a.          | n.a.              |
| <b>BY-PRODUCTS</b> <sup>7</sup>                            |                                  |           |           |         |         |               |                   |
| Gypsum   | t                                | 139,644   | 105,898   | 33,746  | n.a.    | n.a.          | n.a.              |
| Fly Ash and slag   | t                                | 463,943   | 463,943   | n.a.    | n.a.    | n.a.          | n.a.              |
| <b>DISTRIBUTION IN PROTECTED AREAS</b>                     |                                  |           |           |         |         |               |                   |
| <b>High voltage distribution grid in protected areas</b>   |                                  |           |           |         |         |               |                   |
| Overhead   | km                               | 1,139     | 905       | 122     | 112     | n.a.          | n.a.              |
| Underground  | km                               | 1,125     | 891       | 122     | 112     | n.a.          | n.a.              |
|  | km                               | 14        | 14        | 0       | 0       | n.a.          | n.a.              |
| <b>Medium voltage distribution grid in protected areas</b> |                                  |           |           |         |         |               |                   |
| Overhead   | km                               | 13,494    | 9,039     | 866     | 3,589   | n.a.          | n.a.              |
| Underground  | km                               | 12,500    | 8,098     | 818     | 3,584   | n.a.          | n.a.              |
|  | km                               | 994       | 941       | 48      | 5       | n.a.          | n.a.              |
| Substations in protected areas                             | #                                | 43        | 19        | 19      | 5       | n.a.          | n.a.              |
| <b>FLOODED AREAS BY RESERVOIRS</b>                         |                                  |           |           |         |         |               |                   |
|  | ha                               | 6,025     | 5,690     | 330     | 4       | n.a.          | n.a.              |
| <b>ENVIRONMENTAL COMPLAINTS</b>                            |                                  |           |           |         |         |               |                   |
|  | #                                | 167       | 35        | 2       | 49      | 9             | 72                |

<sup>1</sup> Primary energy consumption by turnover.

<sup>2</sup> The stationary emissions do not include those produced by the burning of ArcelorMittal steel gases in EDP's power plant in Spain.

<sup>3</sup> Calculation according with GHG Protocol based location methodology.

<sup>4</sup> Scope 1 and Scope 2 emissions by turnover.

<sup>5</sup> Includes only stationary combustion emissions.

<sup>6</sup> The by-product status is only attributed in Portugal and Spain. For this reason, the value reported here in 2016 for Brazil start to be includes in recovered waste of fly ash.

<sup>7</sup> Aggregated certification indicator due to assets with potential environmental impacts.





**SOCIAL INDICATORS**

| 2017  | UN    | Group  | Portugal | Spain | Brazil | North America | Rest of the World |
|---|-------|--------|----------|-------|--------|---------------|-------------------|
| <b>EMPLOYMENT</b>   |       |        |          |       |        |               |                   |
| Employees   | #     | 11,657 | 6,326    | 1,680 | 2,945  | 502           | 204               |
| Executive Board of Directors  | #     | 8      | 8        | 0     | 0      | 0             | 0                 |
| Senior Management   | #     | 750    | 421      | 159   | 74     | 68            | 28                |
| Supervisors   | #     | 766    | 365      | 225   | 100    | 54            | 22                |
| Specialists   | #     | 4,093  | 2,062    | 678   | 936    | 269           | 148               |
| Technicians   | #     | 6,041  | 3,470    | 619   | 1,835  | 111           | 6                 |
| Male employees  | %     | 76     | 77       | 73    | 77     | 69            | 62                |
| Female employees  | %     | 24     | 23       | 27    | 23     | 31            | 38                |
| Females in management position  | %     | 25     | 25       | 27    | 16     | 24            | 32                |
| Senior management hired from the local community  | %     | 98     | 100      | 100   | 99     | 99            | 68                |
| Employees by types of contract  | #     | 11,657 | 6,326    | 1,680 | 2,945  | 502           | 204               |
| Executive bodies  | #     | 53     | 30       | 0     | 23     | 0             | 0                 |
| Male  | #     | 50     | 28       | 0     | 22     | 0             | 0                 |
| Female  | #     | 3      | 2        | 0     | 1      | 0             | 0                 |
| Permanent workforce   | #     | 11,534 | 6,252    | 1,660 | 2,921  | 502           | 199               |
| Male  | #     | 8,762  | 4,813    | 1,217 | 2,259  | 348           | 125               |
| Female  | #     | 2,772  | 1,439    | 443   | 662    | 154           | 74                |
| Fixed-term contracts  | #     | 70     | 44       | 20    | 1      | 0             | 5                 |
| Male  | #     | 38     | 21       | 16    | 0      | 0             | 1                 |
| Female  | #     | 32     | 23       | 4     | 1      | 0             | 4                 |
| Employees by occupational contract  | #     | 11,657 | 6,326    | 1,680 | 2,945  | 502           | 204               |
| Full-Time   | #     | 11,619 | 6,324    | 1,650 | 2,945  | 502           | 198               |
| Male  | #     | 8,846  | 4,862    | 1,231 | 2,281  | 348           | 124               |
| Female  | #     | 2,773  | 1,462    | 419   | 664    | 154           | 74                |
| Part-time   | #     | 38     | 2        | 30    | 0      | 0             | 6                 |
| Male  | #     | 4      | 0        | 2     | 0      | 0             | 2                 |
| Female  | #     | 34     | 2        | 28    | 0      | 0             | 4                 |
| Employees with special needs  | #     | 184    | 111      | 18    | 55     | 0             | 0                 |
| Male  | #     | 116    | 75       | 11    | 30     | 0             | 0                 |
| Female  | #     | 68     | 36       | 7     | 25     | 0             | 0                 |
| Foreign employees   | #     | 229    | 32       | 70    | 24     | 71            | 32                |
| New employees   | #     | 939    | 311      | 128   | 318    | 135           | 47                |
| Direct admissions to permanent workforce  | #     | 820    | 258      | 87    | 300    | 135           | 40                |
| Admissions with fixed-term contracts  | #     | 86     | 40       | 37    | 2      | 0             | 7                 |
| Other admissions  | #     | 33     | 13       | 4     | 16     | 0             | 0                 |
| Male  | #     | 650    | 205      | 84    | 232    | 104           | 25                |
| Female  | #     | 289    | 106      | 44    | 86     | 31            | 22                |
| <30 years   | #     | 538    | 229      | 70    | 145    | 74            | 20                |
| [30-50 years]   | #     | 374    | 79       | 55    | 165    | 50            | 25                |
| >=50 years  | #     | 29     | 5        | 3     | 8      | 11            | 2                 |
| F/M new admissions rate   | x     | 0.44   | 0.52     | 0.52  | 0.37   | 0.30          | 0.88              |
| Employees leaving   | #     | 1,198  | 450      | 339   | 331    | 58            | 20                |
| Male  | #     | 892    | 373      | 224   | 244    | 42            | 9                 |
| Female  | #     | 306    | 77       | 115   | 87     | 16            | 11                |
| <30 years   | #     | 135    | 25       | 27    | 57     | 17            | 9                 |
| [30-50 years]   | #     | 390    | 30       | 129   | 189    | 31            | 11                |
| >=50 years  | #     | 673    | 395      | 183   | 85     | 10            | 0                 |
| Turnover  | %     | 9.04   | 5.92     | 13.10 | 10.99  | 20.89         | 17.18             |
| Male  | %     | 8.56   | 5.81     | 11.83 | 10.39  | 23.14         | 14.05             |
| Female  | %     | 10.56  | 6.29     | 16.53 | 13.07  | 16.04         | 22.30             |
| <30 years   | %     | 22.21  | 19.08    | 60.25 | 16.24  | 41.74         | 38.16             |
| [30-50 years]   | %     | 6.80   | 2.45     | 8.75  | 9.27   | 14.11         | 12.24             |
| >=50 years  | %     | 7.48   | 5.64     | 14.26 | 11.05  | 15.91         | 10.00             |
| Average age of workforce  | years | 45     | 48       | 46    | 38     | 37            | 36                |
| Average age of new admissions   | years | 31     | 29       | 32    | 32     | 33            | 33                |
| Average age of leaving  | years | 49     | 58       | 49    | 41     | 39            | 33                |
| Average seniority of employees  | years | 18     | 23       | 17    | 10     | 4             | 4                 |
| Seniority of leaving  | years | 22     | 32       | 20    | 15     | 4             | 4                 |
| Absenteeism rate  | %     | 3.19   | 3.68     | 3.61  | 2.12   | 2.94          | n.d.              |
| Employees entitled to parental leave  | #     | 440    | 195      | 62    | 132    | 31            | 20                |
| Male  | #     | 302    | 138      | 31    | 101    | 25            | 7                 |
| Female  | #     | 138    | 57       | 31    | 31     | 6             | 13                |
| Employees that took parental leave  | #     | 334    | 191      | 61    | 31     | 31            | 20                |
| Male  | #     | 196    | 134      | 30    | n.d.   | 25            | 7                 |
| Female  | #     | 138    | 57       | 31    | 31     | 6             | 13                |
| Retention rate of employees who took parental leave   | %     | 98     | 99       | 100   | 95     | 100           | 100               |
| Male  | %     | 100    | 99       | 100   | 100    | 100           | 100               |
| Female  | %     | 95     | 100      | 100   | 77     | 100           | 100               |
| Annualized average base salary  | €     | 3,188  | 3,216    | 4,179 | 1,656  | 6,925         | 6,823             |
| Male  | €     | 3,164  | 3,165    | 4,358 | 1,653  | 7,165         | 7,322             |
| Female  | €     | 3,264  | 3,386    | 3,685 | 1,666  | 6,382         | 6,015             |
| Pay ratio by gender (F/M)   | x     | 1.03   | 1.07     | 0.85  | 1.01   | 0.89          | 0.82              |
| Ratio of the annual total compensation for the organization's highest-paid individual to the average annual total compensation for all employees (excluding the highest-paid individual)  | x     | n.a.   | 6.31     | 5.41  | 13.08  | 4.29          | n.a.              |
| Ratio of percentage increase in annual total compensation for the organization's highest-paid individual to the average percentage increase in annual total compensation for all employees (excluding highest-paid individual) <sup>1</sup> | %     | n.a.   | 0.00     | 2.81  | 0.00   | -4.43         | n.a.              |

<sup>1</sup> Value for North America explained by the leaving of the highest-paid employee of last year

**SUSTAINABILITY REPORT**  
**EDP 2017**

| 2017  |       | UN        | Group Portugal | Spain   | Brazil    | North America | Rest of the World |
|---|-------|-----------|----------------|---------|-----------|---------------|-------------------|
| <b>TRAINING</b>   |       |           |                |         |           |               |                   |
| Total hours of training   | hours | 473,078   | 235,069        | 58,891  | 156,707   | 14,647        | 7,764             |
| Sustainability  |       |           |                |         |           |               |                   |
| Environment   | hours | 3,314     | 351            | 302     | 2,227     | 129           | 306               |
| Social and Economic   | hours | 3,577     | 2,287          | 1,290   | 0         | 0             | 0                 |
| Ethics  | hours | 2,653     | 567            | 304     | 1,679     | 104           | 0                 |
| Quality   | hours | 3,717     | 2,505          | 73      | 1,078     | 62            | 0                 |
| Languages   | hours | 22,553    | 7,780          | 10,248  | 3,459     | 92            | 975               |
| Information systems   | hours | 21,956    | 12,975         | 7,059   | 441       | 958           | 523               |
| Other   | hours | 415,308   | 208,605        | 39,617  | 147,824   | 13,303        | 5,960             |
| Average training per employee (h/p)                             |       |           |                |         |           |               |                   |
| Executive Board of Directors                                    | h/p   | 15        | 15             | n.a.    | n.a.      | n.a.          | n.a.              |
| Senior Management   | h/p   | 37        | 38             | 48      | 30        | 15            | 40                |
| Supervisors   | h/p   | 72        | 71             | 56      | 131       | 40            | 45                |
| Specialists   | h/p   | 38        | 46             | 38      | 25        | 26            | 37                |
| Technicians   | h/p   | 39        | 28             | 21      | 64        | 39            | 32                |
| Employees with training   | %     | 98        | 98             | 111     | 94        | 99            | 85                |
| <b>LABOUR RELATIONS</b>   |       |           |                |         |           |               |                   |
| Collective employment agreements                                | %     | 91        | 99             | 79      | 99        | 0             | 43                |
| Trade union membership  | %     | 43        | 53             | 18      | 48        | 0             | 0                 |
| Union Structures  | #     | 35        | 22             | 4       | 7         | 0             | 2                 |
| Hours lost due to strikes                                       | hours | 8         | 8              | 0       | 0         | 0             | 0                 |
| Staff engaged in further study                                  | #     | 29        | 29             | n.d.    | n.d.      | n.d.          | n.d.              |
| Professional Internships  | #     | 536       | 373            | 0       | 146       | 0             | 17                |
| Academic internships  | #     | 380       | 123            | 257     | 0         | 0             | 0                 |
| <b>HEALTH AND SAFETY (H&amp;S)</b>                              |       |           |                |         |           |               |                   |
| Installed capacity certified by OHSAS 18.001                    | MW    | 22,782    | 10,071         | 5,518   | 1,718     | 3,934         | 1,541             |
| Installed capacity certified by OHSAS 18.001                    | %     | 86        | 89             | 100     | 61        | 74            | 99                |
| Employees covered by OHSAS 18.001                               | #     | 36        | 17             | 100     | 37        | 43            | 79                |
| Employees   |       |           |                |         |           |               |                   |
| Accidents <sup>1</sup>  | #     | 28        | 22             | 2       | 3         | 1             | 0                 |
| Male  | #     | 24        | 18             | 2       | 3         | 1             | 0                 |
| Female  | #     | 4         | 4              | 0       | 0         | 0             | 0                 |
| Fatal accidents   | #     | 0         | 0              | 0       | 0         | 0             | 0                 |
| Frequency rate <sup>2</sup>                                     | Fr    | 1.33      | 2.11           | 0.69    | 0.46      | 1.09          | 0                 |
| Male  | Fr    | N.d.      | 2.25           | 1.43    | 0.61      | N.d.          | 0                 |
| Female  | Fr    | N.d.      | 1.64           | 0.00    | 0.00      | N.d.          | 0                 |
| Severity rate <sup>3</sup>                                      | Sr    | 122       | 173            | 23      | 104       | 24            | 0                 |
| Male  | Sr    | 364       | 185            | 41      | 138       | 0             | 0                 |
| Female  | Sr    | 130       | 130            | 0       | 0         | 0             | 0                 |
| Total lost days due to accidents <sup>4</sup>                   | #     | 2,574     | 1,801          | 66      | 685       | 22            | 0                 |
| Occupational diseases   | #     | 2         | 2              | 0       | 0         | 0             | 0                 |
| Occupational diseases rate (with devaluation)                   | %     | 0.00      | 0.00           | 0.00    | 0.00      | 0.00          | 0.00              |
| Contractors   |       |           |                |         |           |               |                   |
| Accidents <sup>1</sup>  | #     | 100       | 41             | 28      | 28        | 1             | 2                 |
| Fatal accidents   | #     | 4         | 0              | 0       | 4         | 0             | 0                 |
| Working days  | #     | 5,592,634 | 2,197,153      | 696,676 | 2,250,505 | 36,1521       | 86,779            |
| Frequency rate <sup>2</sup>                                     | Fr    | 2.38      | 2.49           | 5.36    | 1.66      | 0.37          | 3.07              |
| Severity rate <sup>3</sup>                                      | Sr    | 136       | 233            | 182     | 48        | 29            | 292               |
| EDP employees and contractors                                   |       |           |                |         |           |               |                   |
| Frequency rate <sup>2</sup>                                     | Fr    | 2.03      | 2.34           | 3.69    | 1.32      | 0.55          | 2.10              |
| Severity rate <sup>3</sup>                                      | Sr    | 131       | 203            | 125     | 64        | 28            | 199               |
| Fatal electrical accidents involving third parties <sup>6</sup> | #     | 10        | 1              | 0       | 9         | 0             | 0                 |
| Near accidents  | #     | 2,279     | 92             | 60      | 1,841     | 268           | 18                |
| Representatives elected in H&S Comissions                       |       |           |                |         |           |               |                   |
| EDP employees represented <sup>7</sup>                          | %     | 77        | 77             | 52      | 100       | 7             | 29                |
| Employees representative  | #     | 138       | 69             | 8       | 56        | 0             | 5                 |
| <b>H&amp;S TRAINING</b>   |       |           |                |         |           |               |                   |
| Employees   |       |           |                |         |           |               |                   |
| Awareness actions   | #     | 976       | 266            | 510     | 10        | 135           | 55                |
| Employees   | #     | 11,459    | 7,022          | 2,367   | 654       | 1,216         | 200               |
| Training hours  | hours | 35,302    | 15,504         | 8,849   | 4,792     | 4,476         | 1,680             |
| Contractors   |       |           |                |         |           |               |                   |
| Awareness actions   | #     | 16,656    | 1,062          | 318     | 14,056    | 1,200         | 20                |
| Employees   | #     | 12,478    | 4,637          | 190     | 7,265     | 0             | 386               |
| Training hours  | hours | 119,195   | 4,176          | 395     | 107,340   | 7,226         | 58                |

<sup>1</sup> Accidents at the workplace in worktime and accidents on the way to or from work, with an absence of one more calendar days and fatal accidents.

<sup>2</sup> Work accidents by a million worked hours.

<sup>3</sup> Number of calendar days lost due to work accident by a million worked hours.

<sup>4</sup> Sum of the number of absence calendar days resulting of work accidents occurred in the reference period, plus the number of days lost by accidents in the previous period, which lasted until the reference period without interruption. The lost time is measured from the day following the accident to the day right before the return to work.

<sup>5</sup> Accidents occurred involving male gender employees.

<sup>6</sup> Accidents occurred involving people outside EDP activity.

<sup>7</sup> Number of represented EDP employees, by the total number of EDP employees.



| 2016   | UN    | Group  | Portugal | Spain | Brazil | North America | Rest of the World |
|--|-------|--------|----------|-------|--------|---------------|-------------------|
| <b>EMPLOYMENT</b>  |       |        |          |       |        |               |                   |
| Employees  | #     | 11,992 | 6,537    | 1,886 | 2,961  | 422           | 186               |
| Executive Board of Directors   | #     | 8      | 8        | 0     | 0      | 0             | 0                 |
| Senior Management  | #     | 733    | 406      | 163   | 77     | 62            | 25                |
| Supervisors  | #     | 806    | 352      | 243   | 140    | 48            | 23                |
| Specialists  | #     | 3,996  | 1,982    | 733   | 914    | 235           | 132               |
| Technicians  | #     | 6,450  | 3,789    | 748   | 1,830  | 77            | 6                 |
| Male employees   | %     | 76     | 78       | 73    | 78     | 67            | 62                |
| Female employees   | %     | 24     | 22       | 27    | 22     | 33            | 38                |
| Females in management position   | %     | 25     | 24       | 75    | 17     | 28            | 35                |
| Senior management hired from the local community   | %     | 98     | 100      | 99    | 97     | 98            | 64                |
| Employees by types of contract   | #     | 11,992 | 6,537    | 1,886 | 2,961  | 422           | 186               |
| Executive bodies   | #     | 53     | 31       | 1     | 21     | 0             | 0                 |
| Male   | #     | 50     | 29       | 1     | 20     | 0             | 0                 |
| Female   | #     | 3      | 2        | 0     | 1      | 0             | 0                 |
| Permanent workforce  | #     | 11,874 | 6,464    | 1,867 | 2,938  | 422           | 183               |
| Male   | #     | 9,076  | 5,042    | 1,357 | 2,279  | 283           | 115               |
| Female   | #     | 2,798  | 1,422    | 510   | 659    | 139           | 68                |
| Fixed-term contracts   | #     | 65     | 42       | 18    | 2      | 0             | 3                 |
| Male   | #     | 37     | 21       | 13    | 2      | 0             | 1                 |
| Female   | #     | 28     | 21       | 5     | 0      | 0             | 2                 |
| Employees by occupational contract   | #     | 11,992 | 6,537    | 1,886 | 2,961  | 422           | 186               |
| Full-Time  | #     | 11,953 | 6,536    | 1,854 | 2,961  | 422           | 180               |
| Male   | #     | 9,157  | 5,092    | 1,367 | 2,301  | 283           | 114               |
| Female   | #     | 2,796  | 1,444    | 487   | 660    | 139           | 66                |
| Part-time  | #     | 39     | 1        | 32    | 0      | 0             | 6                 |
| Male   | #     | 6      | 0        | 4     | 0      | 0             | 2                 |
| Female   | #     | 33     | 1        | 28    | 0      | 0             | 4                 |
| Employees with special needs   | #     | 196    | 121      | 18    | 57     | 0             | 0                 |
| Male   | #     | 128    | 84       | 12    | 32     | 0             | 0                 |
| Female   | #     | 68     | 37       | 6     | 25     | 0             | 0                 |
| Foreign employees  | #     | 198    | 35       | 57    | 19     | 54            | 33                |
| New employees  | #     | 722    | 232      | 75    | 295    | 94            | 26                |
| Direct admissions to permanent workforce   | #     | 584    | 190      | 49    | 228    | 94            | 23                |
| Admissions with fixed-term contracts   | #     | 62     | 34       | 24    | 2      | 0             | 2                 |
| Other admissions   | #     | 76     | 8        | 2     | 65     | 0             | 1                 |
| Male   | #     | 509    | 157      | 52    | 215    | 70            | 15                |
| Female   | #     | 213    | 75       | 23    | 80     | 24            | 11                |
| <30 years  | #     | 390    | 153      | 37    | 144    | 40            | 16                |
| [30-50 years]  | #     | 311    | 74       | 37    | 140    | 50            | 10                |
| >=50 years   | #     | 21     | 5        | 1     | 11     | 4             | 0                 |
| F/M new admissions rate  | x     | 0.42   | 0.48     | 0.44  | 0.37   | 0.34          | 0.73              |
| Employees leaving  | #     | 814    | 377      | 52    | 307    | 59            | 19                |
| Male   | #     | 632    | 292      | 45    | 234    | 47            | 14                |
| Female   | #     | 182    | 85       | 7     | 73     | 12            | 5                 |
| <30 years  | #     | 122    | 29       | 9     | 56     | 18            | 10                |
| [30-50 years]  | #     | 197    | 24       | 13    | 125    | 26            | 9                 |
| >=50 years   | #     | 495    | 324      | 30    | 126    | 15            | 0                 |
| Turnover   | %     | 6.38   | 4.61     | 3.39  | 10.15  | 19.01         | 12.20             |
| Male   | %     | 6.18   | 4.35     | 3.55  | 9.71   | 21.63         | 12.29             |
| Female   | %     | 7.03   | 5.52     | 2.96  | 11.69  | 13.64         | 12.03             |
| <30 years  | %     | 17.23  | 14.39    | 35.94 | 15.05  | 33.92         | 33.33             |
| [30-50 years]  | %     | 4.61   | 2.26     | 2.26  | 7.15   | 15.11         | 6.99              |
| >=50 years   | %     | 5.12   | 4.31     | 2.20  | 15.29  | 14.50         | 0.00              |
| Average age of workforce   | years | 45     | 49       | 46    | 38     | 38            | 36                |
| Average age of new admissions  | years | 31     | 30       | 32    | 32     | 33            | 30                |
| Average age of leaving   | years | 50     | 57       | 49    | 44     | 40            | 33                |
| Average seniority of employees   | years | 18     | 24       | 17    | 10     | 4             | 5                 |
| Seniority of leaving   | years | 22     | 32       | 20    | 15     | 4             | 4                 |
| Absenteeism rate   | %     | 3.12   | 3.65     | 3.63  | 1.95   | 2.47          | n.d.              |
| Employees entitled to parental leave   | #     | 399    | 153      | 73    | 139    | 19            | 15                |
| Male   | #     | 273    | 109      | 40    | 101    | 13            | 10                |
| Female   | #     | 126    | 44       | 33    | 38     | 6             | 5                 |
| Employees that took parental leave   | #     | 297    | 151      | 72    | 40     | 19            | 15                |
| Male   | #     | 171    | 107      | 39    | 2      | 13            | 10                |
| Female   | #     | 126    | 44       | 33    | 38     | 6             | 5                 |
| Retention rate of employees who took parental leave  | %     | 99     | 100      | 100   | n.d.   | 100           | 100               |
| Male   | %     | 100    | 100      | 100   | n.d.   | 100           | 100               |
| Female   | %     | 98     | 100      | 100   | 95     | 100           | 100               |
| Annualized average base salary   | €     | 3,095  | 3,184    | 4,250 | 1,516  | 7,215         | 3,993             |
| Male   | €     | 3,075  | 3,139    | 4,427 | 1,507  | 7,565         | 4,408             |
| Female   | €     | 3,158  | 3,343    | 3,779 | 1,547  | 6,503         | 3,316             |
| Pay ratio by gender (F/M)  | x     | 1.03   | 1.07     | 0.85  | 1.01   | 0.86          | 0.76              |
| Ratio of the annual total compensation for the organization's highest-paid individual to the average annual total compensation for all employees (excluding the highest-paid individual)                                       | x     | n.a.   | 6.38     | 5.59  | 13.48  | 3.85          | n.a.              |
| Ratio of percentage increase in annual total compensation for the organization's highest-paid individual to the average percentage increase in annual total compensation for all employees (excluding highest-paid individual) | %     | n.a.   | 0.00     | 0.00  | 0.73   | 0.00          | n.a.              |

**SUSTAINABILITY REPORT  
EDP 2017**

| 2016  | UN    | Group     | Portugal  | Spain   | Brazil    | North America | Rest of the World |
|---|-------|-----------|-----------|---------|-----------|---------------|-------------------|
| <b>TRAINING</b>   |       |           |           |         |           |               |                   |
| Total hours of training   | hours | 389,883   | 198,042   | 65,705  | 102,730   | 14,764        | 8,642             |
| Sustainability  |       |           |           |         |           |               |                   |
| Environment   | hours | 5,349     | 3,920     | 292     | 877       | 140           | 120               |
| Social and Economic   | hours | 9,265     | 7,678     | 1,093   | 221       | 0             | 273               |
| Ethics  | hours | 6,346     | 1,954     | 483     | 2,734     | 945           | 230               |
| Quality   | hours | 10,767    | 9,831     | 608     | 328       | 0             | 0                 |
| Languages   | hours | 28,006    | 11,159    | 11,797  | 4,201     | 118           | 731               |
| Information systems   | hours | 36,236    | 19,781    | 13,176  | 1,900     | 1,120         | 259               |
| Other   | hours | 293,914   | 143,719   | 38,256  | 92,469    | 12,441        | 7,029             |
| Average training per employee (h/p)                             |       |           |           |         |           |               |                   |
| Executive Board of Directors                                    | h/p   | 15        | 15        | n.a.    | n.a.      | n.a.          | n.a.              |
| Senior Management   | h/p   | 37        | 41        | 44      | 11        | 29            | 38                |
| Supervisors   | h/p   | 57        | 52        | 43      | 102       | 42            | 52                |
| Specialists   | h/p   | 38        | 47        | 39      | 16        | 30            | 48                |
| Technicians   | h/p   | 26        | 18        | 26      | 40        | 49            | 28                |
| Employees with training   | %     | 93        | 96        | 100     | 83        | 109           | 100               |
| <b>LABOUR RELATIONS</b>   |       |           |           |         |           |               |                   |
| Collective employment agreements                                | %     | 92        | 99        | 82      | 99        | 0             | 39                |
| Trade union membership  | %     | 45        | 56        | 17      | 50        | 0             | 1                 |
| Union Structures  | #     | 37        | 21        | 4       | 8         | 0             | 4                 |
| Hours lost due to strikes                                       | hours | 0         | 0         | 0       | 0         | 0             | 0                 |
| Staff engaged in further study                                  | #     | 30        | 30        | n.d.    | n.d.      | n.d.          | n.d.              |
| Professional Internships  | #     | 417       | 285       | 0       | 132       | 0             | 0                 |
| Academic internships  | #     | 517       | 136       | 343     | 6         | 20            | 12                |
| <b>HEALTH AND SAFETY (H&amp;S)</b>                              |       |           |           |         |           |               |                   |
| Installed capacity certified by OHSAS 18.001                    | MW    | 23,487    | 9,852     | 5,548   | 2,611     | 3,934         | 1,541             |
| Installed capacity certified by OHSAS 18.001                    | %     | 94        | 94        | 100     | 98        | 81            | 100               |
| Employees covered by OHSAS 18.001                               | %     | 33        | 18        | 100     | 23        | 44            | 79                |
| Employees   |       |           |           |         |           |               |                   |
| Accidents <sup>1</sup>  | #     | 30        | 23        | 3       | 3         | 0             | 1                 |
| Male  | #     | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Female  | #     | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Fatal accidents   | #     | 0         | 0         | 0       | 0         | 0             | 0                 |
| Frequency rate <sup>2</sup>                                     | Fr    | 1.37      | 2.07      | 0.94    | 0.46      | 0.00          | 3.22              |
| Male  | Fr    | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Female  | Fr    | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Severity rate <sup>3</sup>                                      | Sr    | 91        | 155       | 28      | 28        | 0             | 32                |
| Male  | Sr    | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Female  | Sr    | n.a.      | n.a.      | n.a.    | n.a.      | n.a.          | n.a.              |
| Total lost days due to accidents <sup>4</sup>                   | #     | 2,003     | 1,723     | 90      | 180       | 0             | 10                |
| Occupational diseases   | #     | 3         | 3         | 0       | 0         | 0             | 0                 |
| Occupational diseases rate (with devaluation)                   | %     | 0.09      | 0.18      | 0       | 0         | 0             | 0                 |
| Contractors   |       |           |           |         |           |               |                   |
| Accidents <sup>1</sup>  | #     | 158       | 110       | 21      | 14        | 12            | 1                 |
| Fatal accidents   | #     | 3         | 3         | 0       | 0         | 0             | 0                 |
| Working days  | #     | 5,420,000 | 2,619,813 | 626,042 | 1,728,052 | 374,696       | 71,398            |
| Frequency rate <sup>2</sup>                                     | Fr    | 3.84      | 5.52      | 4.41    | 1.07      | 4.21          | 1.84              |
| Severity rate <sup>3</sup>                                      | Sr    | 217       | 350       | 195     | 27        | 107           | 684               |
| EDP employees and contractors                                   |       |           |           |         |           |               |                   |
| Frequency rate <sup>2</sup>                                     | Fr    | 2.98      | 4.29      | 3.02    | 0.87      | 3.26          | 2.34              |
| Severity rate <sup>3</sup>                                      | Sr    | 173       | 280       | 128     | 28        | 83            | 446               |
| Fatal electrical accidents involving third parties <sup>6</sup> | #     | 7         | 3         | 0       | 4         | 0             | 0                 |
| Near accidents  | #     | 384       | 49        | 48      | 94        | 176           | 17                |
| Representatives elected in H&S Comissions                       | #     | 234       | 69        | 10      | 130       | 21            | 4                 |
| EDP employees represented <sup>7</sup>                          | %     | 88        | 89        | 66      | 100       | 100           | 21                |
| Employees representative  | #     | 234       | 69        | 10      | 130       | 21            | 4                 |
| <b>H&amp;S TRAINING</b>   |       |           |           |         |           |               |                   |
| Employees   |       |           |           |         |           |               |                   |
| Awareness actions   | #     | 1,197     | 219       | 447     | 171       | 295           | 65                |
| Employees   | #     | 10,919    | 1,799     | 2,676   | 3,554     | 2,679         | 211               |
| Training hours  | hours | 68,839    | 11,432    | 9,706   | 40,329    | 5,958         | 1,414             |
| Contractors   |       |           |           |         |           |               |                   |
| Awareness actions   | #     | 15,538    | 5,770     | 52      | 8,274     | 1,412         | 30                |
| Employees   | #     | 51,006    | 19,057    | 529     | 29,568    | 1,756         | 96                |
| Training hours  | hours | 328,294   | 16,107    | 103     | 299,054   | 12,588        | 442               |

<sup>1</sup> Accidents at the workplace in worktime and accidents on the way to or from work, with an absence of one more calendar days and fatal accidents.

<sup>2</sup> Work accidents by a million worked hours.

<sup>3</sup> Number of calendar days lost due to work accident by a million worked hours.

<sup>4</sup> Sum of the number of absence calendar days resulting of work accidents occurred in the reference period, plus the number of days lost by accidents in the previous period, which lasted until the reference period without interruption. The lost time is measured from the day following the accident to the day right before the return to work.

<sup>5</sup> Accidents occurred involving male gender employees.

<sup>6</sup> Accidents occurred involving people outside EDP activity.

<sup>7</sup> Number of represented EDP employees, by the total number of EDP employees.

## ECONOMIC INDICATORS

| EDP GROUP  | UN    | 2017       | 2016       |
|--|-------|------------|------------|
| <b>ECONOMIC VALUE GENERATED</b>  | '000€ | 17,234,143 | 15,899,739 |
| Economic value distributed   | '000€ | 14,910,470 | 14,550,903 |
| Economic value accumulated   | '000€ | 2,323,672  | 1,348,836  |
| RDI <sup>1</sup>   | '000€ | 64,518     | 36,145     |
| <b>ENERGY EFFICIENCY AND SUPPLEMENTARY ENERGY SERVICES REVENUES <sup>2</sup></b> | '000€ | 1,103,854  | 1,005,821  |
| Energy efficiency services revenues  | '000€ | 134,114    | 92,975     |
| Supplementary energy services revenues <sup>3</sup>                              | '000€ | 969,740    | 912,846    |
| <b>SUPPORT FROM PUBLIC AUTHORITIES <sup>4</sup></b>                              | '000€ | 42,118     | 51,246     |
| <b>FINES AND PENALTIES</b>   | '000€ | 6,520      | 6,928      |
| <b>ENVIRONMENTAL MATTERS <sup>5</sup></b>  | '000€ | 236,893    | 240,870    |
| Investments  | '000€ | 179,892    | 179,187    |
| Expenses   | '000€ | 57,001     | 61,683     |
| <b>SOCIAL MATTERS</b>  |       |            |            |
| Personnal costs  | '000€ | 597,732    | 588,843    |
| Employee benefits  | '000€ | 83,102     | 71,773     |
| Direct training investment   | '000€ | 4,337      | 5,948      |
| Direct training investment per employee  | €/p   | 372        | 496        |
| HC ROI per employee  | %     | 0.19       | 0.17       |

<sup>1</sup> In 2017, the calculation process of this indicator was changed.

<sup>2</sup> Energy Efficiency and Supplementary Energy Services: services provided under energy supply, installation of more efficient and/or building retrofit, and sustainable mobility, which generate revenues for the company.

<sup>3</sup> Supplementary energy services revenues include the following categories: Energy Management, Maintenance and Operation, Property/Facility Management, Energy and/or Equipment Supply, Provision of Service (example: steam) and other.

<sup>4</sup> Support from public authorities both recognised and not recognised in the income statement.

<sup>5</sup> More information available on the Notes to the Consolidated and Company Financial Statements (Note 50) by EDP Group Annual Report.

**THE**  
**LIVING ENERGY**  
**BOOK**

by *edp*



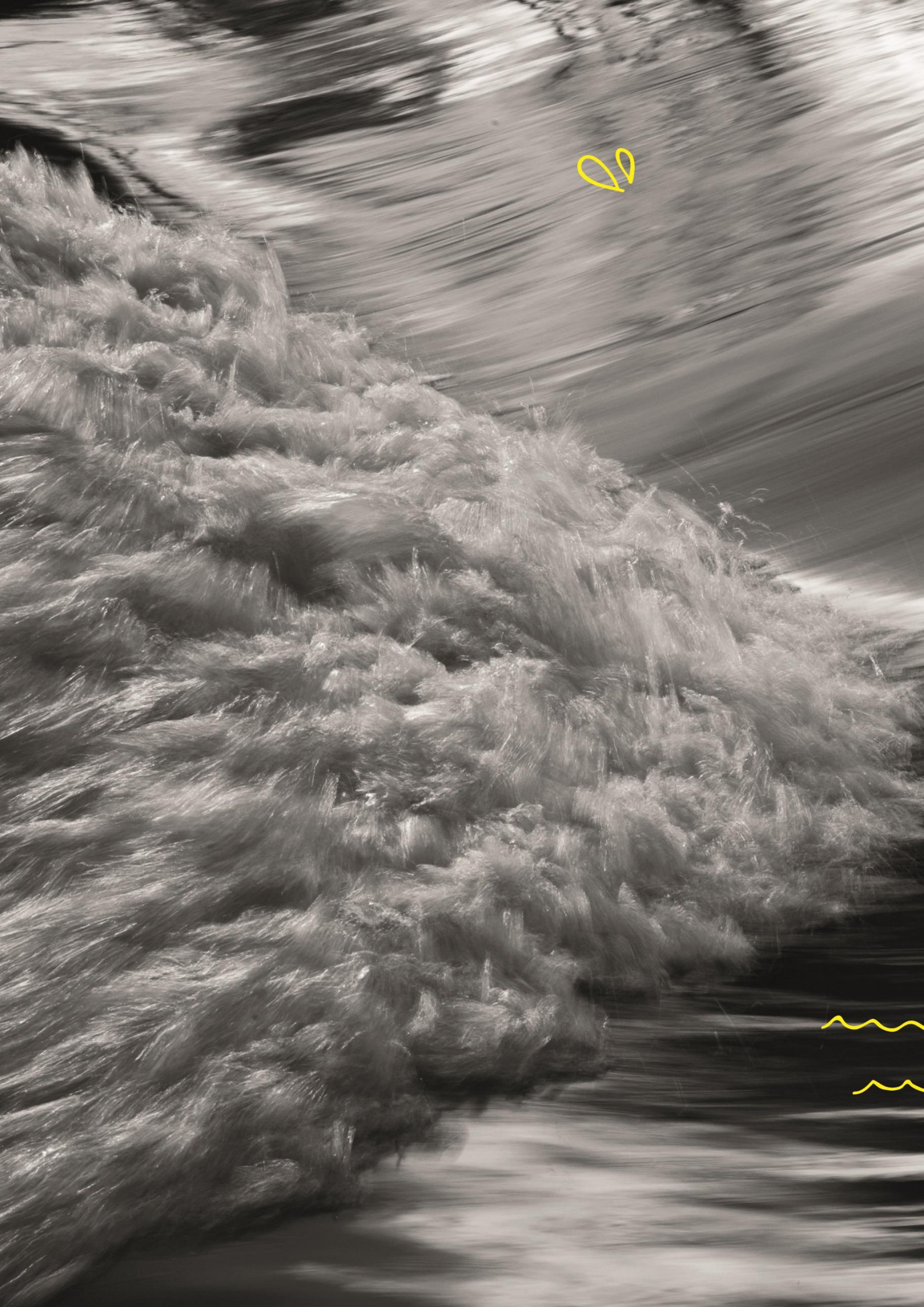
# 05

## ANNEXES

|  |     |
|--|-----|
| EDP'S Principles and Policies  | 151 |
| Reporting Principles   | 152 |
| Non Financial Statement (Art.66. <sup>th</sup> -B and 508. <sup>th</sup> -G) | 155 |
| GRI Table  | 156 |
| Statement of the Auditor   | 160 |



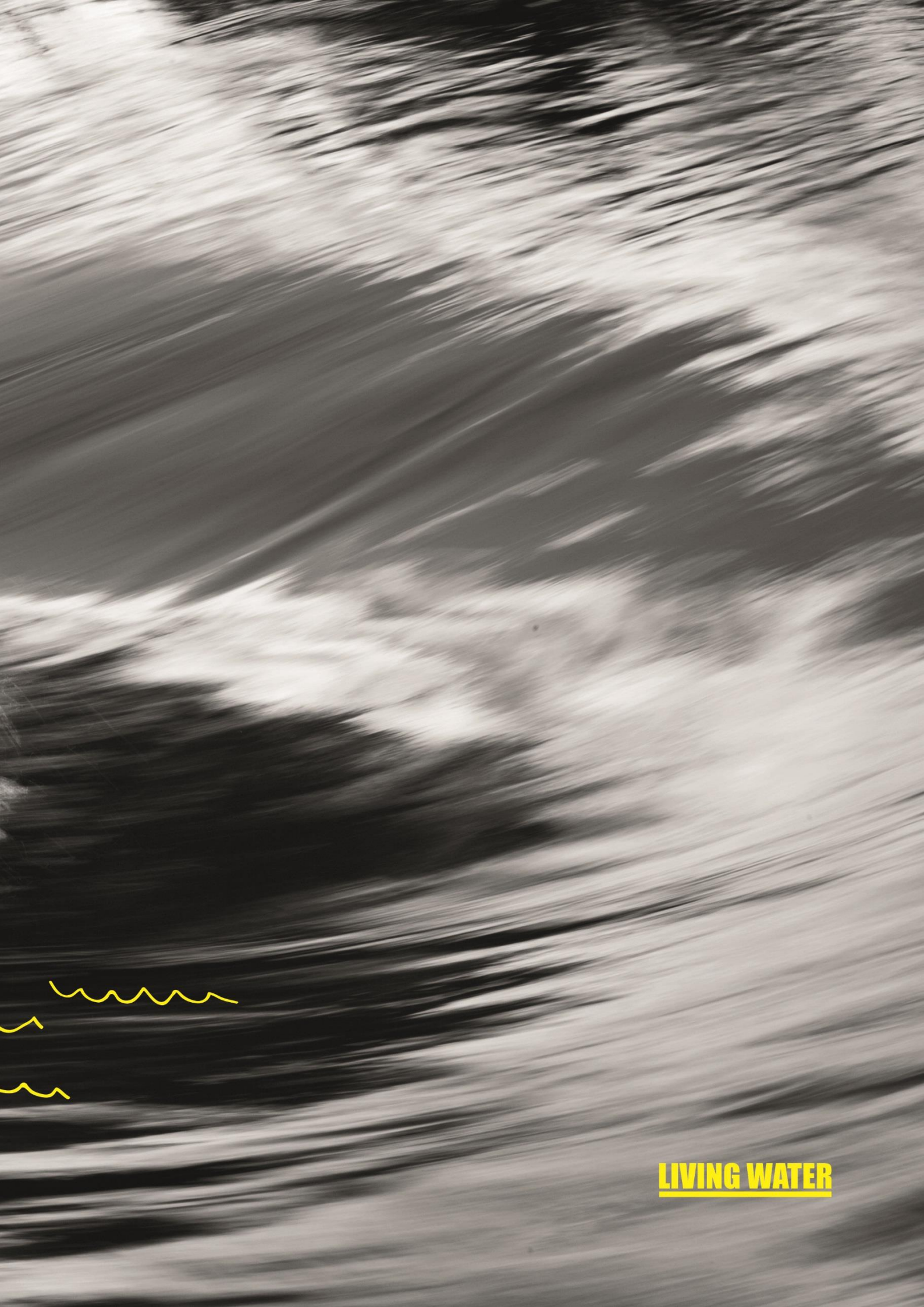




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**LIVING WATER**

# **EDPS' PRINCIPLES AND POLICIES**

Ethics in EDP (Code of Ethics)

Sustainable Development Principles

Policy on selection of the members of the General and Supervisory Board and Executive Board of Directors

Corporate Risk Management Policy

Financial Management Policy

Business Data Governance

EDP Group Fiscal Policy

Healthy Competition Practices Commitment

Information Security Policy

Environmental Policy

Biodiversity Policy

Water Management Policy

Stakeholder Relationship Policy

Health and Safety at Work Policy

Training Policy

Diversity Policy

Internal Mobility Policy - local and international

Social Investment Policy

Volunteering Policy

EDP Supplier Code of Conduct

Sustainable Procurement Policy

To read the principles and policies listed please go to [www.edp.com](http://www.edp.com)> about us> principles and policies

# **REPORTING PRINCIPLES**

The annual publication of the EDP Sustainability Report is in accordance with the Reporting Principles (content and quality) expressed by the Global Reporting Initiative GRI Standards - “Comprehensive Option”.

## **GRI STANDARDS REPORTING PRINCIPLES**

### **REPORTING QUALITY**

| <b>BALANCE</b>  | <b>COMPARABILITY</b>  | <b>TRANSPARENCY</b>   |
|---|---|---|
| The content of the report considers both the most positive facts of the year and those less positive when materially relevant.  | The information reported covers a four-year time series in the material theme indicators relevant to the EDP Group's business (p. 130) and enables a comparative analysis of the company's performance. | An online glossary is provided, helping to understand some of the technical terms used ( <a href="http://www.edp.com/en/glossary">www.edp.com/en/glossary</a> ). In addition to the publications in pdf, a web version is also available, facilitating navigation through the different contents. |
| <b>ACCURACY</b>   | <b>TIMELINES</b>  | <b>RELIABILITY</b>  |
| The scope of the report is explained, as well as the consolidation criteria. All exceptions and changes to criteria are duly identified and highlighted. The definitions and descriptions of the calculation methodologies of the main indicators employed are available online, in the glossary. | The Report has an annual frequency and covers the calendar year 2017.   | The internal process verification is described in p. 154. External verification is an additional guarantee of the reliability of the content, regarding the indicators included in GRI Table (p. 156 onwards)   |

## **CONTENT PRINCIPLES**

### **SUSTAINABILITY CONTEXT**

Within the framework of the defined strategy, EDP fosters a corporate culture of permanent demand for excellence in sustainability, based on its eight principles of sustainability ([www.edp.com](http://www.edp.com)> edp> about us> principles and policies).

The Group's sustainability performance is globally reported based on the financial consolidation criteria defined and described in the next chapter. Regarding these companies, the Group defines a clear strategy for continuous improvement of its performance, supported by the internal process of identifying the year's material themes and emerging trends in the sector, always considering the local conditions in which it operates. Regarding non-consolidated assets (identified below), the Company positively influences its performance and highlights the major initiatives of the year throughout the report, when materially relevant. In the supply chain, the approach is management and the material themes are published. In this context, the Group advocates a relationship supported in trust, collaboration and shared value creation (page 79). Finally, on the customer side, EDP has a growth strategy supported by an increasingly clean supply, contributing to higher energy efficiency and an increasing reduction of its carbon footprint (page 105).

## **CONSOLIDATION CRITERIA**

The consolidation criteria of non-financial information are as follows:

- In the subsidiary companies where the Group exercises control, the performance of companies is reported at 100%;
- In jointly controlled companies, the performance reported relates only to the percentage of ownership held by the Group in each company;
- In companies where the Group exercises significant influence, operational, environmental and social information is published, given its relevance to the Group.

In 2017, the sale of the gas distribution business in Iberia implied the exclusion of the non-financial information of these companies.

A list of companies and their method of consolidation is available in Appendix I of the Notes to the Condensed Consolidated and Company Financial Statements.

## **MATERIALITY**

In terms of sustainability management and reporting on its performance, the EDP Group periodically identifies the issues and trends that in the short, medium and long term can influence the creation of value for the company. The Material Themes bring together both financial and non-financial dimensions, including economic, environmental and social information likely to influence or be influenced by different EDP stakeholders.

The materiality analysis assesses and prioritises the relevance of an issue for EDP and its stakeholders, periodically reviewing their expectations to support the organisation's decision-making and strategy development process.

Further details on the internal methodology for determining the Materiality of the EDP Group is available in the Sustainability Management Approach document at [www.edp.com](http://www.edp.com)> sustainability> publications> reports> sustainability management approach.

Further details on the material themes of the EDP Group for 2017 and their meaning can be found at [www.edp.com](http://www.edp.com)> sustainability> approach> materiality.

## **VERIFICATION ACCORDING TO AA1000 APS 2008**

Material topics (page 52) are identified within the framework defined by AA1000 APS (2008), ensuring the identification of critical stakeholders; integrating their expectations into the corporate and operational strategy and seeking to appropriately respond to their expectations.

In 2017, like in previous years, EDP was subject to verification of its compliance with the AA1000 APS (2008) type 2 standard by the audit firm KPMG, in particular, the principles of inclusion, materiality and responsiveness.

## **INCLUSION OF STAKEHOLDERS**

The inclusion principle assumes that the most relevant stakeholders are consulted, to learn about their expectations and concerns, and incorporating them into the decision-making process.

Periodically, interaction initiatives are promoted with different segments of the company's stakeholders, while there are communication channels dedicated to specific segments.

## **RESPONSE AND INTEGRITY**

EDP responds strategically to the main expectations of its stakeholders, making commitments and defining action plans for material themes. On page 40, the EDP's Target Goals are listed, and on page 52 the Group's Materiality grid for 2017, whose themes are detailed throughout the document.

## **INTERNAL AND EXTERNAL ASSURANCE**

The overall coordination of the process of preparing the EDP Sustainability Report is the responsibility of the Sustainability Department. The contents are subsequently viewed and approved by the Executive Board of Directors and by the General and Supervisory Board.

The external verification of sustainability content, carried out by KPMG & Associados - Sociedade de Revisores de Contas, S.A., has the external verification level - "Reasonable" - for a set of 31 key indicators and "Limited" for the remaining content, according to the table starting on page 155, and verification letter, on page 160.

## **GRI AND GLOBAL COMPACT**

A The following table lists the GRI-Standard indicators in accordance with the "Comprehensive" option and the specifics of the G4 Electric Utilities Sector Disclosures, assuming deadlines for the implementation of the indicators for which full compliance has not yet been possible. Simultaneously, the following table identifies the available information that responds to the 10 principles of the Global Compact, demonstrating EDP's commitment to this initiative.

# CONSOLIDATED AND COMPANY NON FINANCIAL STATEMENTS UNDER ARTICLES 66.<sup>TH</sup>-B AND 508.<sup>TH</sup>-G OF THE COMMERCIAL COMPANIES CODE

| ARTICLE 66. <sup>TH</sup> -B AND 508. <sup>TH</sup> -G  | DESCRIPTION AND DUE DILIGENCE PROCESSES  |  | ASSOCIATED RISKS   | RESULTS   | KEY PERFORMANCE INDICATORS |
|---|--|--|--|---|----------------------------|
| Environmental policies  |  | Environmental Policy<br>Biodiversity Policy<br>Water Management Policy   |  | Environmental Management<br>Climate Change<br>Promotion of Renewable Energy<br>Energy Efficiency  |                            |
| Workers related social policies   | Code of Ethics   | Business Data Governance<br>Healthy Competition Practices Commitment<br>Information Security Policy<br>Stakeholder Relationship Policy<br>Training Policy<br>Internal Mobility Policy<br>Social Investment Policy<br>Volunteering Policy<br>EDP Supplier Code of Conduct<br>Sustainable Procurement Policy | Chapter 'Risk Management' in block '02 Strategic Approach' | Ethics and Human Rights<br>Communication and Transparency<br>Supplier Management<br>Customer Service and Satisfaction<br>Vulnerable Customers<br>Community Engagement and Development<br>People Management<br>Health and Safety |                            |
| Equality policies between men and women   | Sustainable Development Principles   | Diversity Policy<br>Policy on selection of the members of the GSB and EBD  |  | Corporate Governance – Operation of Corporate Bodies<br>Ethics and Human Rights - Diversity and Equal Opportunities<br>People Management  | Block '04 Indicators'      |
| Non-discrimination policies   | Corporate Risk Management Policy   | Diversity Policy<br>Policy on selection of the members of the GSB and EBD  |  | Corporate Governance – Operation of Corporate Bodies<br>Ethics and Human Rights – Diversity and Equal Opportunities<br>Ethics and Human Rights – Inclusion of Vulnerable Groups<br>People Management                            |                            |
| Human rights policies   |  | Stakeholder Relationship Policy<br>Social Investment Policy<br>Volunteering Policy<br>EDP Supplier Code of Conduct<br>Sustainable Procurement Policy   |  | Ethics and Human Rights<br>Supplier Management<br>Community Engagement and Development<br>People Management<br>Health and Safety  |                            |
| Policies against corruption and bribery attempt   |  | Healthy Competition Practices Commitment<br>EDP Supplier Code of Conduct<br>Sustainable Procurement Policy   |  | Ethics and Human Rights - Corruption/Bribery/Fraud/Money Laundering<br>Ethics and Human Rights – Responsible Political Involvement<br>Supplier Management   |                            |
| Brief description of the company's business model   | 'Business Model' chapter in '01 EDP' and block '02 Strategic Approach'   |  |  |   |                            |
| Reference to the amounts in the annual financial statements and additional explanations of amounts reported | Chapter 'Business Sustainability' in block '03 Performance' Group's Financial Analysis in 2017 Annual Report (Chapter 3 - Performance) |  |  |   |                            |

**GRI TABLE**

| DISCLOSURE NUMBER                   | PAGE NUMBERS                       | REPORT | OMISSIONS/ADDITIONAL INFORMATION  | EXTERNAL ASSURANCE | GLOBAL COMPACT |
|-------------------------------------|------------------------------------|--------|---|--------------------|----------------|
| <b>GRI 100: UNIVERSAL STANDARDS</b> |                                    |        |   |                    |                |
| <b>GRI 102: General Disclosures</b> |                                    |        |   |                    |                |
| 102-1                               | 4                                  |        |   | L                  |                |
| 102-2                               | 21-22                              |        |   | L                  |                |
| 102-3                               | 4                                  |        |   | L                  |                |
| 102-4                               | 19-20                              |        |   | L                  |                |
| 102-5                               | 4                                  |        |   | L                  |                |
| 102-6                               | 19-22                              |        |   | L                  |                |
| 102-7                               | 19-20; 142; AR 207 e 209           |        |   | L                  |                |
| 102-8                               | 142-143                            |        |   | R                  | 3; 6           |
| 102-9                               | www.edp.com                        |        | www.edp.com> suppliers> procurement   | L                  |                |
| 102-10                              | 132; AR 56; AR 87-88; AR 89-90     |        |   | L                  |                |
| 102-11                              | Code of Ethics                     |        | www.edp.com> edp> about us> ethics  | L                  |                |
| 102-12                              |                                    |        | www.edp.com> sustainability> approach> participations<br>www.edp.com> sustainability> approach> sustainable development goals | L                  |                |
| 102-13                              | www.edp.com                        |        | www.edp.com> sustainability> approach> participations   | L                  |                |
| 102-14                              | 11-18                              |        |   | L                  |                |
| 102-15                              | 35-38                              |        |   | L                  |                |
| 102-16                              | Code of Ethics                     |        |   | L                  | 10             |
| 102-17                              | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  | 10             |
| 102-18                              | 41-44; 45-46                       |        |   | L                  |                |
| 102-19                              | AR 109                             |        |   | L                  |                |
| 102-20                              | 43-44                              |        |   | L                  |                |
| 102-21                              | 152-154; AR 29 and 117             |        |   | L                  |                |
| 102-22                              | 41-44; AR 97-99; AR 128-132        |        |   | L                  |                |
| 102-23                              | 41-44; AR 96-97                    |        |   | L                  |                |
| 102-24                              | 41-44                              |        |   | L                  |                |
| 102-25                              | AR 99-101; AR 185                  |        |   | L                  |                |
| 102-26                              | 41-44; 45-46; AR 102-105           |        |   | L                  |                |
| 102-27                              | 143                                |        |   | L                  |                |
| 102-28                              | 53-56; AR 158-164                  |        |   | L                  |                |
| 102-29                              | 53-54; AR 139-152                  |        |   | L                  |                |
| 102-30                              | 53-54; AR 139-152                  |        |   | L                  |                |
| 102-31                              | AR 141                             |        |   | L                  |                |
| 102-32                              | 152-154                            |        |   | L                  |                |
| 102-33                              | AR 109-126                         |        |   | L                  |                |
| 102-34                              | 60; 128                            |        |   | L                  |                |
| 102-35                              | 53-56; AR 155-166                  |        |   | L                  |                |
| 102-36                              | 53-56; AR 155-166                  |        |   | L                  |                |
| 102-37                              | 53-56; AR 155-166                  |        |   | L                  |                |
| 102-38                              | 142                                |        |   | L                  |                |
| 102-39                              | 142                                |        |   | L                  |                |
| 102-40                              | 30                                 |        |   | L                  |                |
| 102-41                              | 142                                |        |   | L                  | 3              |
| 102-42                              | Stakeholders Report                |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 102-43                              | Stakeholders Report                |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 102-44                              | Stakeholders Report                |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 102-45                              | AR 361-369                         |        |   | L                  |                |
| 102-46                              | 52;152-154                         |        |   | L                  |                |
| 102-47                              | 52                                 |        |   | L                  |                |
| 102-48                              |                                    |        | Not applicable  | L                  |                |
| 102-49                              | 52;152-154                         |        |   | L                  |                |
| 102-50                              | 152-154                            |        |   | L                  |                |
| 102-51                              | 152-154                            |        |   | L                  |                |
| 102-52                              | 152-154                            |        |   | L                  |                |
| 102-53                              | AR 385                             |        |   | L                  |                |
| 102-54                              | 152-154                            |        |   | L                  |                |
| 102-55                              | 154                                |        |   | L                  |                |
| 102-56                              | 154                                |        |   | L                  |                |
| <b>GRI 103: Management Approach</b> |                                    |        |   |                    |                |
| 103-1                               | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  | 1 to 10        |
| 103-2                               | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 103-3                               | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  |                |



**SUSTAINABILITY REPORT  
EDP 2017**

| DISCLOSURE NUMBER   | PAGE NUMBERS          | REPORT | OMISSIONS/ADDITIONAL INFORMATION  | EXTERNAL ASSURANCE | GLOBAL COMPACT |
|---|-----------------------|--------|---|--------------------|----------------|
| <b>GRI 200: ECONOMIC TOPICS</b>                           |                       |        |   |                    |                |
| <b>GRI 201: Economic Performance</b>                      |                       |        |   |                    |                |
| 201-1   | 132                   |        |   | R                  |                |
| 201-2   | 97-98                 |        |   | L                  | 7              |
| 201-3   | AR 270; AR 308-3 18   |        |   | L                  |                |
| 201-4   | 146                   |        |   | R                  |                |
| <b>GRI 202: Market Presence</b>                           |                       |        |   |                    |                |
| 202-1   | 137-138               |        |   | R                  |                |
| 202-2   | 142                   |        |   | L                  | 6              |
| <b>GRI 203: Indirect Economic Impacts</b>                 |                       |        |   |                    |                |
| 203-1   | 109-112               |        |   | L                  |                |
| 203-2   | 79-80; 89-90; 109-110 |        |   | L                  |                |
| <b>GRI 204: Procurement Practices</b>                     |                       |        |   |                    |                |
| 204-1   | 79-80; 132            |        |   | R                  |                |
| <b>GRI 205: Anti-corruption</b>                           |                       |        |   |                    |                |
| 205-1   | 57; 60                |        |   | L                  |                |
| 205-2   | www.edp.com           |        | www.edp.com> sustainability> social dimension> human rights                 | L                  |                |
| 205-3   | 57; 130               |        |   | L                  |                |
| <b>GRI 206: Anti-competitive Behaviour</b>                |                       |        |   |                    |                |
| 206-1   | 68; 130               |        |   | R                  |                |
| <b>GRI 300: ENVIRONMENTAL TOPICS</b>                      |                       |        |   |                    |                |
| <b>ISO 14001 Certified maximum net installed capacity</b> |                       |        |   |                    |                |
|   | 139                   |        |   | R                  | 7, 8; 9        |
| <b>GRI 301: Materials</b>                                 |                       |        |   |                    |                |
| 301-1   | 79-80                 |        |   | L                  |                |
| 301-2   |                       |        | This figure is considered not material compared to the total materials used | L                  |                |
| 301-3   |                       |        | Not applicable  | L                  |                |
| <b>GRI 302: Energy</b>                                    |                       |        |   |                    |                |
| 302-1   | 134; 139              |        |   | R                  |                |
| 302-2   | 139                   |        |   | L                  |                |
| 302-3   | 139                   |        |   | L                  |                |
| 302-4   | 105-106; 136          |        |   | L                  |                |
| 302-5   |                       |        | Not applicable to the sector  | L                  |                |
| <b>GRI 303: Water</b>                                     |                       |        |   |                    |                |
| 303-1   | 93-94; 139            |        |   | R                  |                |
| 303-2   | 93-94; 134; 139-140   |        |   | L                  |                |
| 303-3   |                       |        | This figure is considered not material compared to the total water used     | L                  |                |
| <b>GRI 304: Biodiversity</b>                              |                       |        |   |                    |                |
| 304-1   | 140                   |        |   | R                  |                |
| 304-2   | 92; www.edp.com       |        | www.edp.com> sustainability> environmental dim.> biodiversity               | L                  |                |
| 304-3   | www.edp.com           |        | www.edp.com> sustainability> environmental dim.> biodiversity               | L                  |                |
| 304-4   | www.edp.com           |        | www.edp.com> sustainability> environmental dim.> biodiversity               | L                  |                |
| <b>GRI 305: Emissions</b>                                 |                       |        |   |                    |                |
| 305-1   | 135; 139              |        |   | R                  |                |
| 305-2   | 98; 135; 139          |        |   | R                  |                |
| 305-3   | 98; 135; 139          |        |   | L                  |                |
| 305-4   | 139                   |        |   | L                  |                |
| 305-5   | 97-100                |        |   | L                  |                |
| Avoided CO <sub>2</sub> emissions                         | 102; 135; 136; 139    |        |   | R                  |                |
| 305-6   |                       |        | Equipment with this substance no longer have expression in the Group        | L                  |                |
| 305-7   | 139                   |        |   | R                  |                |
| <b>GRI 306: Effluents and Waste</b>                       |                       |        |   |                    |                |
| 306-1   | 139                   |        |   | L                  |                |
| 306-2   | 94; 134; 140          |        |   | R                  |                |
| 306-3   | 94; 134; 139-140      |        |   | L                  |                |
| 306-4   |                       |        | There were no exports of hazardous materials in 2017                        | L                  |                |
| 306-5   | 94                    |        | There were no significantly affected water bodies by the wastewater         | L                  |                |
| <b>GRI 307: Environmental Compliance</b>                  |                       |        |   |                    |                |
| 307-1   | 134                   |        |   | R                  |                |
| <b>GRI 308: Supplier Environmental Assessment</b>         |                       |        |   |                    |                |
| 308-1   | 79-80                 |        |   | L                  |                |
| 308-2   | 79-80                 |        |   | L                  |                |

| DISCLOSURE NUMBER  | PAGE NUMBERS                            | REPORT | OMISSIONS/ADDITIONAL INFORMATION  | EXTERNAL ASSURANCE | GLOBAL COMPACT |
|--|---|--------|---|--------------------|----------------|
| <b>GRI 400: SOCIAL TOPICS</b>                                    |   |        |   |                    |                |
| <b>GRI 401: Employment</b>                                       |   |        |   |                    |                |
| 401-1  | 142                                     |        |   | R                  | 6              |
| 401-2  | 113; Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 401-3  | 142                                     |        |   | L                  |                |
| Absenteeism rate   | 142                                     |        |   | R                  |                |
| <b>GRI 402: Labour/Management Relations</b>                      |   |        |   |                    |                |
| 402-1  | Sustainability Management Approach      |        | www.edp.com> sustainability> publications> reports  | L                  | 3              |
| <b>GRI 403: Occupational Health and Safety</b>                   |   |        |   |                    |                |
| 403-1  | 141; Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 403-2  | 143                                     |        |   | R                  |                |
| 403-3  | Sustainability Management Approach      |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 403-4  | Sustainability Management Approach      |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| <b>GRI 404: Training and Education</b>                           |   |        |   |                    |                |
| 404-1  | 143                                     |        |   | R                  | 6              |
| 404-2  | 113-115                                 |        |   | L                  |                |
| 404-3  | n/a                                     |        | All Group employees are covered by the Amplify competency assessment system (see Sustainability Management Approach for more information about this system), provided they belong to the permanent staff and have 6 months of effective work, excluding EBD and GSB members with specific evaluation processes (see page 55 of this Report) | L                  |                |
| <b>GRI 405: Diversity and Equal Opportunity</b>                  |   |        |   |                    |                |
| 405-1  | 137; 142                                |        |   | R                  |                |
| 405-2  | 142                                     |        |   | L                  |                |
| <b>GRI 406: Non-discrimination</b>                               |   |        |   |                    |                |
| 406-1  | Ethics Ombudsman Report                 |        | www.edp.com> edp> about us> ethics  | L                  | 1; 6           |
| <b>GRI 407: Freedom of Association and Collective Bargaining</b> |   |        |   |                    |                |
| 407-1  | 79-80                                   |        |   | L                  | 1; 3           |
| <b>GRI 408: Child Labour</b>                                     |   |        |   |                    |                |
| 408-1  | 79-80                                   |        |   | L                  | 5              |
| <b>GRI 409: Forced or Compulsory Labour</b>                      |   |        |   |                    |                |
| 409-1  | 79-80                                   |        |   | L                  | 4              |
| <b>GRI 410: Security Practices</b>                               |   |        |   |                    |                |
| 410-1  |   |        | Not material  | L                  |                |
| <b>GRI 411: Rights of Indigenous Peoples</b>                     |   |        |   |                    |                |
| 411-1  | 58                                      |        |   | L                  | 1; 2           |
| <b>GRI 412: Human Rights Assessment</b>                          |   |        |   |                    |                |
| 412-1  | 58                                      |        | Incident in São Manoel (Brazil)   | L                  |                |
| 412-2  | 143                                     |        | Detailed answer in 'Inclusion of Vulnerable Groups'   | L                  |                |
| 412-3  | 79-80                                   |        | Included in ethics training   | L                  |                |
| <b>GRI 413: Local Communities</b>                                |   |        |   |                    |                |
| 413-1  | 110                                     |        |   | L                  | 1              |
| 413-2  | 110                                     |        |   | L                  |                |
| <b>GRI 414: Supplier Social Assessment</b>                       |   |        |   |                    |                |
| 414-1  | 79-80                                   |        |   | L                  | 1; 2           |
| 414-2  | 79-80                                   |        |   | L                  |                |
| <b>GRI 415: Public Policy</b>                                    |   |        |   |                    |                |
| 415-1  | 60                                      |        |   | L                  | 10             |
| <b>GRI 416: Customer Health and Safety</b>                       |   |        |   |                    |                |
| 416-1  | Sustainability Management Approach      |        | www.edp.com> sustainability> publications> reports  | L                  |                |
| 416-2  |   |        | Not relevant  | L                  |                |
| <b>GRI 417: Marketing and Labelling</b>                          |   |        |   |                    |                |
| 417-1  | 70.84                                   |        |   | R                  |                |
| 417-2  |   |        | Not relevant  | L                  |                |
| 417-3  |   |        | Not relevant  | L                  |                |
| <b>GRI 418: Customer Privacy</b>                                 |   |        |   |                    |                |
| 418-1  | 83; 130                                 |        |   | L                  | 1              |
| <b>GRI 419: Socioeconomic Compliance</b>                         |   |        |   |                    |                |
| 419-1  | 146                                     |        |   | R                  |                |
| Environmental matters  | 146                                     |        |   | R                  |                |
| Energy efficiency services revenues                              | 146                                     |        |   | R                  |                |

**SUSTAINABILITY REPORT  
EDP 2017**

| DISCLOSURE NUMBER                            | PAGE NUMBERS                       | REPORT | OMISSIONS/ADDITIONAL INFORMATION   | EXTERNAL ASSURANCE | GLOBAL COMPACT |
|--|------------------------------------|--------|--|--------------------|----------------|
| <b>G4 SECTOR SPECIFIC</b>                    |                                    |        |  |                    |                |
| <b>General standard disclosures</b>          |                                    |        |  |                    |                |
| EU1*   | 135                                |        |  | R                  |                |
| EU2*   | 135                                |        |  | R                  |                |
| EU3*   | 133                                |        |  | R                  |                |
| EU4*   | 135                                |        |  | R                  |                |
| EU5*   | AR 341 (note 46)                   |        |  | R                  |                |
| <b>Economic</b>                              |                                    |        |  |                    |                |
| G4-DMA Availability and Reliability*         | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU10*  | AR 15 (key metrics); AR 36; AR 375 |        |  | L                  |                |
| G4-DMA Demand-Side Management*               | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| G4-DMA Research and Development*             | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| G4-DMA Plant Decommissioning*                | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU11*  | 136                                |        |  | L                  |                |
| EU12*  | 136                                |        |  | L                  |                |
| <b>Environment</b>                           |                                    |        |  |                    |                |
| G4-DMA Materials*                            | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| G4-DMA Water*                                | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| G4-DMA Biodiversity*                         | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU13*  | 94; www.edp.com                    |        | www.edp.com> sustainability> environmental dim.> biodiversity  | L                  | 7; 8           |
| G4-DMA Effluents and Waste                   | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| <b>Social</b>                                |                                    |        |  |                    |                |
| G4-DMA Employment                            | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU15*  | 137                                |        | 95%of estimated leaves on the next 5 years will be in Portugal<br>86%of estimated leaves on the next 10 years will be in | R                  |                |
| EU17*  | 143                                |        |  | L                  |                |
| EU18*  | 143                                |        |  | L                  |                |
| G4-DMA Freedom of Assoc.Collective Bargainir | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| G4-DMA Local Communities*                    | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU22*  | 110                                |        | more information: www.edp.com.br/conheca-edp/relatorios/Documents/RA_2017_Vf.pdf (page 92)<br>[Portuguese version only]  | L                  | 1; 7; 8        |
| G4-DMA Disaster/Emergency Planning and respc | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| <b>Product responsibility</b>                |                                    |        |  |                    |                |
| G4-DMA Customer Health and Safety*           | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU25*  | 143                                |        |  | L                  |                |
| G4-DMA: Access*                              | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU26*  | Sustainability Management Approach |        | www.edp.com> sustainability> publications> reports   | L                  |                |
| EU27*  | 133                                |        |  | L                  |                |
| EU28*  | 133                                |        |  | L                  |                |
| EU29*  | 133                                |        |  | L                  |                |
| EU30*  | AR 376                             |        |  | L                  |                |
| * Sector specific indicator                  |                                    |        |  |                    |                |
| R reasonable verification                    |                                    |        |  |                    |                |
| L limited verification                       |                                    |        |  |                    |                |
|  | AR - Annual Report                 |        | Fully reported   |                    |                |
|  |                                    |        | Partially reported   |                    |                |
|  |                                    |        | Not reported   |                    |                |

**THE**  
**LIVING ENERGY**  
**BOOK**

by *edp*





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## INDEPENDENT ASSURANCE REPORT TO EDP – Energias de Portugal, S.A.

**(Free translation from a report originally issued in Portuguese language. In case of doubt the Portuguese version will always prevail.)**

**To the Executive Board of Directors of  
EDP - Energias de Portugal, S.A.**

### Introduction

- 1 We have been engaged by the Executive Board of Directors of EDP- Energias de Portugal, S.A (“EDP”) to provide reasonable assurance in respect of the indicators identified in paragraph 4 of the scope paragraph and limited assurance in respect of the sustainability information corresponding to the other GRI indicators as summarized in the GRI Table included in the Sustainability Report for the year ended 31 December 2017.

### Responsibilities

- 2 The Executive Board of Directors of EDP is responsible for:
  - The preparation and presentation of the sustainability information included in the Sustainability Report in accordance with the Sustainability Reporting Guidelines (GRI *Standards*) and the Electric Utilities Sector supplement, of the Global Reporting Initiative (GRI) – Comprehensive option, as described in the appendix “Reporting Principles” of the Sustainability Report, and the information and assertions contained within it;
  - Determining EDP’s objectives in respect of sustainable development performance and reporting, including the identification of stakeholders and material issues, in accordance with the principles of inclusiveness, materiality and response of AA1000APS (2008); and
  - Establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.



3 Our responsibility is to express, based on the work performed:

- A reasonable assurance conclusion on whether GRI indicators (“Assured Sustainability Parameters”): Economic Data (GRI 201-1, GRI 201-4, GRI 202-1, GRI 204-1), Sector (G4-EU1, G4-EU2, G4-EU3, G4-EU4, G4-EU5, G4-EU15), Environmental (GRI 302-1, GRI 303-1, GRI 304-1, GRI 305-1, (GEE Scope 1), GRI 305-2 (GEE Scope 2), GRI 305-7, GRI 306-2), Product (GRI 417-1), Labour Practices (GRI 102-8, GRI 401-1, GRI 403-2, GRI 404-1, GRI 405-1), Fines and Penalties (GRI 307-1, GRI 206-1, GRI 419-1), Environmental matters, Absenteeism rate, Billing of Energy Efficiency Services, CO2 avoided, Maximum Certified Installed Capacity ISO 14001, are free from material misstatement; and
- A limited assurance conclusion on whether the information on the sustainability information, corresponding to the other GRI indicators as summarized in the GRI Table included in the Sustainability Report (“Limited Assurance Sustainability Parameters”) for the year ended 31 December 2017, is not free from material misstatement.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. This standard requires that we plan and perform the engagement to obtain reasonable assurance about whether the Reasonable Assurance Sustainability Parameters are free from material misstatement and limited assurance about whether the Limited Assurance Sustainability Parameters are free from material misstatement.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our work included also a moderate level of assurance in accordance with the AA1000 Accountability Assurance Standard 2008 (AA1000AS) (Type 2) issued by Accountability, that consists in the verification of the nature and extent of the organization’s adherence to the AA1000APS (2008), and the evaluation of the reliability of the performance information as reported in the appendix “Reporting Principles”.





## Scope

### 4 The scope of our work was as follows:

#### – Reasonable Assurance:

A reasonable assurance engagement with respect to the indicators: Economic Data (GRI 201-1, GRI 201-4, GRI 202-1, GRI 204-1), Sector (G4-EU1, G4-EU2, G4-EU3, G4-EU4, G4-EU5, G4-EU15), Environmental (GRI 302-1, GRI 303-1, GRI 304-1, GRI 305-1, (GEE Scope 1), GRI 305-2 (GEE Scope 2), GRI 305-7, GRI 306-2), Product (GRI 417-1), Labour Practices (GRI 102-8, GRI 401-1, GRI 403-2, GRI 404-1, GRI 405-1), Fines and Penalties (GRI 307-1, GRI 206-1, GRI 419-1), Environmental matters, Absenteeism rate, Billing of Energy Efficiency Services, CO2 avoided, Maximum Certified Installed Capacity ISO 14001, involves performing procedures to obtain sufficient evidence to give reasonable assurance that the indicators disclosed are free from material misstatement whether caused by fraud or error. The procedures performed depend on professional judgment, including the assessment of the risk of material misstatement in the indicators mentioned above, whether due to fraud or error. In making those risk assessments, we considered internal control relevant to EDP in the preparation and presentation of the referred indicators in order to design assurance procedures that are appropriate in the circumstances. Our engagement also included assessing the suitability of the criteria used by the Board of Directors of EDP in the preparation of the indicators, as explained in the Sustainability Report, in the evaluation of the appropriateness of the quantification methods, in the reporting of the policies used and the reasonableness of the estimates made by EDP.

Among others, our procedures included:

- Interviews with relevant responsible persons and relevant staff at operating and corporate level concerning the identification of the indicators mentioned above;
- Interviews with relevant responsible persons and relevant staff at operating and corporate level concerning the preparation of the indicators;
- Evaluation of the systems used for collection, calculation and reporting of the indicators;
- Recalculation of the indicators at corporate and operational level; and
- Validation of the design and effectiveness of controls.

#### – Limited assurance:

Our limited assurance engagement on the sustainability information consisted in inquiries, primarily of persons responsible for the preparation of information presented in the Sustainability Report for the year ended 31 December 2017, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:

- Interviews with relevant responsible persons and relevant staff at corporate and operational level concerning sustainability strategy and policies for material issues, and the implementation of these across the business;
- Interviews with relevant staff at corporate operational level responsible for the preparation of the sustainability information;
- Visits to operating sites in Portugal, Spain and Brazil, selected on the basis of a risk analysis including the consideration of both quantitative and qualitative criteria;





- Comparing the information presented in the Sustainability Report for the year ended 31 December 2017 to corresponding information sources to determine whether all the relevant information contained in such underlying sources has been included in the Report;
- Reading the information presented in the Sustainability Report to determine whether it is in line with our overall knowledge of, and experience with, the sustainability performance of EDP.

The extent of evidence gathering procedures performed in a limited assurance engagement is substantially less in scope than a reasonable assurance engagement or an audit conducted in accordance with International Standards on Auditing and Assurance Engagements, and consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit or a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance conclusion on the information presented in the Sustainability Report as a whole.

- 5 Our multidisciplinary team included specialists in AA1000APS, stakeholder dialogue, social, environmental and economic business performance.

### **Conclusion**

- 6 Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

#### *Reasonable Assurance Sustainability Parameters*

- In our opinion, the indicators: Economic Data (GRI 201-1, GRI 201-4, GRI 202-1, GRI 204-1), Sector (G4-EU1, G4-EU2, G4-EU3, G4-EU4, G4-EU5, G4-EU15), Environmental (GRI 302-1, GRI 303-1, GRI 304-1, GRI 305-1, (GEE Scope 1), GRI 305-2 (GEE Scope 2), GRI 305-7, GRI 306-2), Product (GRI 417-1), Labour Practices (GRI 102-8, GRI 401-1, GRI 403-2, GRI 404-1, GRI 405-1), Fines and Penalties (GRI 307-1, GRI 206-1, GRI 419-1), Environmental matters, Absenteeism rate, Billing of Energy Efficiency Services, CO2 avoided, Maximum Certified Installed Capacity ISO 14001, are presented in all material respects, in accordance with the Sustainability Reporting Guidelines (GRI Standards), of the Global Reporting Initiative (GRI) as described in the Sustainability Report.

#### *Limited Assurance Sustainability Parameters*

- Based on the limited assurance procedures performed and the evidence obtained, as described above, nothing has come to our attention that causes us to believe that the sustainability information, corresponding to the other GRI indicators as summarized in the GRI Table included in the Sustainability Report for the year ended 31 December 2017 is not presented fairly, in all material respects, in accordance with the Sustainability Reporting Guidelines (GRI Standards) and the Electric Utilities Sector supplement, of the Global Reporting Initiative (GRI) as described in the appendix "Reporting Principles" of the Sustainability Report. Additionally and also based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that EDP has not applied the principles of inclusivity, materiality and responsiveness as included in the AA1000 Accountability Principles Standard 2008, as described in the "Reporting Principles" of the Sustainability Report.



Without affecting our conclusions presented above, we present some of the key observations:

In relation to the Inclusiveness principle

EDP has consolidated its process of stakeholders' consultation in the different countries where operates, in line with the stakeholder management model defined at the corporate level. The implementation of the stakeholder management guide as well as the development of the stakeholder management plan applicable to all the companies and geographies where the EDP Group operates, ensured a greater harmonization and standardization of the whole process.

EDP annually performs specific initiatives of relationship with some groups of stakeholders, ensuring inclusion and the review of stakeholder expectations.

In relation to the Materiality principle

EDP has established a comprehensive process for determining material issues, which consolidates a vision at the corporate and local levels. The outputs resulting from the identification of material issues reflect the main themes for the energy sector, regions where the group is present and main stakeholder's groups. EDP ensure the enlargement of the materiality process scope to all geographies where the group operates. The EDP Group finalized the redefinition project of the whole process of materiality whose the objective is to ensure better harmonization of this among all countries. This work aims to determine the materiality per stakeholder's segment.

In relation to the Responsiveness principle

EDP address the answer of its main stakeholders' expectations by defining a set of goals and targets. EDP has been developing action plans per company in order to ensure better alignment and communication of its commitments and corporate goals to the most relevant material issues identified by stakeholders.

**Non-financial statement**

EDP included as an annex to the Sustainability Report the non-financial statement defined in article 66-B and 508-G of the Portuguese Companies' Code. This independent assurance report refers to the GRI indicators as summarized in the GRI Table included in the Sustainability Report and it does not aim to assess the compliance of such non-financial statement with applicable legal and regulatory requirements.



Restriction on Use and Distribution

Our assurance report is made solely to EDP in accordance with the terms of our engagement. Our work has been undertaken so that we might state to EDP those matters we have been engaged to state in this assurance report and for no other purpose. We do not accept or assume responsibility to any third party other than EDP for our work, for this assurance report, or for our conclusions.

Lisbon, 22 March 2018

SIGNED ON THE ORIGINAL

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**KPMG & Associados**  
**Sociedade de Revisores Oficiais de Contas, S.A. (n.º 189)**  
represented by  
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