

Part I

# Management Report



Moray East - Floating Wind Offshore - United Kingdom

# This report

EDP – Energias de Portugal, S.A. (“EDP”), has its head office in Lisbon, Avenida 24 de Julho 12 and its shares listed on the Euronext Lisbon stock exchange. The group’s businesses are currently focused on the generation, transmission, distribution and supply of electricity and supply of natural gas. Although complementary, the group also operates in related areas such as engineering, laboratory tests, professional training, energy services and property management.

EDP operates essentially in the European, American and APAC energy sectors.

In 2022, EDP publishes, for the first time, an Integrated Annual Report, which includes, in the same document: its strategy, operational and sustainability performance, financial statements, corporate governance and remunerations report.

The Integrated Annual Report is prepared in accordance with the provisions set out on Portuguese Companies Code and Securities Code and in compliance with the provisions set out on CMVM’s Regulations no. 4/2013 and no. 5/2008, concerning Corporate Governance and Disclosure Requirements of the publicly traded companies and under the terms of the Corporate Governance Code of the Portuguese Corporate Governance Institute, revised in 2020.

Its sustainability performance is 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<sup>nd</sup> October 2014, that is, disclosure under article 66–B and approval by the general meeting under article 65, both of the Commercial Companies Code. Additionally, follows other voluntary regulatory reporting frameworks, namely the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB) and the Portuguese Securities Market Commission (CMVM).

The financial statements presented in the report are prepared in accordance with the International Financial Reporting Standards (IFRS), adopted in the European Union. Thus, under the combined terms of articles 29.ºG and 29.ºL of the Portuguese Securities Code, the documents included in this Report were prepared in the ESEF Format and in accordance with the specifications provided for by the Commission Delegated Regulation (EU) 2018/815 of 17<sup>th</sup> December 2018, and in accordance with the subsequent amendments, also taking into

account the guidance provided by the European Securities and Markets Authority (ESMA) through the updated version of the ESEF Reporting Manual.

This report covers the calendar year 2022 and has been structured in five major blocks:

- Part I – Management Report  
Includes EDP’s strategy, operational and sustainability performance. The sustainability performance is organized around the strategic axes and the year’s material issues
- Part II – Financial Statements
- Part III – Corporate Governance
- Part IV – Remunerations Report
- Part V – Annexes.

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

- [Annual Report of the General and Supervisory Board](#)
- [Climate Transition Plan](#)
- Sectoral reports, in particular: [Safety and Business Continuity Report](#), [Internal Audit Report](#), [Ethics Ombudsperson’s Report](#), [Human and Labour Rights Report](#), [Biodiversity Report](#), [Circular Economy Report](#), [Social Investment Report](#) and [People Report](#)
- [Report on the implementation of Article 8 of the European Taxonomy Regulation](#)
- Annual and sustainability reports of the companies [EDP España](#), [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.

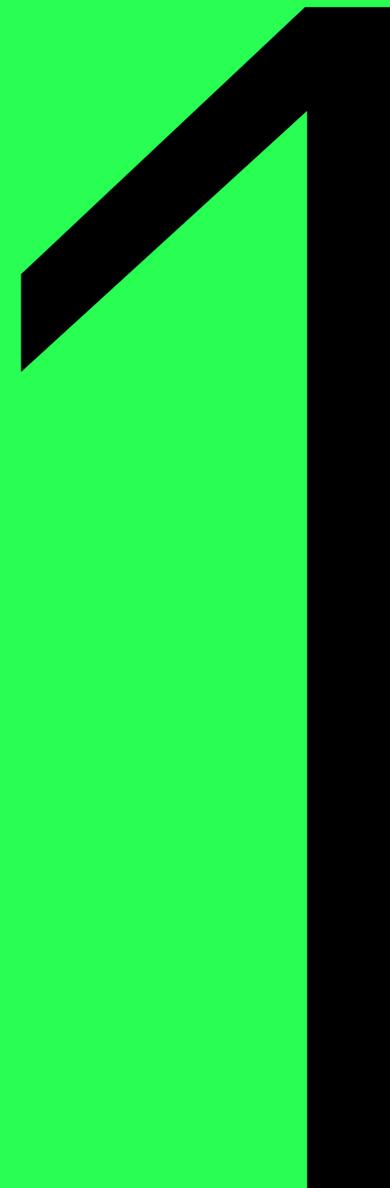
This Report is a free translation of the Integrated Annual Report originally issued in Portuguese. In the event of discrepancies, the Portuguese language version prevails.

This document incorporates the Integrated Annual Report of the EDP Group and is part of an unofficial and unaudited version of the EDP Group’s official accountability document, submitted at the CMVM website on March 13<sup>th</sup>, 2023. Notwithstanding, it corresponds to a faithful [interactive] copy of the aforementioned financial and non-financial information, which can also be found at EDP Group’s website under name "Integrated Annual Report 2022 – Unofficial Version – Unaudited". In case of discrepancy, the official financial and non-financial information submitted to CMVM on March 13<sup>th</sup>, 2023 prevails.

# Management Report

<b>01 Our company</b>	<b>004</b>	<b>02 Strategic approach</b>	<b>023</b>	Share performance	072
Message from the CEO	005	Global energy trends	024	Sustainability	077
Our main achievements	009	Materiality	027	<b>04 Indicators</b>	<b>162</b>
Our key metrics	010	Risk management	030	Operational and ESG indicators	163
Our presence	013	Strategic priorities	041	GRI indicators	189
Our organisation	014	Contribution to the SDGs	045		
Shareholder structure	015				
Corporate governance	015	<b>03 Performance</b>	<b>047</b>		
Our corporate bodies	016	Markets and regulation	048		
Our business model	018	Risk management in the year	060		
Our vision	020	Business area analysis	062		
Stakeholder management	021	Group's financial analysis	068		

# Our Company



Message from the CEO	005	Our corporate bodies	016
Our main achievements	009	Our business model	018
Our key metrics	010	Our vision	020
Our presence	013	Stakeholder management	021
Our organisation	014		
Shareholder structure	015		
Corporate governance	015		

# Message from the CEO



Miguel Stilwell d'Andrade CEO of EDP and EDP Renewables

## Dear Shareholders and Stakeholders,

Rarely has our sector been in the spotlight as much as in the last year. The conflict in Ukraine has shown that our over-reliance on fossil fuels as a society is not only harming the climate, but also compromising energy security and affordability.

Investing in clean energy is critical to achieving environmental goals such as Net Zero by 2050, but also to the long-term sustainability of the energy system. Governments, business and civil society must come together to ensure that there is more investment in renewables, relying on the power of the sun, the wind and water.

In 2022 important steps were taken to achieve this goal. The European Commission increased the headline 2030 target for renewables installed capacity from 40% to 45% and approved important measures towards faster and more comprehensive permitting procedures, reducing European energy dependence and promoting energy efficiency. With this framework in place, it is now crucial that Member States urgently and adequately implement it in their jurisdictions.

In the United States, the Inflation Reduction Act (IRA) represents a huge political accomplishment. By providing a simple, stable and long-term investment framework, it will further accelerate the development of clean energy and support our investment in the region.

At EDP we are leading the needed energy transition across the world with a very clear mission: drive a better tomorrow and create positivity to our stakeholders every step in the way.

## Our main achievements in 2022

### Renewables generation

In 2022 EDP grew significantly in renewables, adding 2.1 GW of renewables installed capacity and a pipeline of a further 4.0 GW under construction, more than twice the level we had in December 2021. We have now delivered more than 50% of our 20 GW capacity additions target for the 2021–25 business plan period.

Besides concluding the establishment of our renewables growth platform for APAC based out of Singapore, we have acquired a solar developer company based in Germany that allowed us to expand our footprint in Europe to 12 countries, which together cover more than 90% of the expected solar capacity additions in the European Union until 2030.

In Iberia, we commissioned our first hybrid solar and wind energy park in the region and secured a grid connection that will allow EDP to build a 70 MW floating solar project in Alqueva hydro power plant – a project that falls within our more than 500 MW of solar and wind projects under development to hybridize our hydro assets – an innovative and efficient way of combining several renewable energy

sources using the same grid connection point (a scarce resource in many markets).

In the United States, we completed the construction of the largest solar park in Indiana and our first repowering project in Oklahoma, and we started construction on 13 new projects to reach a record of more than 2 GW of new capacity under construction in the country.

In offshore, we are proud to be in the top 5 players worldwide, through the joint venture Ocean Winds 50% held by EDP Renewables, reaching by year-end a portfolio of 16.6 GW through 15 projects across 7 countries worldwide.

We have evolved our presence in storage, starting construction on our first sizeable storage project in the United States. Regarding Hydrogen, we have produced our first hydrogen molecule in a pilot project in Brazil and our three green hydrogen initiatives in thermoelectric plants Aboño, Los Barrios and Soto Ribera in Spain have been selected as key projects to be supported by the European Commission and the Spanish Recovery and Resilience program.

### Networks

In 2022 we invested more than 800 million euros in the development and optimization of our distribution networks and in the growth of transmission in Brazil, commissioning several new lots and finalizing the acquisition of EDP Goiás.

We have distributed 85 TWh of energy (+0.5% vs 2021) and delivered an excellent performance in quality of service of our grids, reaching record levels at our Spanish platform and our Brazilian distribution company in Espírito Santo.

By the end of 2022 we have installed 6.4 million smart meters (+740,000 vs 2021), allowing us to have 80% of energy metered (+3.3 pp vs 2021).

### Client Solutions

Despite the extraordinary context in the energy sector that brought added complexity to our energy supply activity, we managed to maintain the price stability commitment assumed with our clients in Portugal and sustain a competitive price during the year.

We have scaled our distributed solar generation business, a high growth and attractive energy transition technology, with total gross additions of 1.1 GWac over the past three years, across North America, Europe, Brazil, APAC, including as a result of multi-geography partnerships that secured large distributed solar energy installations across the world.

We have also taken important steps in the democratization of access to decentralized solar generation through our energy communities which have reached more than 30 MWp of contracted capacity this year, enabling more than 35,000 neighbours to benefit from solar energy in self-consumption in Portugal.

Regarding electric mobility, we have delivered our ambition to reach 3,000 contracted public charging points in the Iberian Peninsula. One of our flagship projects was the entry into operation of 50 fast and ultra-fast charging points across 17 locations in Portugal's main motorways, giving faster and modernized solutions to drivers in the country.

### Business enablement

Despite the challenging context, in 2022 our workforce grew by 7.4% and EDP employs now more than 13,000 people with 64 nationalities spread all over the world. We continue to evolve as a global organization, supported by a common purpose: our energy and heart drive a better tomorrow.

We have launched a renewed brand identity that represents a more global and inclusive company focused on the future,

sustainability, innovation, social responsibility, and on the ambition to lead the energy transition.

We have continued to invest throughout our 7 innovation domains – renewables, smart networks, distributed solar, hydrogen, mobility, flexibility, storage – to accelerate the delivery of new solutions through 3 key channels – internal incubation, corporate venture capital and partnerships.

Digital and Technology are an important accelerator and enabler of the energy transition. This year we implemented a new strategy focused on 7 critical action drivers – global, digital, cloud, data, cyber, excellence, people – and managed to migrate about 70% of eligible applications to the cloud.

## Our commitment to ESG excellence

We have taken important steps to further strengthen our Environmental, Social and Governance (“ESG”) credentials across our company.

### Environment

Within the just transition action plan, we made progress in the transformation of our coal sites in Spain and Brazil into Green Hubs alongside 4 business streams: green hydrogen, renewables, storage and flexibility.

We kept our activities rooted in our commitment to the 10 principles of the United Nations Global Compact, notably to build a more sustainable world, aligned with the values of respect for environmental protection. Moreover, EDP became a signatory of the United Nations Sustainable Ocean Principles, recognizing the urgency and global importance of taking measures to promote the sustainability of the oceans for current and future generations.

### Social

To address the inequalities of today and anticipate those of tomorrow, we created a central department fully dedicated to social responsibility, which aims to invest more than 300 million euros in social impact projects by 2030, promoting a fair energy transition and access to energy, while fighting energy poverty.

We launched the fourth edition of the A2E (Access to Energy) Fund, supporting nine projects which provide renewable energy to remote and vulnerable communities in Mozambique, Nigeria, Angola and Malawi, with direct impact on priority areas such as health, agriculture, education and access to drinking water.

### Governance

We have continued the transition to a business platform management model, streamlining our organizational structure and revamping the internal KPIs to ensure the proper alignment and incentives within the organization. Furthermore, we have improved our decision-making process to promote efficiency, agility and simplicity on an increasingly global company.

As we ensure that we follow corporate governance best practices and deliver the best interests of our stakeholders, we have obtained the highest score at the FTSE Russell's ESG ratings for good governance practices and for quality of corporate governance.

We progressed with our Health & Safety program (PlayitSafe) that aims to reach zero working accidents. This year the focus was training and education for all EDP leaders, from the Executive Board of Directors to managers across all business units, on the absolute commitment of the company to safety. There is still work to be done on this top priority area for EDP but I was proud to see that the organization recognizes its

importance, with Safety being the dimension with the highest scoring category in our internal climate study of 2022.

### ESG recognition

EDP's sustainability practices have once again been recognized in the S&P Dow Jones Sustainability Index, with EDP keeping its place as number one integrated electric utility, scoring 90 points, well above the sector average of 50 points. CDP Water and Climate Change recognized EDP as one of the world's leading companies in the fight against climate change for the sixth year. Furthermore, we saw our net-zero science-based target by 2040 approved by SBTi.

The company was also included for the third consecutive year in the Bloomberg Gender-Equality Index, improving its overall score compared to last year, which reflects our commitment to creating a more diverse and inclusive workplace. In this context, we are proud to have launched our DEIB (Diversity, Equity, Inclusion, and Belonging) Global Policy, as well as an updated Gender Equality Plan (2022/2023) and an Equal Pay Project within our global compensation framework. Moreover, EDP was once again recognized by the Top Employer Institute as an employer of first choice.

Finally, EDP is proud to have joined the Executive Committee of the World Business Council for Sustainable Development (WBCSD), the largest international business organization promoting sustainable development.

## Our financial performance

Despite 2022 being severely impacted by drought in Iberia and the huge price volatility resulting from the Ukraine conflict, we managed to deliver good results, with a recurrent EBITDA of 4,522 million euros, representing a 21% increase year-on-year, benefiting from a strong performance of renewables, networks and thermal in Iberia.

Recurrent net profit of 871 million euros improved 6% compared to the previous year, driven by EBITDA growth, though penalized by higher financial costs.

We have further strengthened our financial base with 2 billion euros of proceeds mainly related with 7 asset rotation transactions closed during the year, allowing us to crystallize value upfront and redeploy capital into new growth opportunities.

Despite a challenging and volatile debt capital markets environment, we re-opened the senior Eurobonds' market in March 2022 with a 1.25 billion euros issuance and in October 2022 we issued a couple of additional bonds, accessing both the Euro and US dollars markets for 500 million each.

We signed our first sustainability-linked loan, amounting to 3.65 billion euros, linked to two ESG KPIs – reduction of scope 1 and 2 greenhouse gas emissions and increase in the percentage of installed capacity from renewable sources within EDP group. By year-end, green bonds already represented 44% of our financial debt.

EDP maintained its “BBB” long-term corporate credit ratings by Standard & Poor's Global Ratings and Fitch Ratings, with Stable Outlooks, and also maintained its Baa3 rating with Positive Outlook from Moody's.

## Looking ahead to 2023

I am immensely grateful to all those who have contributed to EDP's success over the last year.

A special word of thanks goes to my dear colleagues of EDP's Executive Board of Directors for leading by example and to the Chairman and all members of the General and Supervisory Board for their collaboration and advice throughout a very demanding year for EDP.

I also thank our stakeholders, notably our shareholders, customers, suppliers, regulators, partners and local communities, for their trust and support along the way.

Finally, I want to show my deepest gratitude to our 13,000 employees across the world who are the driving force of our company and the main contributors to its success.

EDP is about to start a new chapter, strengthening its commitment to lead the energy transition, through a promising strategic update for the 2023–2026 period.

I look forward to working with all of you to achieve this goal together.

**Miguel Stilwell d'Andrade**

# Our Main Achievements

## Jan

- 17 EDP expands its footprint in offshore wind, with OW being awarded exclusive rights to develop 1GW offshore wind project in Scotland
- 20 EDP is distinguished as TOP Employer by the Top Employer Institute
- 26 EDP is distinguished by gender equality policies and integrates Bloomberg Gender–Equality Index

## Feb

- 07 EDP Brasil concludes CELG Transmission Business acquisition
- 24 EDP concludes Sunseap acquisition, establishing a growth platform for APAC
- 27 EDP increases its offshore wind footprint, with OW being awarded lease area to develop up to 1.7GW offshore wind project in the US

## Apr

- 06 EDP holds its Annual General Shareholders' Meeting and approves the distribution of dividends relating to 2021 financial year
- 22 EDP secures PPA for a 425 MW solar portfolio in the US
- 28 Payment of dividends relating to the 2021 financial year

## Aug

- 04 EDP issues its first sustainability-linked loan, amounting to €3.65 Bn

## Jul

- 29 EDP enters Germany and Netherlands markets by acquiring solar development platform based in Germany
- 15 EDP's pioneer floating solar power plant in Alqueva is inaugurated

## Jun

- 02 EDP launches new identity aligned with its commitment to the energy transition

## Oct

- 06 EDP completes the acquisition of a solar development platform in Germany

## Dec

- 01 EDP was recognised, for the 6th consecutive year, as one of the world's leading companies in the fight against climate changes by the CDP.
- 08 EDP enters the Californian market, with OW being awarded exclusive rights to develop a 2GW offshore wind project in California, US
- EDP completes disposal of Mascarenhas Hydro Plant in Brazil
- 12 EDP recognised as the world's most sustainable integrated electric utility, by the Dow Jones World Sustainability Index
- 16 EDP produces the first green hydrogen molecule in Brazil

# Our Key Metrics

## Financial Data

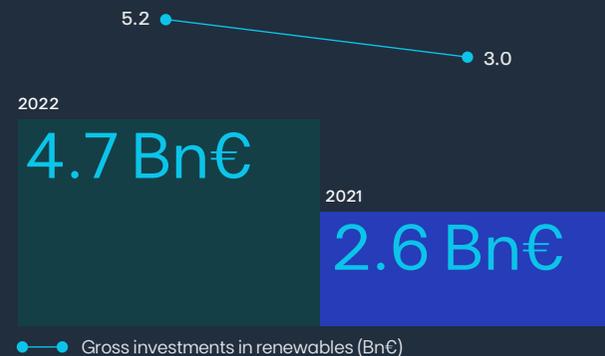
### EBITDA



### Net Profit<sup>1</sup>



### Net Investments<sup>2</sup>



### Net Debt



1 – Net profit attributable to EDP equity shareholders.

2 – Considers capex of EDP group, organic financial investment €2,115M (31 Dec 2021: €414M) and asset rotation –€1,967M (31 Dec 2021: –€1,356M).

3 – Non-recurring adjustments in 2021 –€12M including (i) the one-off gain on the sale of our 50% stake in the energy supplier CHC in Spain to our partner CIDE (–€21M), (ii) cost with Sonatrach agreement (€17M) and (iii) HR restructuring costs (€16M); Non-recurring adjustments in 2022: +€1M, including net gain related with portfolio optimization in LatAm (+€4M) and HR restructuring costs (–€3M).

4 – Adjustments and non-recurring items impact at net profit level: In 2022 –€192M, including (i) impairments in thermal assets and other (–€154M) and EDPR (–€41M); and (ii) net gain related to portfolio optimization in LatAm (+€6M) and HR restructuring costs (+€3M). In 2021 –€169M, including (i) impairments, mostly CCGTs in Iberia (–€164M), (ii) acquisition of debt in minority stake in Spain (+€36M); (iii) provision on competition authority penalty (–€33M), (iv) gain from CIDE disposal (+€21M), (v) debt buyback prepayment fees (–€19M), (vi) HR restructuring costs (–€10M).

## Operational Data

### Renewables



**22.2 GW**

Installed Capacity Equity + EBITDA  
+5% vs 2021

**45.2 GWh**

Generation Output  
-1% vs 2021

**4.0 GW**

Capacity U/C  
+109% vs 2021

### Electricity Networks



**85.3 TWh**

Electricity distributed  
+0% vs 2021

**381**

Distribution operating network ('000 km)  
+1% vs 2021

**0.4**

Transmission under construction network ('000 km)  
-72% vs 2021

**11,583**

Supply Points ('000)  
+1% vs 2021

**2.2**

Transmission operating network ('000 km)  
+1249% vs 2021

**6,429**

Smart Meters ('000)  
+13% vs 2021

### Client Solutions & Energy Management



**5.6 GW**

Installed capacity thermal  
+11% vs 2021

**8,495**

Electricity customers ('000)  
-2% vs 2021

**631**

Gas customers ('000)  
-8% vs 2021

**65.9 TWh**

Electricity sales  
+10% vs 2021

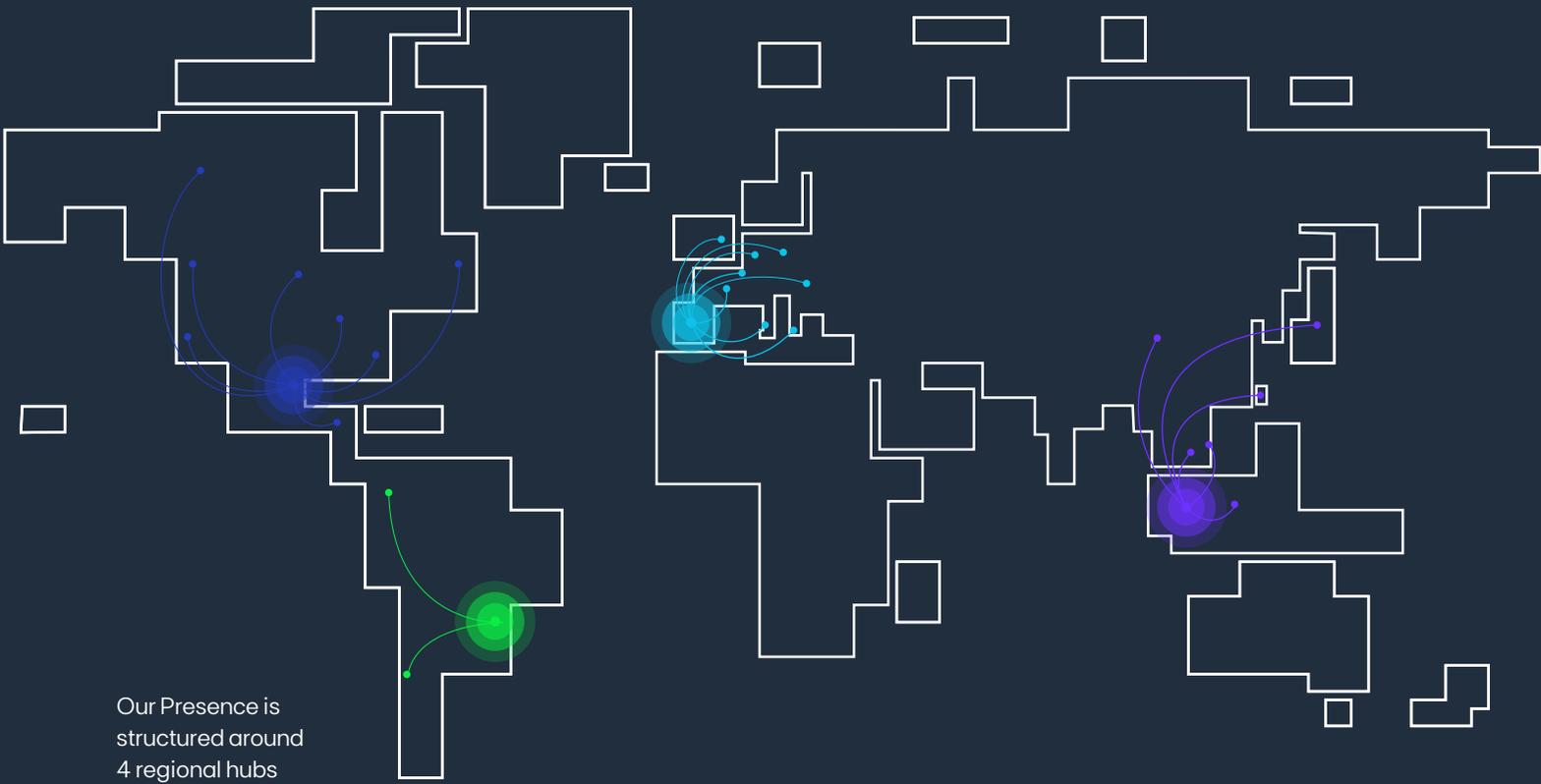
**10.4 TWh**

Gas supplied  
-28% vs 2021

## ESG Data

	Indicator	Unit	2022	2021	Δ
 Environmental	Renewables generation	%	74	76	-2 p.p.
	Recovered waste materials	%	95	83	+12 p.p.
	Specific CO <sub>2</sub> emissions	tCO <sub>2</sub> /GWh	152	164	-7%
	Assets certified by ISO 14001	%	87	90	-3 p.p.
	Coal installed capacity	GW	2.5	2.0	+25%
	Revenues aligned with EU taxonomy	%	49	63	-14 p.p.
	Investments in environmental matters	€ M	105	88	+19%
 Social	Employee engagement (top tier company)		X	X	
	Employees	#	13,211	12,236	+8%
	Female employees	%	27.5	27.0	+0.5 p.p.
	Total hours of training	H	309,936	337,295	-8%
	Employees with training	%	100	100	0 p.p.
	Accidents at work with employees	#	28	21	+33%
	Accidents at work with suppliers <sup>1</sup>	#	105	132	-20%
 Governance	Female employees in management position	%	28	26	+2 p.p.
	Cybersecurity	(bitsight rating)	810	790	+20
	ESG & equity linked compensation for Top Management		✓	✓	
	Top quartile in ESG rating performance		✓	✓	

<sup>1</sup> Workers who are not employees but whose work and/or workplace is controlled by the organization.



Our Presence is structured around 4 regional hubs

Region	Main Office	Solar Capacity (MW)	Wind Capacity (MW)	Hydro Capacity (MW)	Networks ('000 km)	Clients ('000 #)	Employees (#)
Europe	Lisbon, Oporto, Oviedo, Madrid	11,184	285			5,540	8,311
APAC	Singapore	726				531	
North America	Houston	7,242				1,041	
South America	São Paulo	3,066	98			3,586	3,328

Solar Capacity (MW)   
 Hydro Capacity (MW)  
 Wind Capacity (MW)   
 Networks ('000 km)  
 Clients ('000 #)   
 Employees (#)   
 Main offices

# Our Presence

45 TWh  
74% renewable energy generation

13,211  
employees

Business areas

# Our Organization

Renewables

56%  
77%  
Capex EBITDA

Electricity Networks

33%  
18%  
Capex EBITDA

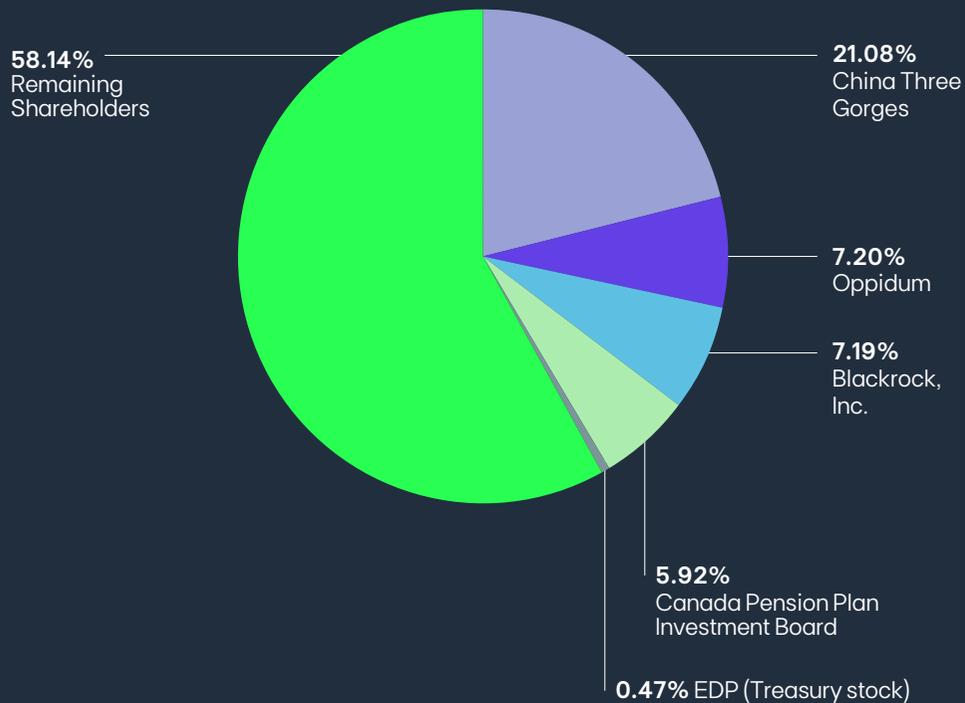
Client Solutions &  
Energy Management

11%  
5%<sup>1</sup>  
Capex EBITDA

1 - Includes capex on IT, buildings and fleet.

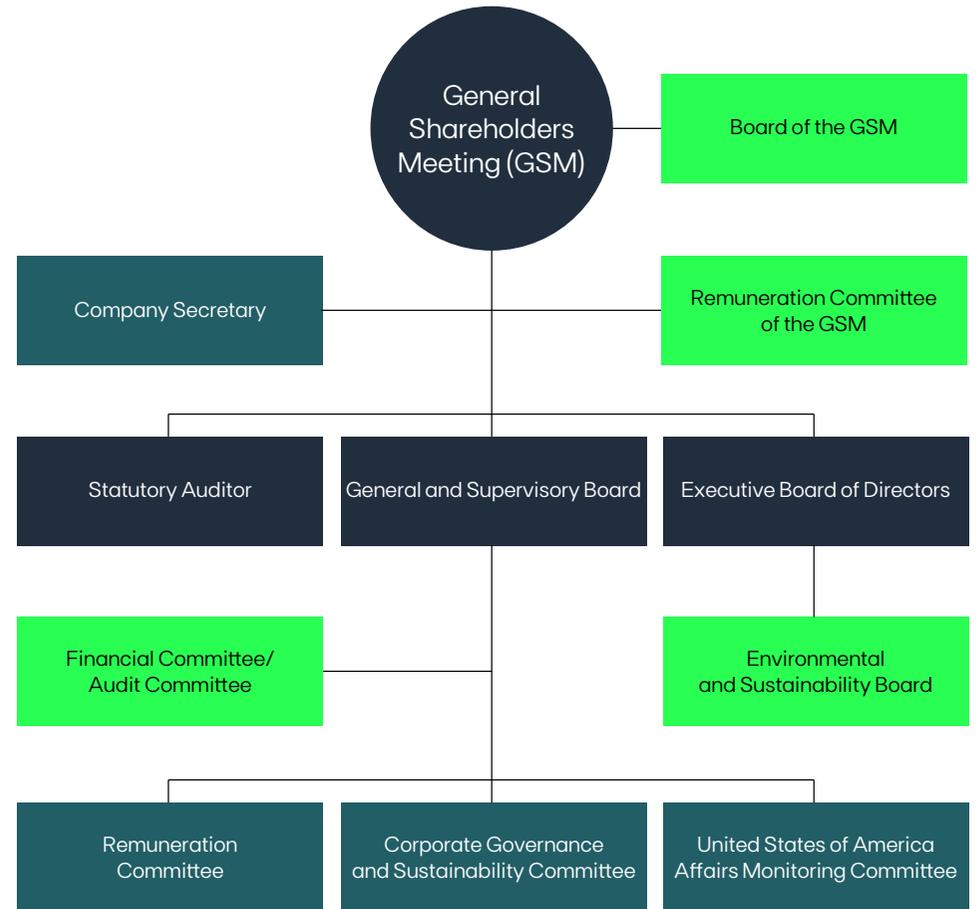
## Shareholder Structure

The share capital of EDP – Energias de Portugal, S.A. is 3,965,681,012 euros and is fully paid up, as provided for in article 4 of the Company Statutes, being represented by 3,965,681,012 shares with a nominal value of 1 euro each.



According to the results of the analysis prepared by Nasdaq, the volume of the Socially Responsible Investors (SRI) EDP shares represent 29.8% of EDP's share capital (up 5 percentage points compared to 2021). 67% of shares held by SRI investors are located in Europe. The other 33% are mostly located in the United States (21%); United Kingdom (18%) and France (16%).

## Corporate Governance



- Corporate Entites<sup>1</sup>
- Corporate Bodies
- Other Statutory Bodies

<sup>1</sup> Corporate Entites are also Corporate Bodies, pursuing the article 8(4) of EDP's Articles of Association.

For more information on Corporate Governance, please see Part III – Corporate Governance Report.

# Our Corporate Bodies

## Executive Board of Directors



Rui Teixeira

- CFO EDP and EDP Renewables
- Global Energy Management
- Energy Planning and Investor Relations



Vera Pinto Pereira

- CEO EDP Comercial
- Client Solutions
- Social Impact Coordination Office



Miguel Stilwell d'Andrade

- CEO EDP and EDP Renewables
- Strategy and Corporate Development
- People & Organization and Communication



Ana Paula Marques

- CEO EDP España
- Hydro and Conventional Generation
- Digital, Innovation, Policy, Regulation & Stakeholders



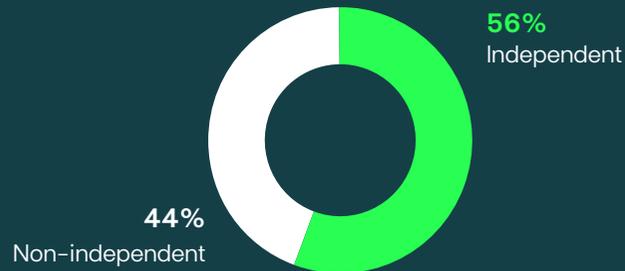
Miguel Setas

- Chairman EDP Brasil and E-Redes España
- Networks
- Risk Management and ESG

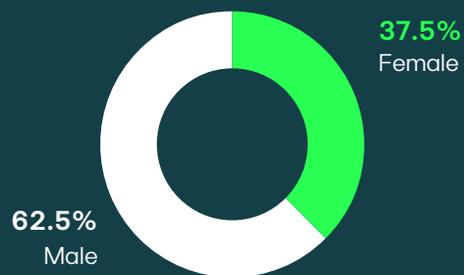
## Our Corporate Bodies

### General and Supervisory Board

#### Status



#### Gender diversity



**João Luís Ramalho de Carvalho Talone**  
Chairman



**Dingming Zhang**  
China Three Gorges Corporation



**Shengliang Wu**  
China Three Gorges International Limited



**Ignacio Herrero Ruiz**  
China Three Gorges (Europe), S.A.



**Zhang Hui**  
China Three Gorges Brasil Energia, S.A.



**Miguel Espregueira Mendes Pereira Leite**  
China Three Gorges (Portugal), Sociedade Unipessoal, Lda.



**Felipe Fernández Fernández**  
DRAURSA, S.A.



**Fernando Maria Masaveu Herrero**



**João Carvalho das Neves**



**Maria del Carmen Fernández Rozado**



**Laurie Lee Fitch**



**Esmeralda da Silva Santos Dourado**



**Helena Sofia Silva Borges Salgado Fonseca Cerveira Pinto**



**Sandrine Dixson-Declève**



**Zili Shao**



**Luís Maria Viana Palha da Silva**  
Chairman of the General Shareholders' Meeting

### Statutory Auditor

**Pricewaterhouse Coopers & Associados – Sociedade de Revisores de Contas, Lda.,**  
João Rui Fernandes Ramos

**Aurélio Adriano Rangel Amado**  
Alternate Statutory Auditor

# Our Business Model

Trends

Market Forces

Stakeholders

## Resources



### Financial

- €13.2 Bn financial net debt
- €14.0 Bn equity



### Physical

- 28 GW installed capacity (22 GW renewable)
- Shop network



### Intellectual

- €186 M investment in innovation/R&D
- Brand



### Human

- 13,211 employees
- Contractors



### Social

- €22 M donations
- Business partners



### Natural

- Renewable resources: wind, hydro and solar
- Non-renewable resources: gas, coal

## Generation

Generation is the first activity in the value chain of the electricity sector. Power plants transform the various energy sources into electricity. These energy sources may be of renewable or non-renewable origin. In EDP, 75% of the energy produced comes from renewable sources.



## Transmission

In the transmission the energy generated is delivered to the transport network, which is made of very high voltage lines and which then channels the energy to the distribution network. In EDP this is a growing business segment in Brazil.



A global energy company, leading the energy transition to create superior value.

## Distribution

In the distribution activity the transported energy is channeled to the distribution grid. The distribution network allows the flow of energy to the supply points. Electricity distribution networks are composed of high, medium and low voltage lines and cables. EDP has made major investments in the modernization of its network such as the increase in the number of smart meters installed.



## Supply

In the supply activity the distributed energy arrives at the supply point and is sold by the supplier. Throughout the electricity and gas value chain, supply is the closest activity to the customer and responsible for the relationship with final consumers. EDP has been focusing on developing new solutions for customers responding to new challenges of the energy transition.

## Outputs



### Financial

- €679 M net profit
- +0.5% TSR
- Debt management



### Physical

- Quality and efficiency of energy supply
- 61 TWh energy produced
- 85,3 TWh distributed



### Intellectual

- Innovative products and services
- Knowledge generated



### Human

- 27.5% female employees
- 24 hours of training/employee
- 1.84 frequency rate (EDP + contractors)



### Social

- €31 M social investment
- 10,551 hours of EDP volunteering time
- 80% customer satisfaction



### Natural

- 160 tCO<sub>2</sub>/GWh emissions
- 144 thousand TJ energy consumption
- Waste and water management

## Impacts

- Minimizing financial risks
- Debt reduction

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

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

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

- Reputation and recognition
- Promotion of social investment
- Promotion of customer satisfaction
- Promotion of an ethical culture with suppliers

- -56% of specific emissions reduction S1+S2 (vs 2015)
- 6 TWh saved energy by customers (since 2015)
- Preservation of biodiversity

## Our values

### Innovation

We want to create value in the various areas in which we operate.

### Sustainability

We aim to improve the quality of life of current and future generations.

### Humanization

We build genuine and trusting relationships with our employees, customers, partners, and local communities.

## Our commitments

### Results

Delivering on our commitments to shareholders; leading through the ability to anticipate and execute; demanding excellence.

### Sustainability

Taking on environmental responsibilities; contributing to developing the regions where we operate;  
Reducing gas emissions; actively championing energy efficiency

### Customers

Staying focused on customers; making sure we listen to their concerns; responding simply and transparently; surprising them and anticipating their needs.

### People

Combining an ethical and rigorous conduct with enthusiasm and initiative; encouraging teamwork; investing in competence and merit; promoting a balance between professional and personal life.



# Our Vision

**A global energy company,  
leading the energy transition  
to create superior value**

# Stakeholder Management

Stakeholder management is an extremely demanding exercise for companies that involves sharing information and being transparent in their relationship with society and, in particular, with all who are affected by their activities.

Engaging with stakeholders is a strategic priority for EDP to establish an open dialogue, following the ESG (Environment; Social; Governance) growing importance in the business world.

EDP strongly believes this activity is key to enabling the implementation of the business plan, improving business success, anticipating risks, and also to create value for the stakeholders involved. To pursue these objectives, it has been fundamental to rely on the joint effort of all the EDP business units across the world to know their main stakeholders, understand their priorities and needs, establish continuous communication, and deploy ambitious action plans to tackle the main risks and meet stakeholder's needs.

EDP Group continues committed to achieving an excellent level regarding stakeholder engagement activities, designing new procedures, and global and unified approaches on its main markets, adapting it whenever necessary regarding cultural and social specificities.

Position EDP as a global company at the forefront of the energy transition, increasing awareness in our key markets, and establishing long-lasting and trustful relations with our main stakeholders will continue to be our main purpose.

## EDP GROUP STAKEHOLDER ENGAGEMENT POLICY

### Understand

> INCLUDE > IDENTIFY > PRIORITISE

- We have dynamically and systematically identified the Stakeholders who influence and are influenced by the Company.
- We analyze and seek to understand stakeholders' expectations and interests in the decisions that impact them directly.

### Communicate

> INFORM > LISTEN > UNDERSTAND

- We are committed to promoting a two-way dialogue with Stakeholders through information and advisory activities.
- We listen, inform, and respond consistently, clearly, accurately and transparently to stakeholders in order to build close, strong and lasting relationships.

### Trust

> TRANSPARENCY > INTEGRITY > RESPECT > ETHICS

- We believe promoting trust with our stakeholders is crucial to establish stable and long-term relations.
- Our relationship with stakeholders is based on such values as transparency, integrity, and mutual respect.

### Collaborate

> INTEGRATE > SHARE > COOPERATE > INFORM

- We aim to work with stakeholders to build strategic partnerships that collate and share knowledge, skills and tools, thereby promoting the creation of shared value in a differentiated way.

# Our heart



# Strategic Approach



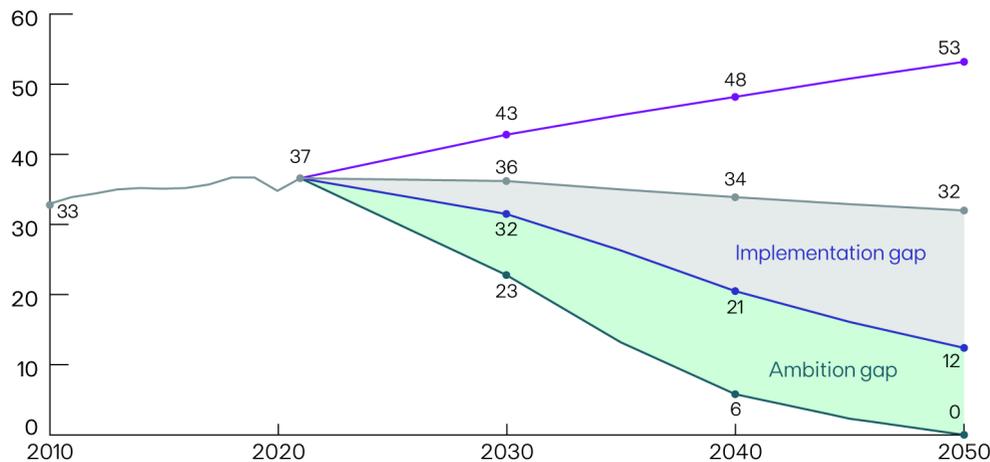
Global Energy Trends	024
Materiality	027
Risk Management	030
Strategic priorities	041
Contribution to the SDGs	045

## 2.1. Global energy trends

### An extraordinary challenge

Limiting the increase in global temperature to 1.5°C compared with the pre-industrial levels requires the **global economy to fully decarbonize by 2050**. To overcome this unprecedented challenge, there must be **a coordinated commitment** from all countries, involving policymakers, businesses, and consumers. Currently, **more than 130 countries** have announced or are considering net-zero targets, **covering 83% of global emissions**. This corresponds to more than 90% of the global GDP and 80% of the world population<sup>1</sup>. However, the announced pledges fall short of reaching the target by 2050, and there is still an ambition gap to be fulfilled (see figure below).

#### GLOBAL CO<sub>2</sub> EMISSIONS BY SCENARIO, 2010-2050



Source: International Energy Agency, World Energy Outlook 2022

- Pre-Paris scenario
- Stated policies scenario
- Announced pledges scenario
- Net-zero scenario

As an overarching target, providing **access to electricity to the entire global population** is critical to clean and energy-efficient demand. Many of the poorest households often use low-quality and polluting fuels, with impacts on their health and the environment, combined with inefficient equipment. The International Energy Agency (IEA) considers that under a carbon neutrality scenario, there will be **no one without access to electricity by 2030**, compared to 770 million people today.

### An energy transition driven by three key pillars

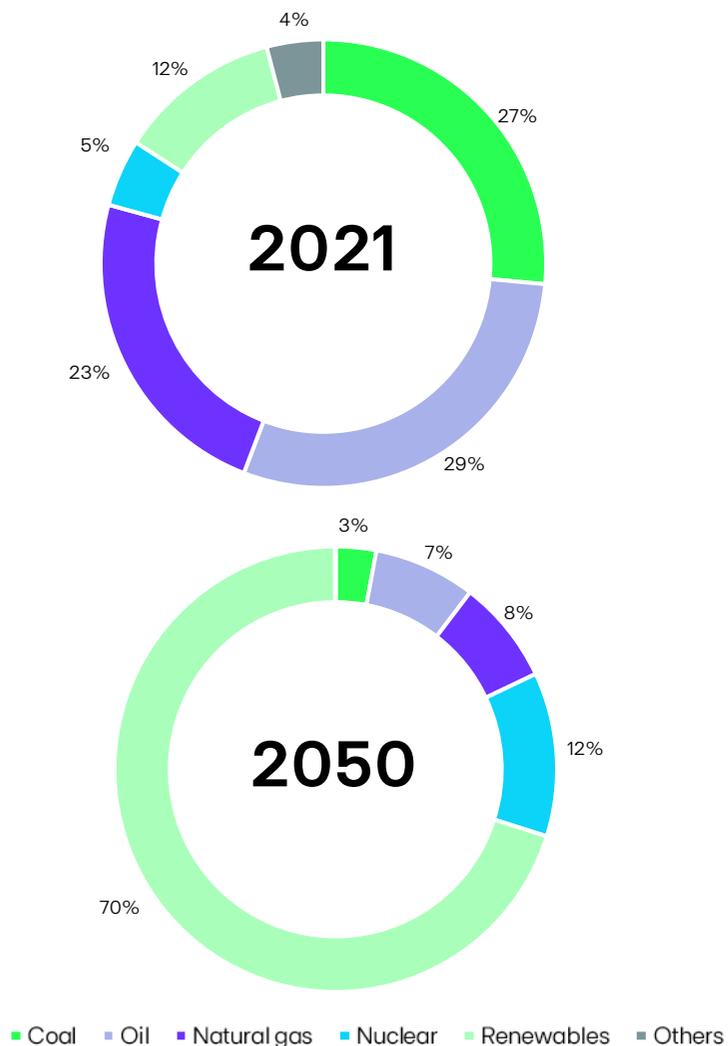
A **global energy crisis** marked the year 2022, with high commodity prices impacting businesses and households. The exposed fragilities of a fossil fuel-dependent energy system **reinforced the need for change** and **highlighted the importance** of pursuing the main **carbon neutrality drivers: renewables, electrification, and energy efficiency**.

The IEA estimates in its Net-Zero Emissions scenario of the World Energy Outlook 2022 that **clean technologies must dominate the energy mix** to enable the energy transition. While today fossil fuels account for 80% of the primary energy demand, there will have to be a complete change in the coming decades. **Renewables** should represent **70% of the mix by 2050**, and the remaining fossil fuels must be combined with carbon capture and storage technology (see figure next page).

Decarbonization is happening at a faster pace in the power sector, in which **renewables are already a cost-competitive solution for most key markets around the world**. More than two-thirds of the world population lives in countries where either onshore wind or solar PV are the cheapest technologies for new builds (BloombergNEF). Electric solutions are often more efficient than other alternatives, as is the case of electric vehicles or heat pumps. All in all, **electrification supported by a renewable mix** should be the most **effective solution for cleaner and more efficient energy consumption**.

<sup>1</sup>Data retrieved from Net Zero Tracker on January 6th, 2023

## GLOBAL PRIMARY ENERGY DEMAND FOR THE NET-ZERO SCENARIO



Source: International Energy Agency, World Energy Outlook 2022

**Energy efficiency** plays a critical role, since more efficient appliances ensure a **lower energy demand**, reducing costs, and ultimately **lowering energy bills for consumers**. Some of the most effective energy efficiency measures include renovating buildings and investing in efficient appliances, reducing energy needs, and improving thermal comfort.

### Other clean technologies are necessary to reach net-zero

Renewables, electrification, and energy efficiency will be the key pathways to pursue to reach carbon neutrality. However, global decarbonization efforts will have to be **complemented by investment in alternative low-carbon technologies**, especially for hard-to-abate uses.

**Hydrogen** will play an important role in sectors such as **heavy industry, long-distance, and heavy-duty vehicles, shipping, and aviation**. With the expected decrease in the cost of electrolyzers and in the cost of electricity generation, renewable electrolysis should become a more competitive solution to produce hydrogen. Hydrogen has been gaining global recognition, and today more than 50 countries already have either a **Hydrogen National Strategy** or are preparing one (BloombergNEF).

The future power system will also require a strong increase in the **availability of flexible technologies** as a response to the intermittent nature of renewables. From mature technologies to the ones still growing, all will have an important part to play, including **pumped hydro, battery storage, interconnections, and demand-side response**.

### Innovation and digitalization as key enablers

To keep up with the decarbonization goals, innovation will be essential, as we need to **adopt existing technologies at a faster rate** while developing **new ones**. **R&D will be critical** to further develop the **technologies that are still in the prototype or demonstration phase** and without which carbon neutrality cannot be reached.

**Digitalization** also offers several opportunities for utilities throughout the entire value chain, fostering energy transition. For the **generation** side, digitalization solutions will comprise **embedding data into everyday activities** to maximize outputs and operations efficiency (e.g., predictive maintenance, automated work). For **networks**, a more digital business will **facilitate managing a system** with much higher levels of renewables and distributed energy resources, while also **making operations more efficient** (e.g., smart meters, smart grids, predictive maintenance). While on the retail side, digitalization will enable the integration of

an increasing number of **distributed resources** and will allow for the rethinking of **business models, customer interactions, products, and services.**

## 2.2. Materiality

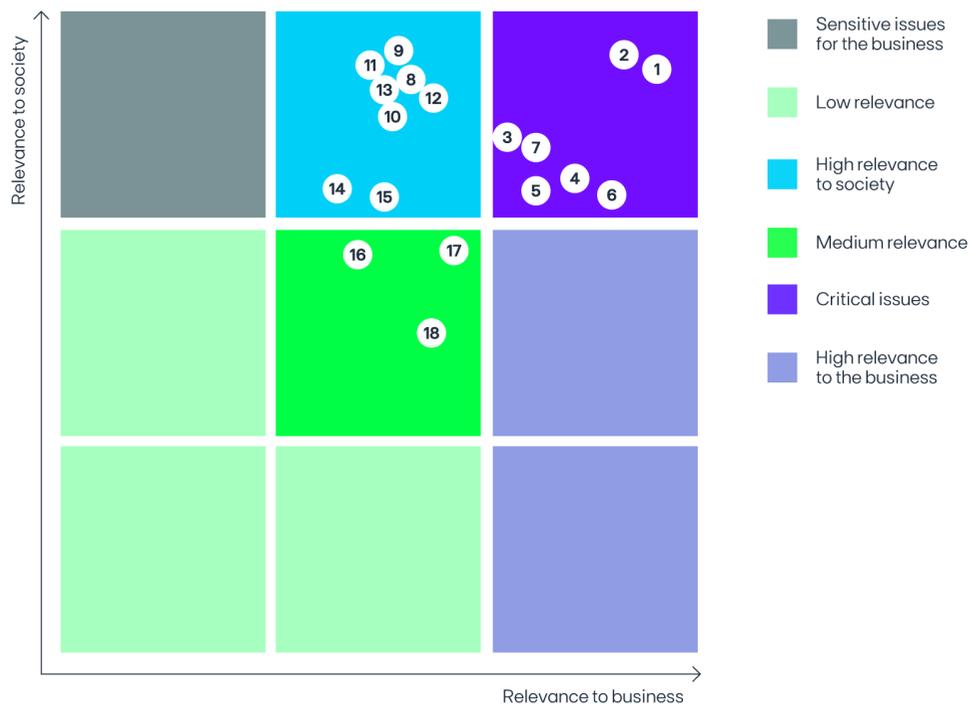
EDP's Materiality analysis process has been developed since 2016, through a transversal methodology, common to the whole group, systematised and detailed in a specific report available at [www.edp.com](http://www.edp.com). The EDP group carries out its Materiality process every two years, accompanying the revision of its Business Plans. This process makes it possible to identify the relevance of non-financial issues for stakeholders, cross-referencing it with their relevance to the business priorities and strategy. This analysis supports the decision-making process and the development of strategies in the organization, particularly the clarification of its performance in terms of sustainability.

The main stages of the materiality process are described in the infographic on the right. EDP's methodological approach in the definition of materiality considers the concept of double materiality, as defined by GRI Standards. This alignment reflects the importance given by the group to the relevance of the issues for society, in which it takes into account their impact on its stakeholders. However, as the concept of double materiality becomes operational in the international regulatory context, namely with the creation of the International Sustainability Standards Board and as defined by the European Financial Reporting Advisory group (EFRAG), EDP is dealing with possible adjustments to its methodology for identifying material themes in subsequent reports, in order to meet the expectations of its stakeholders and fulfil its commitment to society and the environment.

In 2022, material themes remain stable compared to 2021, and 18 material themes have been identified for the EDP group, whose relevance for society and for business is positioned in accordance with the matrix presented on the following page, highlighting:

**7. Customer Satisfaction and Service** – Sustainable Consumption stands out for its increased relevance for both society and business. Thus, this is a subject to which EDP intends to give particular focus in its activity plan. Additionally, the growing weight of the issue of Energy Prices at a European level was also identified as one of the most relevant issues for society in 2022.





- 1 Climate Change
- 2 Promoting Renewable Energy
- 3 Innovation and Digital Transformation
- 4 Economic Business Sustainability
- 5 Decarbonisation Solutions
- 6 Health and Safety
- 7 Satisfaction and Customer Service
- 8 Crisis Management
- 9 Environmental Protection
- 10 Community Engagement
- 11 Communication and Transparency
- 12 Human Rights
- 13 Vulnerable Customers
- 14 Corporate Governance
- 15 Ethics and Compliance
- 16 People Management
- 17 Supplier Management
- 18 Sustainable Finance

**6. Safety** – Mental Health has distinguished itself by the increasing growth of its relevance to society, distinguishing it from other Safety themes for 2022.

**17. Supplier Management** – The growing relevance of the topic for business and society is due to the increased importance given to environmental criteria in the supply chain, namely the reduction of CO<sub>2</sub> emissions in the context of decarbonisation, in light of global goals.

The Materiality process also makes it possible to identify the degree of priority given by each stakeholder group to sustainability issues. This analysis shows a natural dispersion of the relevance attributed by various stakeholders to the analysed themes, inherently related to their nature and relationship with the company.

The figure in the next page details the identified themes, aggregated by the degree of relevance attributed to each of the stakeholder groups.

**MAIN TOPICS**

Climate Change <b>1</b>	Crisis Management <b>8</b>
<b>Mitigation</b>	<b>Infectious diseases (Covid-19)</b>
Decarbonisation Solutions <b>5</b>	Environmental protection <b>9</b>
<b>Energy efficiency</b>	<b>Biodiversity protection</b>

	Climate Change	Promoting Renewable Energy	Innovation and Digital Transformation	Economic Business Sustainability	Decarbonisation Solutions	Health and Safety	Customer satisfaction and Service	Crisis Management	Environmental Protection	Community Engagement	Communication and Transparency	Human Rights	Vulnerable Customers	Corporate Governance	Ethics and Compliance	People Management	Supplier Management	Sustainable Finance
<b>Market</b>																		
Shareholders, Investors	High	High	Low	High	Medium	High	Medium	High	Medium	Medium	High	High	Low	High	Low	Medium	Medium	High
Financial Entities	Medium	High	High	High	Medium	Low	High	High	Medium	Medium	High	Medium	Low	Medium	High	Low	Medium	High
Competition	High	High	Medium	Low	Low	Medium	High	Medium	High	High	Low	Medium	Medium	Medium	Medium	Medium	High	Medium
<b>Democracy</b>																		
Government, Public Entities, Regulation	High	High	Low	Low	Medium	Low	Low	Medium	High	Low	Low	Low	High	Low	Low	Medium	Low	Low
Political Parties	High	High	Medium	High	Medium	Low	High	Medium	High	Low	Low	Low	Medium	Low	Low	Low	Low	Low
International Institutions	High	High	Medium	Low	High	Low	Low	High	High	Medium	Low	High	Medium	Low	Low	Medium	Low	Low
<b>Social and Territorial Environment</b>																		
NGOs	High	High	Low	Low	Low	High	Low	Low	High	High	Medium	High	High	Low	Medium	Medium	Low	Low
Local Communities	Medium	Low	Low	Low	Low	Low	Medium	Low	Medium	High	High	Medium	Medium	Low	Low	Low	Low	Low
Local Government	Medium	High	Medium	Low	Low	Medium	Low	Low	Low	High	Low	Low	Low	Low	Medium	Low	High	Low
Media and Opinion Makers	Medium	High	Low	Low	Low	Low	Low	Medium	Low	Low	High	Medium	Medium	Low	High	Medium	Low	Low
<b>Value Chain</b>																		
Scientific Community	High	High	High	Low	Medium	Low	Low	Low	Medium	High	Low	Low	Low	Low	Low	Low	Low	Low
Customers	High	High	High	Low	High	Low	High	High	Low	High	Medium	Low	High	Low	Medium	Low	Medium	Low
Suppliers	Medium	Medium	Low	Low	Low	Medium	Medium	High	Low	Low	High	High	Low	Low	Medium	Low	High	Low
Employees	Medium	Medium	Medium	Medium	Low	High	Low	Medium	Low	Low	Low	Low	Low	Low	High	High	Low	Low

Relevance level

High Medium Low

## 2.3. Risk management

### 2.3.1. Risk governance model

The EDP group follows a risk governance model, generally recognised in specialist literature<sup>1</sup> based on the concept of three lines of defence internal to the organisation – which may be complemented, in specific circumstances, by a fourth external line of defence, in the form of external auditing and regulation/supervision.

For every line of defence there are clearly defined responsible bodies and forums for debate and decision, formally established to materialize each line of defence at corporate and Business Units levels, avoiding duplication of efforts and/ or the existence of gaps, and promoting the cooperation and collaboration between different areas.

#### RISK GOVERNANCE MODEL OF THREE LINES OF DEFENCE

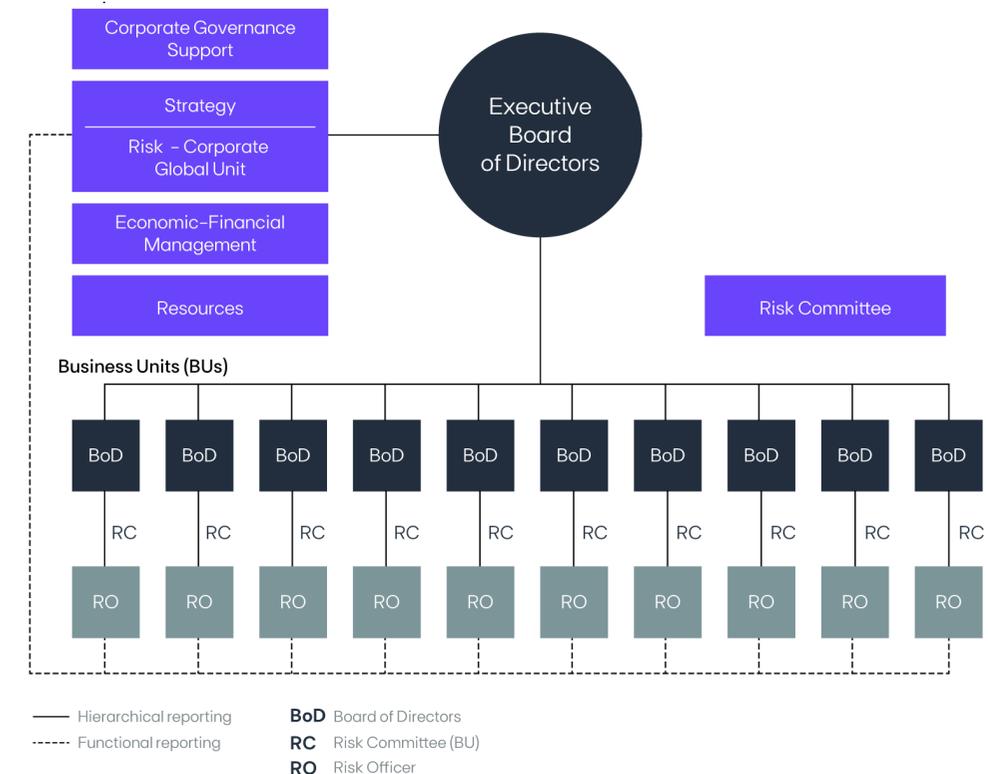
	1 <sup>st</sup> Line: Business (responsibility for risk)	2 <sup>nd</sup> Line: Risk (support the analysis and monitoring of risk)	3 <sup>rd</sup> Line: Audit (independent supervision)
<b>Mission</b>	Daily running business, including proactive management of risks, aligned with established risk policies	Support in the identification, analysis, evaluation and monitoring of risk (to support business)	Performance and coordination of auditing exercises, seeking the improvement of processes of risk management, control and corporate governance
<b>Rational</b>	Who benefits the most from risk should be the responsible for taking it	Given the (natural) incentive for business to take risk, it is beneficial to have an independent function specialized in risk	It is beneficial to have an independent entity responsible for the verification and evaluation of processes of risk management and control
<b>Involved areas (not exhaustive)</b>	<ul style="list-style-type: none"> <li>Employees, suppliers and other internal and external entities</li> <li>Risk-owners</li> <li>Operative Committees</li> </ul>	<ul style="list-style-type: none"> <li>Risk Management</li> <li>Risk - Corporate Global Unit</li> <li>Local risk management structures (risk officers and platform coordinators)</li> <li>Compliance &amp; Internal Control - Corporate Global Unit</li> <li>Risk Committee</li> </ul>	<ul style="list-style-type: none"> <li>Internal Audit - Corporate Global Unit</li> </ul>
	EBoD		GSB via CMF/CAUD

Risk management is represented by the Risk – Corporate Global Unit at corporate level, as well as by the local risk units across the Business Units (lead by their respective risk-officer) that functionally report to the Risk – Corporate Global Unit, guaranteeing a fluid articulation and communication concerning key risk sources and mitigation actions.

In addition, Risk Committees are held at corporate level and locally, at Business Units, gathering top management and relevant specialists for the analysis, debate and advice on key risk exposures for the group, respective limits and other mitigation actions.

A more detailed description about the intervening bodies in the risk governance model at EDP group, as well as attributed responsibilities, is available in the [Corporate Governance Report](#).

#### CORPORATE FUNCTIONS



<sup>1</sup>Instituto de Auditores Internos em IIA, Position Paper, *The three lines of defense in effective risk management and control*, Janeiro 2013

### 2.3.2. Key risks

EDP group seeks to have a comprehensive view over the key risks it is exposed to, at strategic, business, financial and operational level, establishing processes to assure follow-ups and proactive management.

The year 2022 was marked by the geopolitical crisis caused by the conflict in Ukraine, resulting in an energy crisis (in part of the year aggravated by a period of drought in Iberia). The financial markets also noted some concern about the sharp rise in inflation and increase in interest rates.

Risk management reaffirmed its importance, playing an essential role in this disruptive environment.

A more detailed description of the various risks is available in the [Corporate Governance Report](#).

	Illustration of topics (not exhaustive)	Recent evolution/ expected in short-term	Mitigation Actions (not exhaustive)
Strategic & ESG	<b>Strategy</b> - Geopolitical instability. - Social and economic crises. - Technological disruption. - Change in the competitive paradigm.	+ <ul style="list-style-type: none"> <li>Geopolitical instability with the standstill in resolving the conflict in Ukraine, with the following side effects (1) at macroeconomic level (increased inflation and uncertainty regarding its persistence and political, social, fiscal and monetary response), and (2) instability of supply chains (particularly in the energy sector and in Europe, greater exposure to fossil fuel supply and price risks - current transition to the regulated market and change in the EDP group's customer paradigm).</li> <li>Generalized loss of purchasing power with relevant impacts on the population and businesses, increasing the pressure on a social and economic crisis.</li> </ul>	<ul style="list-style-type: none"> <li>Creation of a multidisciplinary crisis management team to monitor the evolution of the energy and geopolitical crisis.</li> <li>In-depth analysis of supplier exposure in EDP group's supply chain.</li> <li>In-depth analysis of exposure and quantification of the impact of rising inflation in EDP group.</li> </ul>
	<b>ESG</b> - Climate change, biodiversity, and circular economy. - People, communities and human rights. - Business conduct and ethics.	=/+ <ul style="list-style-type: none"> <li>Drought scenario with a pronounced drop in hydroelectric production, and additional measures to increase the strategic water reserve by the Government, prioritizing competitive uses of water.</li> <li>Reinforced EDP group's commitment to renewable technologies, in line with political objectives of decarbonization of the economies.</li> <li>Increased security risk for employees and facilities in assets nearby the conflict in Ukraine.</li> <li>Ranked first in the Dow Jones Sustainability Index among integrated utilities.</li> </ul>	<ul style="list-style-type: none"> <li>Geographic and technological diversification of the EDP group's asset portfolio.</li> <li>Rigorous analysis and prospective investments, allowing us to anticipate and adapt the business model to possible market evolution trends (e.g., decarbonization, electrification).</li> <li>Monitoring of ethical risk by the Ethics Ombudsman.</li> <li>Gathering, analysis and assessment in the Ethics Committee of all unethical behaviour allegations.</li> <li>Regular safety risk assessments and implementation of safety measures (e.g., regular training, safety equipment).</li> <li>Extraordinary risk assessment and monitoring of the security of persons and assets nearby Ukraine by multidisciplinary crisis management team.</li> </ul>
Business	<b>Energy Markets</b> - Fluctuations in pool, commodity and CO <sub>2</sub> prices. - Volatility in the volume of renewable energy production (i.e., hydro, wind and solar). - Volatility in energy consumption. - Changes in commercial margins.	+ <ul style="list-style-type: none"> <li>Strong volatility and price increases in the energy markets, particularly in Europe and in the natural gas and electricity markets.</li> <li>Strong volatility in Iberia's hydro volume.</li> <li>Exposure to supply chain risks in the natural gas supply chain.</li> <li>Increase in wind and solar renewable capacity.</li> <li>Implementation of the Iberian mechanism.</li> <li>Implementation of price mechanism for natural gas TTF.</li> </ul>	<ul style="list-style-type: none"> <li>Portfolio diversified by hydro, thermal, wind and solar, reducing (partially) the exposure to renewable volumes and following the climate transition trend of focused on renewable technologies.</li> <li>Preference for long-term energy contracts.</li> <li>Optimization of the production margin in the market, carried out by a dedicated area, with action duly framed by risk policy.</li> <li>Hedging of the main sources of exposure (e.g., fuel prices).</li> </ul>

	Illustration of topics (not exhaustive)	Recent evolution/ expected in short-term	Mitigation Actions (not exhaustive)
Financial	<b>Regulation</b> <ul style="list-style-type: none"> <li>- Changes in rates, taxes and sectorial charges.</li> <li>- Changes in the tariff regime of regulated activities.</li> <li>- Legislative changes.</li> <li>- Alteration of norms (e.g., environmental/climate).</li> </ul>	=/+ <ul style="list-style-type: none"> <li>• Regulatory impacts in the group's various geographies with materialization at the level of group results.</li> <li>• Clawbacks applied in different markets, with higher risk in Poland and Romania markets.</li> <li>• New regulatory period in the distribution business in Portugal.</li> </ul>	<ul style="list-style-type: none"> <li>• Careful monitoring and preparation of the various regulatory dossiers, including anticipation of potential regulatory risks (e.g., climate transition risks).</li> <li>• Geographic diversification.</li> </ul>
	<b>Financial Markets</b> <ul style="list-style-type: none"> <li>- Fluctuations in interest rates.</li> <li>- Fluctuations in exchange rates.</li> <li>- Inflation rate fluctuations.</li> <li>- Fluctuations in the value of financial assets held by the group.</li> </ul>	+ <ul style="list-style-type: none"> <li>• The war in Ukraine and post-pandemic period with impact at the level of constraints in supply chains, resulting in an increase in inflation rates worldwide (with special impact on energy prices).</li> <li>• As a result of the higher inflation rate, and trying to combat its growth, the main Central Banks increased interest rates, reaching the highest levels of the last ten years.</li> <li>• Depreciation of the EUR against the USD and of the EUR against the BRL, due to the instability associated with the war in Ukraine, as well as the interest rate differentials in the different currency zones.</li> </ul>	<ul style="list-style-type: none"> <li>• Interest rate risk mitigation in accordance with the risk limits established by the group's policies.</li> <li>• Diversified exchange rate exposure due to the presence in multiple geographies, with a tendency for a balanced net position (assets - liabilities), through funding sources in local currency and/or the use of hedge instruments.</li> <li>• Contracts with inflation indexation components.</li> <li>• Reduced weight of strategic financial assets and treasury application essentially in short term bank deposits.</li> </ul>
	<b>Credit</b> <ul style="list-style-type: none"> <li>- Default of financial counterparties.</li> <li>- Default of energy counterparties (energy purchase/sale contracts).</li> <li>- Customer default (B2B and B2C).</li> </ul>	+ <ul style="list-style-type: none"> <li>• Increase of some credit exposures due to price escalation in energy markets.</li> </ul>	<ul style="list-style-type: none"> <li>• Careful selection of reference counterparties, and regular monitoring.</li> <li>• Diversification by multiple counterparties.</li> <li>• Financial instruments of reduced complexity, high liquidity and non-speculative.</li> <li>• Mix of B2B and B2C clients, credit insurance and bank guarantees (when applicable).</li> </ul>
	<b>Liquidity/ solvability</b> <ul style="list-style-type: none"> <li>- Occasional cash flow insufficiencies.</li> <li>- Financial rating downgrade (and consequent increase in financing costs and limitation in access to financing).</li> </ul>	+ <ul style="list-style-type: none"> <li>• Increased liquidity needs in the organized forward markets due to the escalation of prices in the energy markets accommodated by the EDP group's conservative liquidity position.</li> <li>• Increase in the amount of available funds, accompanying the increase in liquidity needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Cashpooling for all geographies (excluding Brazil).</li> <li>• Constant control of liquidity levels in a stressed risk scenario to ensure coverage of treasury needs (sufficient to cover 2 years).</li> <li>• Diversification of funding sources, debt type profiles and debt maturity.</li> </ul>
	<b>Social Liabilities</b> <ul style="list-style-type: none"> <li>- Capitalization of the Defined Benefit Pension Fund.</li> <li>- Additional current and early retirement costs.</li> <li>- Medical Expense Costs.</li> </ul>	- <ul style="list-style-type: none"> <li>• Comfortable capitalization position with less risk of funding shortfall due to the decrease in the value of liabilities with the increasing interest rates.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular monitoring of the Defined Benefit Pension Fund, the value of the assets that compose it, and responsibilities by specific committee (including the financial and risk units).</li> </ul>

Operational	Illustration of topics (not exhaustive)	Recent evolution/ expected in short-term	Mitigation Actions (not exhaustive)	
	Assets under construction/ development	<ul style="list-style-type: none"> <li>- Delays in asset commissioning date and lost revenue.</li> <li>- Deviations in investment cost (CAPEX).</li> </ul>	 <ul style="list-style-type: none"> <li>• Increased instability and inflation in the supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>• In-depth analysis of the exposure of suppliers in EDP group's supply chain.</li> <li>• Crisis management and business continuity plans for catastrophic events (e.g., environmental, geopolitical instability).</li> </ul>
	Assets in operation	<ul style="list-style-type: none"> <li>- Damage to physical assets and third parties.</li> <li>- Breakdowns due to component or installation defects.</li> <li>- Unavailability due to external events (e.g., of atmospheric nature).</li> <li>- Operational performance (e.g., distribution network losses, quality of service indicators).</li> </ul>	 <ul style="list-style-type: none"> <li>• Security risk for people and assets nearby Ukraine.</li> <li>• Maintenance of extreme events risk, mainly impacting electricity generation, transmission and distribution assets.</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of a multidisciplinary crisis management team to monitor the evolution of the energy and geopolitical crisis, with action plans in the event of a threat.</li> <li>• Comprehensive insurance policies (essentially at the level of property damage and loss of profits, civil liability and environmental liability).</li> <li>• Programs to combat fraud (at the level of non-technical losses).</li> <li>• Availability of an internal tool to support the recording of incidents and analysis of operational risks being adopted by some Business Units in Portugal.</li> </ul>
	Execution of Processes	<ul style="list-style-type: none"> <li>- Irregularities in the execution of processes (at the level of commercial activities, selection and management of suppliers, invoicing and collection from clients, etc.).</li> </ul>	= -	<ul style="list-style-type: none"> <li>• Diffusion of the Internal Control over Financial Reporting (ICFR).</li> <li>• Documentation and formalization of existing processes by dedicated area.</li> </ul>
	Systems	<ul style="list-style-type: none"> <li>- Unavailability of information and communication systems.</li> <li>- Information integrity and security.</li> </ul>	=/+ <ul style="list-style-type: none"> <li>• Level of exposure (e.g., large-scale cyber-attacks, data protection directives) offset in part by continuous reinforcement of mitigation measures (cyber-range, SOC, cyber-risk insurance, trainings and awareness sessions).</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of the level of criticality and maximum unavailability time for the main applications.</li> <li>• Implementation of redundant disaster recovery systems.</li> <li>• Establishment of a Security Operations Center (SOC) dedicated to continuous monitoring the security of the group's OT/IT infrastructure.</li> <li>• Private cyber-range to simulate and test employees' reaction to cyber-attacks.</li> <li>• <i>Online training and awareness actions on information security principles.</i></li> <li>• <i>Continuous improvement of systems security.</i></li> <li>• <i>Cyber risk insurance.</i></li> </ul>

	Illustration of topics (not exhaustive)	Recent evolution/ expected in short-term	Mitigation Actions (not exhaustive)
<p><i>Legal &amp; Compliance</i></p>	<p>- Losses resulting from non-compliance with tax, labour, administrative, civil or other legislation in force (penalties, indemnities and settlements).</p>	<p>=  -</p>	<ul style="list-style-type: none"> <li>• Regular monitoring of legal exposure.</li> <li>• Constitution of provisions sized to cover all losses estimated as probable from litigation in progress.</li> </ul>

### 2.3.3. Emerging risks

Besides the close monitoring of the main risks inherent to the group's activity, the main trends (global and sectorial) that may translate into threats and opportunities for the group are also comprehensively mapped, and adequate mitigation strategies are proactively developed. In 2022, the emerging risks assessment was updated, with the evaluation by EDP group's top management, executive and non-executive.

The most relevant emerging risks, even due to their impact over recent years, are (1) the regulatory risk and unadjusted energy market design, (2) the instability of global supply chains, (3) the increased inflationary pressure and rising interest rates, (4) the growing threat of cyber-risks and (5) the increase in climate risks (physical and transition risks), as well as the potential misalignment of international commitments for climate transition, and (6) the lack of talent supply in the labour market.

	Description	Impact	Mitigation Measures
Regulatory risk and energy market design mismatch	Structural change from a centralized towards a decentralized energy production model, and greater need for flexibility, along with efforts to decarbonize the economy. In this sense, a progressive revision of the regulatory framework is necessary.	<ul style="list-style-type: none"> <li>Potential abrupt change in remuneration mechanisms, as well as their possible retroactive consequences, impacting profitability of current businesses and discouraging new investments.</li> <li>Unclear market design could lead to market or investment incentive distortions (e.g., to address supply chain constraints / price spikes).</li> </ul>	<ul style="list-style-type: none"> <li>Close monitoring of regulatory developments and active participation in national and international discussions.</li> <li>Diversification by business line and by geography.</li> <li>Creation of contractual resilience in order to share the risk of possible structural changes in market design.</li> </ul>
Instability of global supply chains	Global supply chains exposed to extreme events (e.g., environmental, social, geopolitical, macroeconomic) leading to supply disruptions or price pressure. Geographical concentrations of raw materials enhance this risk.	Threats related to: <ul style="list-style-type: none"> <li>Fuel and raw materials/equipment supply chain constraints, critical to new investments;</li> <li>Delays in maintenance, construction, among others;</li> <li>Possible impact on operations, costs of delays (COD) and CAPEX deviations in new investments.</li> </ul>	<ul style="list-style-type: none"> <li>Analysis and assessment of supplier exposure to potential supply chain disruptions and monitoring of critical suppliers (taking into consideration financial criteria and ESG criteria), as well as supplier diversification reducing dependencies (mainly for critical supplies).</li> <li>When applicable, evaluation of the trade-off of extending ongoing contracts vs. new bids/anticipating purchases to cover shortages and price increases.</li> </ul>
Increased inflationary pressure and rising interest rates	Rising inflation and upward pressure on interest rates (exacerbated by the conflict in Ukraine) pressing liquidity of population and businesses, leading to extraordinary governmental measures (e.g., extraordinary taxes and fees).	<ul style="list-style-type: none"> <li>Increase in the company's financial costs.</li> <li>Generalized increase in the cost of raw materials and equipment, impacting the profitability of assets in operation and under construction.</li> <li>Current asset sale strategy impacted by changes in investors' appetite.</li> </ul>	<ul style="list-style-type: none"> <li>Integrated inflation control – aligning revenues with inflation-related costs (directly or through proxies).</li> <li>Maintenance of a mostly fixed debt strategy and increased debt duration.</li> <li>Prudent liquidity management.</li> </ul>
Cyber-risks	Exposure to cyber risks of different natures, arising from of increasing technological sophistication and integration.	Financial, operational and reputational loss, arising from (among others): <ul style="list-style-type: none"> <li>Operating losses/interruption (dispatch/plants, billing, customer service);</li> <li>Damage/destruction of assets (networks, central offices, other systems);</li> <li>Data breach/destruction (personal and others).</li> </ul>	<ul style="list-style-type: none"> <li>Continuous improvement of the security of internal systems.</li> <li>Dedicated Security Operations Center (SOC) for continuous security monitoring of the group's OT/IT infrastructure.</li> <li>Dedicated Cyber-range for simulation and testing to cyber attacks</li> <li>Online training and awareness actions on information security principles.</li> <li>Cyber risk insurance.</li> </ul>
Increased climate risks and potential misalignment of international commitments for climate transition	Physical risks associated with climate change (e.g., chronic risks such as increased temperature or reduced precipitation, and acute risks such as extreme temperature and precipitation events) impacting portfolio profitability and increasing costs. In a transition phase other regulatory, technological obsolescence, and market risks arise.	<ul style="list-style-type: none"> <li>Structural loss of portfolio profitability:                             <ul style="list-style-type: none"> <li>Damage to physical assets and loss of revenue caused by more frequent extreme weather events.</li> <li>Increases in overall costs (including insurance).</li> </ul> </li> <li>Limitation of the economic potential of investments in new technological solutions (e.g., green hydrogen).</li> </ul>	<ul style="list-style-type: none"> <li>Structured assessment of climate risks (TCFD), updating scenarios, evolution of climate variables and key risks and opportunities for each business.</li> <li>Development of climate adaptation plans by Business Unit in line with the main risks identified.</li> <li>Integration of climate risk assessment into investment analysis.</li> <li>Close monitoring of national and international commitments in decarbonization and adjustment of EDP's strategy accordingly.</li> </ul>

	Description	Impact	Mitigation Measures
<p>Lack of supply of talent in the labour market</p>		<ul style="list-style-type: none"> <li>• Asymmetry between energy sectors across countries (e.g., European integration) and across economic sectors (e.g., restrictions on energy sector versus transport).</li> </ul>	<ul style="list-style-type: none"> <li>• Geographic, technological and business line diversification.</li> </ul>
	<p>Increased competition for labour resources (skilled and unskilled), structural changes in work culture (driven by remote), and digital transformation.</p>	<ul style="list-style-type: none"> <li>• Lack of talent supply to meet the company's human resources needs, impacting team sizing and productivity (including digital).</li> <li>• Rise of personnel costs and other benefits, as a way to attract talent.</li> <li>• Increased difficulty in retaining talent in the company.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased presence in social networks, participating and developing hiring and networking initiatives, youth-oriented programs, more agile recruitment and inclusive methodologies.</li> <li>• Flexibilization of work in line with new reality of and work culture.</li> <li>• Global development of the company culture as a talent management strategy (development and internal requalification) and development of the internal market.</li> </ul>

More details on the TCFD climate dashboard framework is available on the [Climate Transition Plan report](#).

### 2.3.4. Risk appetite

The EDP group is exposed to a number of risks due to its dimension and diversity of businesses and geographies in which it operates, hence it recognizes risks as an integral and unavoidable component of its activity, both as threats as opportunities.

Acknowledging this fact, the group establishes explicitly and implicitly its risk appetite for all internal and external stakeholders, both at corporate and Business Units level, as well as for the various categories of risks, through a set of mechanisms:

- the periodical development and approval of the group's Business Plan by the Executive Board of Directors, which is communicated to all stakeholders, and where key strategic orientations are set for the upcoming three to five years;
- the rigorous evaluation of risk related to investment and divestment opportunities proposed by the Business Units and approved by the Executive Board of Directors, including the estimation of returns adjusted to risks vs. established hurdles. This evaluation is supported by the opinion of the Investments Committee, which includes specialists from relevant areas of expertise;
- the development of a wide set of risk management policies, both at corporate and Business Unit level, which establish guidelines, methodologies of evaluation and exposure limits for key risks<sup>2</sup>;
- the periodical development of risk mapping exercises, based on objective, quantitative and comparable criteria, allowing an analysis of the exposure to key risks, as well as the adoption of preventive treatment actions for excessive exposure to risks (regarding the established tolerance of risk);
- the establishment of a wide set of mechanisms for periodical reporting of key risks, at group and Business Unit level, thus allowing a regular monitoring of the evolution of actual and emerging risks, and comparison of the exposure to different risk profiles within the established limits;
- the adoption of a risk governance model based on three independent lines of defense (business, risk/ compliance and internal audit), which guarantees the implementation of the established strategies and alignment with risk appetite;
- the definition of an internal framework for risk appetite, approved by Executive Board of Directors.

- the periodic reporting to the EBD and GSB of risk indicators and limits aligned with the group's strategy and performance metrics.

The framework of risk appetite in EDP group is structured around four pillars:

- The governance model identifies the key actors in the process of risk appetite and their responsibilities;
- The risk appetite statement formally defines a set of risk appetite statements complemented by risk indicators and thresholds. In terms of positioning, the group establishes maintaining a controlled risk profile as a fundamental pillar of its strategy;
- The monitoring and follow-up, defining the key processes of monitoring, update and action plan;
- And the technological platform, embodied in a risk appetite dashboard that allows the follow up of risk appetite in EDP group. The group is exposed to a number of risks inherent to its dimension and diversity of business and geographies where its present, recognizing the risk assumption as an integrant and inevitable component of its activity, as a threat and opportunity.

<sup>2</sup> Including, among others, the Enterprise Risk Management Policy, the Risk Appetite Framework Policy, the Limits Structure of the Energy Management Business Unit, the Financial Management Policy, the Counterparty Policy, the Insurable Risk Management Policy, the Occupational Health and Safety Policy, the Information Security Policy, and the Principles, Structure, and Procedures for Crisis Management and Business Continuity.

## 2.3.5. Risk appetite statement of EDP group

1 <sup>st</sup> level statement	2 <sup>nd</sup> level statement	KRI (Objective)
<b>Balanced business</b>  Controlled risk utility, with a strong share of regulated/ LT contracted activities, diversified both geographically and across the value chain, with a strong growth focus on renewables	<b>GEOGRAPHICAL CONCENTRATION</b> Geographical diversification and focus in geographies/ markets with reduced country risk.	EBITDA concentration (market/ emerging countries, sovereign rating) Market share per market / country
	<b>BUSINESS SEGMENTS</b> Diversified portfolio across the value chain (generation, grids and retail) with a strong growth focus in medium to long-term viable renewable generation.	EBITDA per technology Residual life of generation assets CAPEX in low TRL (Technology Readiness Level)
	<b>REGULATED/ LT CONTRACTED</b> Activity focused mainly in regulated or long-term contracted operations.	EBITDA regulated / LT contracted Gross Margin@Risk Contracted residual life of generation assets
	<b>ST ENERGY MARKET POSITIONING</b> Controlled short-medium term energy market risk and limited proprietary trading exposure.	Value@Risk of portfolio Net position per market
	<b>REGULATORY MONITORING</b> Foresight of possible high impacting regulatory/ political changes in current portfolio and potential new geographies.	Regulatory rating Expected loss from regulatory risk
<b>Solid financials</b>  Credible business plan with sound financials, aiming for a solid investment grade rating and sustainable dividend policy.	<b>RATING</b> Alignment between business and financial profiles to target a solid Investment Grade.	LT rating, FFO / ND and ND / EBITDA Business profile scoring EBITDA concentration (business, country)
	<b>DIVIDENDS</b> Predictability and sustainability of dividend policy as a fundamental element of the shareholders' value proposition.	Payout ratio Payout ratio P95%
	<b>LIQUIDITY</b> Maintenance of liquidity reserves enough to cover cash needs in short-medium term in times of stress.	Survival period Debt redemption per year Liquidity in cash
	<b>FINANCIAL MARKETS RISK</b> Proactive management of the exposure to financial markets, namely FX and IR, controlling the impacts on the business activity. Investments are financed in local currency if possible.	FX: Loss in net investment (P95%), EBT@Risk and equity in non-EUR not covered by NIH IR: Floating ratio per currency, EBT@Risk and Debt NPV change vs. duration target
	<b>CREDIT &amp; COUNTERPARTY</b> Controlled exposure to credit & counterparty risk, favouring higher rated counterparties.	Total EL of aggregate portfolio Due debt as % of sales Exposure (Top10 and non-Investment Grade counterparties)
<b>INVESTMENT PLAN EXECUTION</b> Investment in projects with an attractive risk adjusted profitability, limited market exposure and short time to cash.	IRR / WACC Contracted NPV for generation EBITDA in very high country risk scoring CAPEX gap to target	
<b>SOCIAL LIABILITIES</b> Full coverage of funded social liabilities, through a diversified asset portfolio of limited duration gap, with new pension plans as defined contribution.	Funded Pensions coverage ratio Value@Risk asset-liability position Duration mismatch	

1 <sup>st</sup> level statement	2 <sup>nd</sup> level statement	KRI (Objective)
<p>Leader in innovation, sustainability &amp; reputation</p> <p>Leader in innovation, sustainability and trust for all stakeholders.</p>	<p>ENVIRONMENTAL SUSTAINABILITY Reference in the energy transition, with performance recognized by independent international entities.</p>	<p>Reduction of CO<sub>2</sub> emissions Renewable installed capacity</p>
	<p>INNOVATION Follow-up on key technological developments in order to remain competitive and optimize value creation.</p>	<p>CAPEX digital</p>
	<p>REPUTATION &amp; ETHICS Assurance of top reputation among peers and an exemplar ethics track record.</p>	<p>Scoring in ESG indexes (DJSI, MSCI, CDP, Sustainalytics), and RepRisk Ethisphere certification</p>
	<p>CLIENT SATISFACTION Assurance of distinctive levels of global client satisfaction.</p>	<p>Client satisfaction scoring Number of complaints</p>
	<p>EMPLOYEE SATISFACTION Maximization of employee engagement and healthy working environment, within a flexible organization.</p>	<p>Engagement and Enablement scoring of employees</p>
<p>Operational excellence</p> <p>Prudent operational management, following best-practices and preventing business disruption.</p>	<p>PHYSICAL ASSETS UNDER DEVELOPMENT/ CONSTRUCTION Excellence in project management, limiting risk of CAPEX deviation and COD delays, allowing the fulfilment of the investment plan.</p>	<p>CAPEX deviation COD deviation MW built gap to target</p>
	<p>AVAILABILITY AND INTEGRITY OF PHYSICAL ASSETS Prudent O&amp;M and security of physical assets, complemented with insurance and contingency and recovery planning, guarantying limited operational losses, outstanding quality of service and assets availability.</p>	<p>Losses on physical assets after insurance Unavailability of grid due to extreme events QoS indicators (TIEPI, SAIDI) Loss ratio</p>
	<p>TECHNICAL AND NON-TECHNICAL ENERGY LOSSES Control of technical and non-technical losses in the power grid through adequate technology, maintenance, operation and fraud anticipation processes.</p>	<p>Losses (total, technical and non-technical)</p>
	<p>PROCESSES Pursue of increasingly efficient and adequately controlled processes and, for business critical and intersecting processes, assurance of business continuity and recovery under abnormal/disruptive situations and minimization of procedural errors.</p>	<p>Global KPI Digitalization Critical processes with Business Continuity strategies, by BU</p>
	<p>SUPPLY CHAIN Reinforcement of the effectiveness, sustainability, resilience and continuity of the supply chain, providing service excellence to customers and partners in a secure manner, while ensuring supplier compliance.</p>	<p>Purchase volume from critical suppliers (inc. with ESG assessment and performance evaluation)</p>
	<p>LEGAL/ COMPLIANCE Zero tolerance to illegal behaviour or deliberately and consciously non-compliance with norms and/or regulations, integrity standards and contractual obligations.</p>	<p>Passive contingencies and provisions Implementation of Internal audit recommendations Internal training on compliance matters Counterparty integrity risk</p>
	<p>FRAUD Zero tolerance to fraudulent behaviours, performed by any employee of the company, as well as suppliers and other related third parties.</p>	<p># of complaints and non-conformities associated with the risk of fraud</p>
<p>HEALTH &amp; SAFETY Zero tolerance for health and safety incidents with employees, external contractors or other third parties. Development of preventive policies and measures and conduct of awareness actions, supported by dedicated area.</p>	<p>Frequency and severity rate of work accidents (inc. fatalities) with employees, external suppliers and third parties Incidence of COVID-19 cases and % of employees vaccinated against COVID-19</p>	

1 <sup>st</sup> level statement	2 <sup>nd</sup> level statement	KRI (Objective)
	<p>SECURITY, CONFIDENTIALITY, INTEGRITY AND AVAILABILITY OF SYSTEM                      Prudent management, targeted maintenance, security and availability of IT and OT systems and related services, ensuring resiliency capability under abnormal/disruptive situations.</p>	<p>Recovery time                      System or services unavailability                      # events/ incidents of data security                      Rating BiTSightSecurity                      Losses after insurance with cyber attack                      Data privacy breaches</p>

## 2.4. Strategic priorities

In today's world, businesses are confronting an array of unprecedented challenges, which are presenting difficulties on a global scale. The rapidly changing circumstances are making it more crucial for organizations to proactively manage risks and seize opportunities to adapt quickly to the uncertain environment. As a major energy sector player, EDP understands the significance of responding to these changes. With its strategic plan in place until 2025, EDP is dedicated to investing in new technologies, expanding its renewable energy portfolio, and promoting energy efficiency and sustainability. These measures are essential in enabling EDP to achieve its vision of becoming a leader in the energy transition.

### Vision

EDP's vision is to be a leader in the energy transition, while creating superior value. To achieve this, EDP is strategically positioning itself with a low-risk, cross-diversified and resilient profile, which enables the company to create distinctive conditions for the execution of a value-creation strategy in the challenging context of low ecological footprint leveraged in sustainable growth.

By prioritizing sustainability and innovation, EDP is committed to being at the forefront of the energy industry and aims to create value for all stakeholders while minimizing its environmental impact. With its forward-thinking approach and strong focus on sustainability, EDP aims to drive the energy transition and contribute to a more sustainable future.

### Strategic Pillars

Based on its Vision, EDP has identified three strategic pillars:

- Accelerated and sustainable growth
- Future-proof organization
- ESG excellence and attractive returns

EDP aims to achieve accelerated and sustainable growth by stepping up its green initiatives and building a distinctive, resilient portfolio that can meet the challenges of climate change while maintaining a solid balance sheet. This will enable EDP to accelerate investment and growth while adopting a sustainable capital approach. The asset rotation strategy is a key

pillar in our growth, as it allows to crystallize value upfront and recycle capital back into the business.

The focus on building a future-proof organization will drive the EDP of the future. We are committed to developing an agile, global, and efficient DNA for the company while maintaining tight cost control. A talented and empowered workforce is key to driving the company forward, and we believe that providing the right incentives to our workforce triggers more innovation and enables us to be a better company.

EDP will continue to prioritize its commitment to environmental, social, and governance (ESG) practices while delivering strong financial returns. As part of a green leadership position, the company is firmly committed to the energy transition and will work towards being coal-free by 2025 and achieving carbon neutrality by 2030. EDP recognizes the importance of ensuring that this transition is fair and equitable for all stakeholders, including employees and the communities in which operates. The target of EUR 1.2 billion net income by 2025, with a minimum floor of €0.19 per share for this period, reflects the dedication to both financial performance and social responsibility.

### Strategic guidelines compliance

In the following pages are the main objectives and strategic goals of the group defined for the period 2021-2025.

Strategic Axes	Objectives		Target 2025	Status 2022
<b>Accelerated and sustainable growth</b>	<ul style="list-style-type: none"> <li>• Step-up growth in renewables, accelerating ownership and asset rotation strategies</li> <li>• Focus investments on RES &amp; Networks in EU and USA</li> <li>• Target a BBB rating in the short term (maintaining a sustainable leverage)</li> </ul>	• CAPEX in energetic transition	€24 B	€4.3 B
		• Gross additions	20 GW	2.2 GW
		• Asset rotation	€8 B	€ 2.0 B
		• EBITDA <sup>1</sup> in 2025	€4.7 B	€ 4.5 B
		• FFO / NET DEB <sup>2</sup>	> 20%	20%
<b>Future-proof organization</b>	<ul style="list-style-type: none"> <li>• Evolve organization to be more global, agile and efficient</li> <li>• Strengthen focus in innovation and promote a digitally enabled organization</li> </ul>	• Efficiency program savings	≈ € 230 M	≈ € 115 M
		• TOTEX in digital and innovation	€ 2 B	€ 0.5 B
<b>Attractive returns and ESG excellence</b>	<ul style="list-style-type: none"> <li>• Step-up a green leadership positioning and being a reference in ESG</li> <li>• Deliver a sustainable EPS growth and an attractive dividend policy</li> </ul>	• Coal-free <sup>3</sup> by 2025	0%	10%
		• Net Profit <sup>1</sup> in 2025	€ 1.2 B	€ 0.9 B
		• Minimum dividend per share	€ 0.19	€ 0.19

1 - Recurring figures. 2 - FFO/ND with a formula consistent with the methodology of rating agencies, considering EDP's definition of recurring EBITDA. 3 - Coal installed capacity/total installed capacity.

Strategic Axes	Objectives	Target 2025	Status 2022	SDG
<b>Accelerated and sustainable growth</b>	• Renewables generation (%)	≈ 85	74	7
	• Fleet electrification (%)	>40	15	7
	• EV charging points installed (#)	>40,000	6,010	7
<b>Future-proof organization</b>	• Revenues aligned with EU taxonomy (%)	≈ 70	54	7
	• Scope 1 & 2 emissions (gCO <sub>2</sub> e/kWh)	≈ 100	160	7
	• Total waste (kt)	118	335	12
	• SDGs social investment (EUR Mn)	50	27	11
	• Top quartile in ESG rating performance	✓	✓	—
<b>Attractive returns and ESG excellence</b>	• Employee engagement (top tier company)	✓	✗	8
	• Female overall (%)	30	27	5
	• Accident Frequency Rate	1.55	1.84	8
	• Female on leadership (%)	30	28	5
	• Top management ESG & equity linked compensation	✓	✓	—
	• Cybersecurity (rating bitsight)	Advanced	Advanced (810)	11



## Strategic alignment

Through the materiality process, the group carefully identifies and prioritizes the most important topics for both society and the business. By doing so, the group can optimize its strategic direction and direct its internal management towards addressing these material topics to integrate them into the group's overall strategy. These material topics are embodied in the three strategic pillars of the current business plan.

Based on these strategic pillars, the group defines objectives that are relevant to the entire scope of the group's operations and ensures that they are integrated and aligned with the strategic axes. These objectives aim to help the group achieve its long-term vision and contribute to the group's ongoing success. By following this process, the group can effectively manage its resources, respond to evolving societal expectations, and remain competitive in the market.



## 2.5. Contribution to the SDGs

EDP is committed to addressing the United Nations' Sustainable Development Goals (SDGs) and has set concrete goals for nine of the 17 SDGs. Through its core business, the company is directly impacting SDGs 7 (Clean and affordable energy), 9 (Industry, innovation and infrastructure), 11 (Sustainable cities and communities), and 13 (Climate action). In particular, the €24 billion investment program in the 2021-2025 period highlights the company's commitment to these goals.

EDP is also ensuring that its strategy contributes to stakeholders achieving balance in the three areas of sustainability, thereby contributing to other SDGs such as SDG 5 (Gender equality), SDG 8 (Decent work and economic growth), SDG 12 (Responsible consumption and production), SDG 15 (Life on land), and SDG 17 (Partnerships for the goals).

In June 2021, EDP Energias de Portugal joined the UN Global Compact CFO Task Force for the SDGs, demonstrating its commitment to implementing the SDGs and publicly disclosing progress in achieving them. Since then EDP has carried out several activities that show this

alignment, highlighting in 2022: (1) the communication on progress with the 4 principles of the CFO Task Force UNGC, (2) the dissemination of the CFO video that shows how EDP follows the path of decarbonization, (3) participation in meetings and events, and (4) the contribution to the profile of the macro-sector of utilities.

The company reports publicly on its progress towards its sustainability goals and links them to the respective SDGs on its [website](#).

### Materiality

- 1 Climate Change

---

- 2 Promoting Renewable Energy

---

- 3 Innovation and Digital Transformation

---

- 5 Decarbonization Solutions

### Strategic plan

24B€ Investment

**€19.2B in renewables (to deploy ~20 GW) to support carbon neutrality by 2030**

**€3.6B in networks, for further grid digitalization and resilience and with quality to support our path to lead the energy transition**

**€1.2B in client solutions and energy management to support the decarbonized consumption and promote low carbon and energy efficiency products and services**

### Sustainable Development Goals



#### Indirect contribution



# Our energy



# Performance

Markets and regulation	048
Risk management in the year	060
Business area analysis	062
Group's financial analysis	068
Share performance	072
Sustainability	077



# 3.1. Markets and regulation

## 3.1.1. Fuels in the world and Europe

The **commodities' market in 2022** was marked by **high volatility**, impacted by multiple factors from the demand and supply sides. Prices started trending upwards in 2021, as a faster than expected economic recovery led to a growth in fuel demand that was not fully met by supply, and this imbalance was severely aggravated by Russia's invasion of Ukraine in February of 2022, with a stronger impact felt in Europe. Pressure on commodity prices coupled with disruptions in the global supply chains contributed to high inflation levels, which have begun to ease by November.

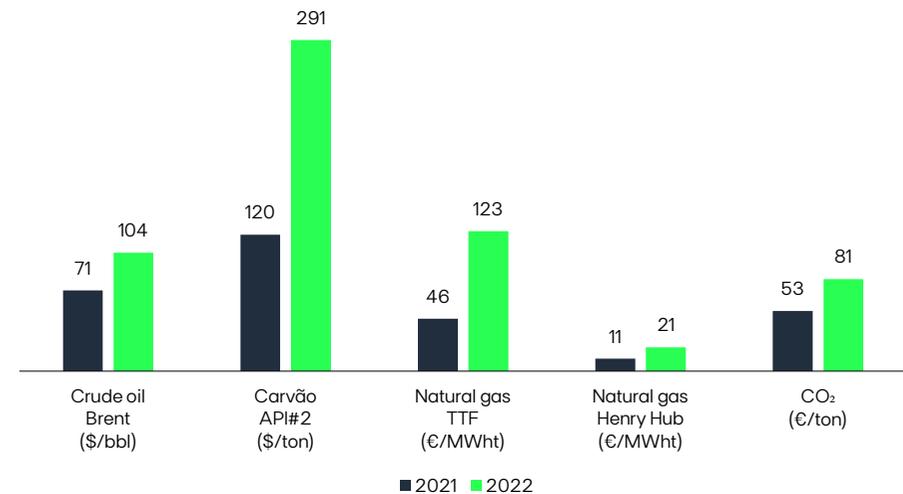
The average price of **Brent crude oil in 2022 was 104 dollars per barrel** (\$/bbl). With a reference of 70 \$/bbl at the start of 2022, the price increased in the first trimester due to a **lower than expected increase in production from OPEC+** (Organization of the Petroleum Exporting Countries and associates) and the impact of the Russian invasion of Ukraine, reaching a maximum of 135 \$/bbl in June. However, in the third and fourth trimesters, China Covid restrictions and a slower global demand contributed to a price decrease, with the year ending with Brent at 83 \$/bbl.

Natural gas experienced the highest volatility of all key fuel commodities, especially in Europe. The European reference gas index (TTF) price at the beginning of the year was 86 €/MWh, and it reached 204 €/MWh in March, as Russian exports began to be curtailed. **The rush to replace Russian gas and fill the European gas reservoirs** drove the price even higher in competition with JKM for liquefied natural gas (LNG), and the TTF reached a record of 309 €/MWh in August. As European storage levels reached the European Union's set targets, and milder than expected temperatures persisted late in the year, prices remained volatile with a low of 29 €/MWh in October but increasing to a maximum of 128 €/MWh by December. **The average annual price was 123 €/MWh.**

API#2, a widely used European price reference for coal, started the year at 120 \$/ton, but the onset of the war in Ukraine led to a significant jump in price, reaching a peak of 439 \$/ton in March **due to reduced coal exports from Russia.** However, the final trimester of the year saw bearish pressure on the market, and the API#2 price fell to 234 \$/ton by the end of the year. Despite this fluctuation, **the average price of API#2** throughout the year was approximately **291 \$/ton, significantly higher than the 122 \$/ton for the year of 2021.**

The **carbon price in Europe in 2022** saw a mix of **ups and downs** throughout the year, averaging **81 €/ton**. Several events led to fluctuations in the price, with the lowest price of 57 €/ton registered in March. In August, the price briefly reached 99 €/ton **due to the typical reduction in primary auctions**, which resulted in a surge in demand in the secondary market. This price point represented the historical maximum and highlighted the **influence of market dynamics on the price of CO<sub>2</sub>.**

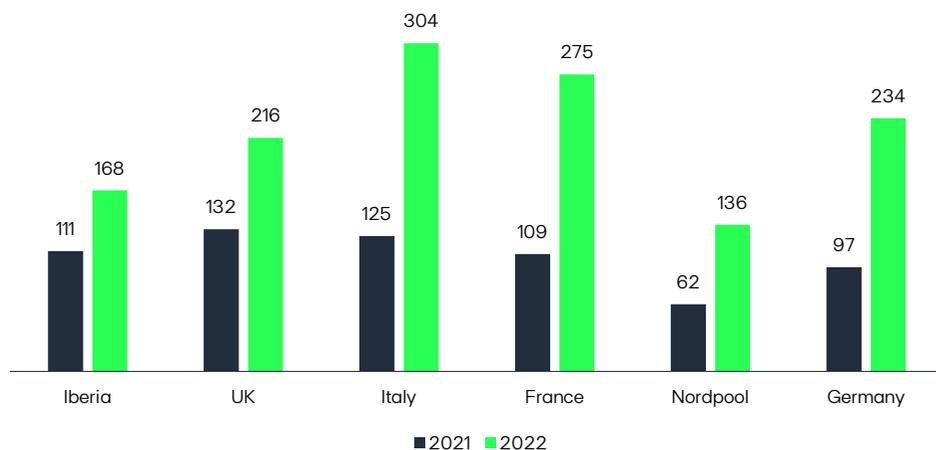
### ANNUAL COMMODITIES AND CARBON PRICES EVOLUTION



Source: Reuters, ICE

The **wholesale power prices** in several **European markets** had a **strong increase** throughout 2022, mostly reflecting the **escalation in natural gas prices**, but also, even if at a lower degree, the CO<sub>2</sub> price. In Spain and Portugal, the **Iberian exception mechanism** led to a **lower pool value** than the rest of the European countries, with an average of **168 €/MWh**. Most of the markets registered values significantly higher, with **France** reaching a **historical high of 3000 €/MWh** in April due to several **outages in their nuclear fleet** and ended the year with an average of 275 €/MWh.

## ANNUAL EUROPEAN MARKETS POOL PRICE EVOLUTION (€/MWh)



Source: OMIE, Nordpool, GME, Reuters.

### 3.1.1.1. Macroeconomic context

**Inflation** was a major talking point this year. **The average inflation in the Euro Zone was 8.4%**, a significant increase from the 2.6% registered last year. This very high value was mainly driven by the **high energy prices**. To tackle this, many countries applied extraordinary measures in order to contain the impact of the escalation of energy prices in the wholesale markets. For **Portugal**, the **average yearly inflation** was slightly below the Euro Zone with **+7.8%**, while Spain was in line with the European average, registering **+8.3%**. **The real GDP in 2022 increased by 6.7% and by 5.5% year-on-year, in Portugal<sup>1</sup> and in Spain<sup>2</sup> respectively**, pushed by private demand from families and by private investment.

In Brazil, on the other hand, the inflation was 5.9% in November 2022, a **reduction** compared to 2021's inflation value (10.06%) which was the highest level in 6 years. **The accumulated GDP<sup>3</sup> in the four quarters ending in September 2022 increased by 3.0%** compared to the immediately previous four. In this period, industry (+0.8%) and services (+4.4%) had a growth, while agriculture fell by 1.31%. However, comparing just the third quarter of 2022 with 2021,

the **GDP growth was 3.6%**. Industry had an increase of 2.8%, whose 11.2% represents electricity and gas segments, and waste management activities with “cheaper tariffs” (green energy flags) contrasting with the hydro crisis in 2021. Services (+2.8%) and farming (+3.2%) also increased.

### 3.1.2. Energy and environmental policy in Europe

To address the disruptions in the commodity markets and security of supply concerns, the **European Commission presented the REPowerEU plan** on May 18th. The plan aims to turn the European energy system into a more **resilient** one, by accelerating the energy transition and **reducing the European Union's dependence on Russian fossil fuels**. To achieve that, the REPowerEU plan lies on **four main pillars**: accelerate the energy transition, diversify energy sources, save energy, and smart investments.

The plan considers several **short-term measures** to address the gas supply concerns, and also **medium-term actions**, including the definition of more ambitious renewable and energy efficiency targets for 2030.

Regarding the share of renewables in demand, the REPowerEU plan proposes setting a target of **45% share for 2030**, five percentage points above the Fit-for-55 target. This higher ambition is expressed in the different sectors, with specific targets for each of them: 69% for the power sector, 46% for heating and cooling, and 32% for transport.

In the power sector, the plan foresees reaching a total of 1,236 GW of renewable capacity by 2030, of which **592 GW of solar PV capacity and 510 GW of wind**, a multiple of 2.5 versus today. Accelerating the capacity deployment will require **speeding up permitting processes**, and the plan proposes establishing a maximum period for renewables permitting of 1 to 2 years and creating “go-to” areas which are specific locations designated as suitable for the installation of renewable plants.

An ambitious target of **20 Mton of green hydrogen by 2030** was also set in the plan, which foresees 10 Mton of internal EU production and 10 Mton of imports.

<sup>1</sup>“Instituto Nacional de Estatística” of Portugal

<sup>2</sup>“Instituto Nacional de Estadística” of Spain

<sup>3</sup>“Instituto Brasileiro de Geografia e Estatística” (IBGE).

In terms of **energy savings**, the REPowerEU plan proposes **an efficiency target of 13% versus 9% in the Fit-for-55**.

The REPowerEU plan requires an additional **€210 billion in investment through 2027** on top of the Fit-for-55 package. This includes, among others, **€113 billion for renewables and key hydrogen infrastructure and €56 billion for energy efficiency and heat pumps**.

Some of the measures proposed by the European Commission already received the **agreement of both the European Parliament and the European Council**, and counterproposals, as in the table below.

REPOWEREU	APPROVAL STATUS	
EUROPEAN COMMISSION PROPOSALS	EUROPEAN PARLIAMENT	EUROPEAN COUNCIL
Renewable energy target of 45% by 2030	✓	Proposal of 40%
Permitting processes maximum period & 'go-to' areas implementation	✓	✓
Energy efficiency target of 13% by 2030	Proposal of 14.5%	

During the year 2022, some progress was made in the approval of the Fit-for-55 package. Not only targets were revised to incorporate the REPowerEU plan, as stated previously but also **some steps forward were taken**, namely:

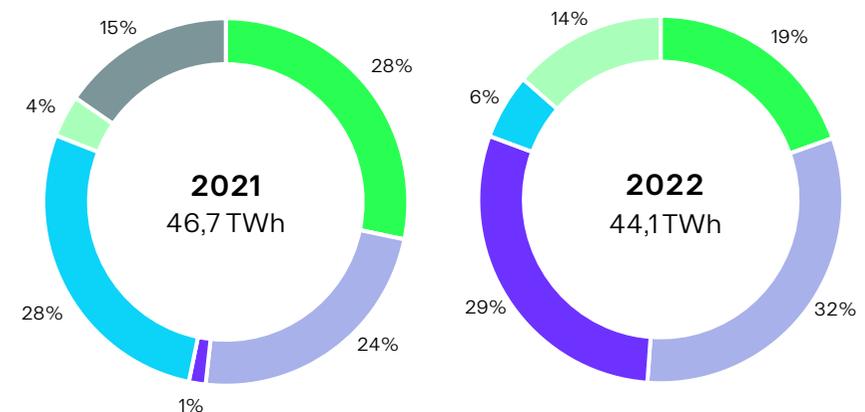
- a **provisional deal on the revision of the Emissions Trading System (ETS)** was reached between the European Parliament and the Council, with an upward revision proposal of the **emissions reductions** target from 61% to **62%**. This corresponds to a reduction from 2005 to 2030 in the emissions from the sectors covered by ETS
- a **provisional agreement on the Carbon Border Adjustment Mechanism** was reached between the European Parliament and the Council, establishing a mechanism that taxes **CO<sub>2</sub> emissions from imported goods** coming from outside the EU
- an agreement on the CO<sub>2</sub> emissions standards for cars and vans was reached between the European Parliament and the Council, establishing the **target of a 100% reduction in CO<sub>2</sub> emissions by 2035**, which implies the end of internal combustion engine cars and vans sales by then

### 3.1.3. Iberian Peninsula

#### 3.1.3.1. Evolution of the electricity sector

In 2022, **electricity consumption in Spain fell significantly**, reaching a 20-year low due to the combination of **high electricity prices** and **lower industry demand**, the sector with the most sensitivity to price volatility. In Portugal, electricity demand was higher than in 2021 even surpassed 2019 levels.

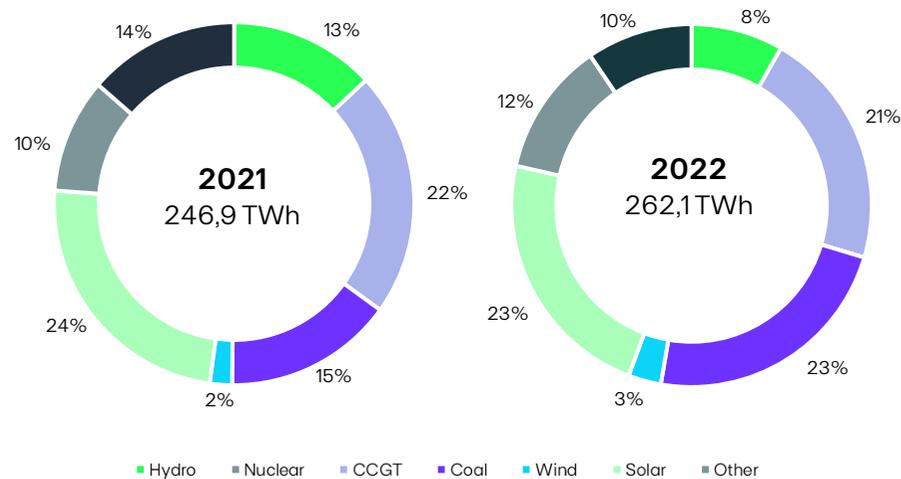
- **Portugal: +1.8%** annual demand increase (+2.4% adjusted for temperature and business days effects)



Source: REN

■ Hydro ■ Nuclear ■ CCGT ■ Coal ■ Wind ■ Solar ■ Other

- Spain: -2.9%** annual demand reduction (-3.8% adjusted for temperature and business days effects), with a strong decrease in the last trimester of -7.5%



Source: REE

Regarding electricity generation, 2022 was a year with **very low hydro inflows in the Iberia Peninsula** as the hydro production index (IPH) stood at 0.6 in Portugal and 0.7 in Spain. The **low hydro availability and higher exports to France**, following the implementation of the Iberian gas cap mechanism, led to an **increase in the gas and coal generation**.

**Renewable generation** supplied **57% of power energy in Portugal in 2022**, with wind generation representing 29% of the total, while hydro's share stood at 19%. In **Spain, renewables** supplied almost **44% of the electricity demand**, with the increase in solar generation (+25% YoY) partially replacing the lower hydro output. In Portugal, despite the increase in demand (+1.8%), electricity generation was 5.7% lower, leading to a rise in imports.

### 3.1.3.2. Regulatory Framework

#### Portugal

On 14 January, Decree-Law 15/2022 was published, establishing a new organisation and management of the National Electricity System (SEN).

To mitigate the high energy prices in Portugal, following the **energy crisis** exacerbated by the Russia-Ukraine conflict, the Portuguese Government has approved several measures, namely:

- the extraordinary and temporary mechanism for adjusting the costs of electricity generation in the MIBEL ("Iberian Mechanism")
- the suspension of the competitive equilibrium mechanism ("Clawback") during 2022
- the suspension of ISP and CO<sub>2</sub> added tax in the last quarter of 2022, as well as their prorogation in 2023
- a reduction of the VAT rate in electricity supply according to the consumption tiers (to the reduced VAT rate)
- the Energy Saving Plan 2022-2023 ("Plano de Poupança de Energia 2022-2023")

With impact on the **generation activity**, in response to the severe drought experienced in Portugal's mainland for most of 2022, a **Hydro Strategic Reserve** ("Reserva Estratégica Hídrica") was set and a **temporary suspension** of the use of water resources of 15 hydropower plants (13 belonging to EDP) from 1<sup>st</sup> of October 2022, until the minimum levels of storage of their useful capacity are reached, fixed administratively.

Concerning the **retail activity**, the status of **Electro intensive Consumer** ("Estatuto do Cliente Eletrointensivo") was established and measures were approved to **simplify and provide flexibility to several tax and declarative obligations** arising from the sale to the grid of the surplus of electricity produced for self-consumption.

An exceptional and temporary measure was also approved allowing the return to the regulated tariffs to final consumers with gas consumption equal to or below 10,000 m<sup>3</sup>, and additional obligations were imposed on operators considered dominant (market share exceeding 20% in volume or number of customers), in particular, to promote continuity of supply.

Within the scope of **renewables**, the targets for energy consumption from renewable sources were established, partially transposing Directive (EU) 2018/2001.

Several extraordinary measures for the **simplification of licensing procedures** for energy production from renewable energy sources were also approved (in line with the REPowerEU Plan proposed by the European Commission).

In the **electricity tariffs**, the regulator (ERSE) proceeded with **two updates to the energy tariff** during 2022, reflecting a 5 €/MWh increase from April 1<sup>st</sup> and October 1<sup>st</sup> onwards, and an extraordinary tariffs settlement in the 2<sup>nd</sup> semester of 2022, establishing an average reduction of the network tariffs (TAR) of 102% and an increase of the energy tariff of 23%. For 2023, a transitory tariff to the end user in the normal voltage network (BTN) increase of 3.3% was approved and an average decrease of TAR of 506%.

Regarding the **electricity sector tariff debt**, the tariffs foresee an ex-ante debt of 879 million euros by the end of 2023, a reduction of 830 million in comparison with the end of 2022. A tariff debt reduction has been observed since 2015, the year in which it reached its peak, according to the sector's sustainability target.

Related to the **gas tariffs**, ERSE proceeded with two updates to the energy tariff during the gas year 2021–2022, a 2 €/MWh increase from April 1<sup>st</sup> and July 1<sup>st</sup>. The gas tariffs for the year 2022–2023 were also approved, in force from October 1<sup>st</sup> 2022, until September 30<sup>th</sup>, 2023, with an increase of the transitory tariff to the end user in low pressure of 8.2%, which suffered a first quarterly update with an increase of 2€ /MWh in force from January 1<sup>st</sup>, 2023, onwards.

## Spain

Given the current crisis resulting from the conflict between Russia and Ukraine, the **main measures** taken have been aimed at **reducing the impact of the rise in energy prices**, as well as **encouraging savings** and **promoting renewable energies**.

As main **consumer protection measures**:

- **fiscal measures were extended** until the end of 2023: **VAT reduced to 5%** for electricity and gas, **special tax of 0.5%** on electricity, and **temporary suspension of the Tax on the Value of Electricity Production (IVPEE)**

- a **new mechanism for financing the social bonus** was regulated so that all parties in the electricity sector will have to pay it. The range of vulnerable consumers with the right to the social bonus was extended
- a new **Tariff of Last Resort (TUR)** was established for community heating systems in force until the end of 2023, which will be financed by the General State Budget 2023 (3,000 million euros).

As **measures to protect industry**:

- the **80% reduction in tolls** for the electro-intensive industry was maintained until June 30<sup>th</sup>, 2023, and the **flexibility of natural gas** supply contracts was regulated
- the **gas reduction mechanism** was extended until the end of 2023 and its scope of application was extended to energy contracted at a fixed price if the price is higher than 67 €/MWh, excluding coal and RECORE
- in May, a **temporary adjustment mechanism** was established for **the production cost of marginal fossil fuel technologies**, which aims to obtain a reduction equivalent to this adjustment in the bids made by these technologies on the market. The amounts corresponding to this adjustment are financed by those consumers who benefit from the aforementioned reduction.

As **measures to promote renewables and reduce consumption**:

- regulation aimed at **administrative simplification in processing**, commissioning, and injection is formulated. In self-consumption, the distance between production and consumption is extended to 2 km, and the minimum time of permanence in a modality is reduced to 4 months. In addition, for low voltage self-consumption installations of up to 100 kW with surpluses, a maximum period of 2 months was set for the activation of the contract. If this period is exceeded, the consumer will receive a "discount for the delay in the activation of self-consumption", which must be expressly stated on the bill
- distributors were temporarily obliged to include in their annual investment plans **actions to increase capacity for access to new renewable generation and self-consumption**
- Measures associated with the **use of basic underground storage facilities** were established for the 2022 gas year
- the Council of Ministers approved the **Plan + SE**, which aims **to reduce gas consumption** by between 5.1% and 13.5%, improve energy autonomy, and increase the competitiveness of the economy and energy exports, in solidarity with the rest of the EU
- in September, an **active demand response service was created**, configured as a specific balancing product with annual contracting by auction

- regarding the rest of the regulatory measures, **electricity storage is assimilated to generation** for the purposes of its processing, and RD 413/2014 is amended to allow the **installation of storage associated with RECORE**
- the processing of **modifications to installations in the gas system network** to adapt them to the injection of renewable gases was eased and Law 34/1998 on Hydrocarbons and RD 1434/2002 were amended to facilitate the connection of direct lines for renewable gases
- the general framework of the regulatory sandbox for the promotion of **research and innovation in the electricity sector** was established

In addition, a **temporary levy** on energy and credit institutions was approved in December, to be applied in 2023 and 2024 based on the results of 2022 and 2023. It is a non-deductible levy, and it will be calculated as **1.2% of the net turnover of the activity carried out in Spain**, excluding regulated activities. Neither the total amount payable nor the initial payment may be passed on.

Regarding the **distribution activity**, on 31 May, Order TED/490/2022 was published, implementing the Supreme Court ruling in relation to the declaration that Order IET/980/2016, of 10 June, which establishes the **remuneration of electricity distribution companies** for 2016, is detrimental to the public interest. In addition, Order TED/749/2022, of 27 July, approves the **incentive or penalty for the reduction of losses in the electricity distribution network** for 2016, modifies the base remuneration for 2016 for several distribution companies, and approves the remuneration of electricity distribution companies for 2017, 2018 and 2019.

### 3.1.4. EDPR Markets

#### 3.1.4.1. The evolution of renewables around the world

##### Wind

In 2022, **wind capacity additions** were around **95–98 GW**, according to energy analysts<sup>4</sup>. Of this, around **90% was onshore wind** (84–88 GW) and the remaining capacity was offshore (9–13 GW). Although wind global **net capacity added to the power system in 2022 remained fairly the same as in 2021**, the additions on onshore technology were significantly higher than offshore.

Overall, China remains the largest wind market, although additions have dropped from last year's record-breaking figures. According to the National Energy Administration (NEA), **China added 37.6 GW of wind power**, down 21% in annual terms, due to the end of subsidies to offshore projects and to the imposed restrictions associated with the Covid-19 pandemic.

In the USA, sources point to **10–11 GW of onshore wind capacity** installed in 2022. This is a **slowdown compared to previous years**, which is mainly explained by the phase-down of the Production Tax Credit (PTC) prior to the approval of the Inflation Reduction Act (IRA).

Onshore wind installations in the European Union represented around **90% of the total** of 15 GW, according to Wind Europe, with **Germany, Sweden, Finland, Spain, and France leading** the ranking. Regarding offshore, **France** commissioned its **first wind farm** with a capacity of **500MW**, while the **UK added 3 GW** to the energy system, one of the countries **ranking highest** in terms of offshore wind additions.

Meanwhile, in Latin America, **Brazil** was likely the largest market in 2022, with wind experts pointing to **around 3 GW of new onshore wind additions**.

All analysts highlighted the challenges faced by the wind industry. The **difficulties felt on the supply chains** across the globe affected the wind deployment rate, and the **higher cost of materials** and **turbine components** caused disruptions in the business of turbine manufacturers. Besides the 2022-specific challenges, the constraints felt before 2022 are

<sup>4</sup>Experts consulted include GWEC, IHS Markit, Bloomberg New Energy Finance, Wood Mackenzie, IEA, Wind Europe, and the American Clean Power Association, among others

still being tackled, namely the **slow and bureaucratic permitting processes** – acknowledged by many analysts to be **one of the main obstacles to a faster deployment of onshore wind**.

### Solar PV

**Solar PV reported additions** were very distinct from source to source with a range of **206 to 268 GW of new capacity in 2022**. In any case, the capacity additions of 2022 surpassed the **200 GW milestone**, confirming analysts' expectations from last year.

**China** remains the **largest solar PV market worldwide** and once again achieved a new historical high in new installations, with **87 GW added** according to the National Energy Administration (NEA). Currently, **almost 90% of polysilicon** – a key material for solar PV modules – is produced in China, supporting the **country's dominant role** in the solar PV market.

More than **40 GW were installed in the European Union in 2022**, according to SolarPower Europe, significantly above the 28 GW installed in 2021. **Germany is the EU country driving most of the growth**, having installed **8 GW** in 2022, followed by **Spain with 7.5 GW**, Poland with 5 GW, and the Netherlands with 4 GW.

In the **US, 7 GW of utility-scale solar PV** were added in the **first three quarters of 2022**, according to data presented by the American Clean Power Association (ACP). Although overall results are positive, the preliminary data points to a **relative slowdown of the sector**, mainly explained by **trade barriers, high equipment prices**, and **ongoing supply chain constraints**, that are hindering solar energy's fast progress.

The energy experts' last estimates on new solar PV additions in **Latin America** revealed that **2022 might be a record year**. Since 2018, the region has, every year, **added more solar PV than wind**, and this trend is set to continue. The strong rise of solar PV is primarily driven by the small-scale segment. The rapid expansion of the sector was witnessed in **Brazil**, with **2.7 GW added in 2022**, according to ANEEL, and **Chile** with **1.8 GW**, according to ACERA data.

## 3.1.4.2. Regulatory Framework

### Belgium

Belgium has implemented a **green certificate scheme (GC)** to promote the **use of renewable energy sources**. Under this scheme, wind farms receive the market price for the electricity they produce, as well as additional GCs per megawatt-hour (MWh) produced. The number of GCs per MWh (kECO) for new plants' contracts was previously revised every two years. However, due to rising electricity prices, an extraordinary revision was done in December 2021. From April 2022, **onshore wind projects will receive 0.52 GCs per MWh** instead of the current rate of 0.73 GCs per MWh.

Given the current high pool prices, **the kECO value** published in December 2022 for **new reservations in 2023 is 0 GCs per MWh**. This means that the 7%-IRR target for such units would be already reached during their lifetime without needing any GCs on top of market revenues. This is because Belgium's scheme methodology assumes long-term pool prices forecast by inflating current FWDs values. If later on, pool prices decrease in a way that GCs are needed to reach the target IRR, the GC rate will be adjusted accordingly and become again higher than zero. The minimum price for GCs is set at 65€/GC in Wallonia.

### Poland

In Poland, the electricity price can be established through bilateral contracts. Wind farms commissioned before 2018 are supported through **a Green Certificate (GC) scheme**. Under this scheme, wind farms receive **1 GC per MWh during a 15-year period**. Electricity suppliers are required to comply with GC obligations and a substitution fee is imposed for non-compliance.

Since 2018, wind farms in Poland are supported by 15-year two-side Contracts-for-difference awarded through auctions.

### Italy

Prior to 2012, wind farms in operation were supported by a **feed-in-premium scheme that was applicable during the first 15 years of operation**. Under this scheme, wind farm operators were given a premium on top of the market price for the electricity they produced.

In 2013, the Italian government introduced a new support mechanism for wind farms, known as the **Contract for Difference (CfD) scheme**. Under this scheme, wind farms commissioned from 2013 to 2017 were supported by a **20-year floor price**, awarded through competitive auctions. Since 2017, wind farms in Italy have been supported by a new 20-year **two-sided CfD scheme**.

### Portugal

Portugal has a long history of supporting the development of wind energy. Wind farms commissioned **before 2006 are subject to a Feed-in-tariff (FiT)** whose value is correlated with production and indexed to the Consumer Price Index (CPI). The initial tenure of the FiT was the soonest of **15 years (or until 2020) or 33GWh/MW**. However, in 2013 the government introduced a tariff extension of 7 years, with a cap and floor scheme in exchange for annual payments between 2013 and 2020. This provided a level of predictability and stability for wind farm operators, allowing them to secure financing and plan for the long-term.

Wind farms under the new regime (Commissioning operation date (COD) after 2006) are subject to a **FiT for 20 years from COD or 44 GWh per MW installed**. The tariff value is also indexed to the (CPI). Additionally, since 2019, **solar projects are awarded following a new auction system**. Solar PV projects awarded in the 2019 and 2020 auctions achieved record-low prices, providing a cost-effective way for Portugal to increase its renewable energy generation.

Participants in the auction can choose among different remuneration schemes: a fixed guaranteed tariff structure (that was transformed into a CfD in the 2020 auction), a market scheme where players bid for a contribution made to the National Electric System, and, since 2020, a new system consisting of a market scheme for power plants incorporating a storage system, in which participants bid the value of the capacity payment what they would like to receive.

### Spain

Under Royal Decree 413/2014, **wind energy projects receive a pool price and a premium** per MW in order to achieve a target return defined by regulation.

In 2019, the Spanish government introduced a **new support mechanism for wind farms** with the Royal Decree Law 17/2019. This law has set the target return (TRF) at 7.398% for wind farms prior to 2013 for the next two regulatory periods (until 2031) and 7.09% for new

installations for the current regulatory period (until 2026). The premium calculation is based on standard assets (standard load factor, production, and costs).

Since 2016, all the **new renewable capacity is allocated through competitive auctions**. In 2020, Royal Decree 960/2020 defined the framework for a new auction mechanism. In 2021, two auctions under the new scheme (set by RD 960/2020) were held: wind and onshore PV projects competed for 12-year fixed-price PPAs with certain exposure to market prices (5% for non-dispatchable and 25% for dispatchable RES). Participants were **awarded unidentified MWs but were requested to comply with stringent deadlines and submit a strategic plan**.

### France

Old wind farms in France receive **feed-in tariffs (FiTs) for 15 years**, with values depending on their COD and load factors achieved.

In December 2016, a transitory **CfD scheme was released** in which wind farms having **requested a PPA in 2016** would receive a **15-year CfD**, with the strike price being very similar to the previous FiT. This scheme was closed in December 2019.

From 2017 onwards, the French Government introduced a **new set of rules for supporting wind farms**:

- wind farms with 6 wind turbines or less, and with a maximum of 3MW per turbine generator, can request a 20-year CfD, which strike price ranges from 72€/MWh to 74€/MWh, depending on the turbine's diameter and may include a FiT reduction when a yearly generation cap is reached. Since April 2022, an additional tip height restriction (below 132m) has been implemented
- wind farms that are not eligible for the above scheme need to participate in competitive tenders in order to obtain a 20-year CfD
- w new set of rules ("Cahier des Charges") that will govern auctions (both technology-specific and neutral) from H2 2021 until 2026 were published in August 2021

### Romania

In Romania, wind assets (installed until 2013) **received 2 GW/MWh until 2017 and 1 GC/MWh after 2017 until completing 15 years**. Out of the 2 GC earned until March 2017, 1 was postponed and could only be recovered gradually from January 2018.

Similarly, solar assets received 6 GC/MWh for **15 years**. Out of the 6 GC earned until December 2020, 2 were postponed and may only be recovered gradually from 2025. The GCs are traded in the market under a cap and floor system (cap 35.0€ and floor 29.4€).

**Wind assets** (installed after 2013) **receive 1.5 GC/MWh until 2017 and 0.75 GC/MWh afterward until completing 15 years**. Solar PV facilities (installed after 2014) only receive 3 GC. Additionally, the GCs issued after April 2017 and the CGs postponed to trading from July 2013 will remain valid and may be traded until March 2032.

### Greece

In Greece, renewable energy projects are supported by a 20-year **feed-in premium (CfD) awarded through auctions**. In 2022, Greece launched a new support system, **based on two-way contract-for-difference (CfD) contracts**, awarded through auctions. Under this system, for both onshore wind and solar installations, support will be awarded through a joint competitive tendering procedure, with minimum reserves per technology of 30%.

### Hungary

In Hungary, **renewable energy projects before 2016** benefited from a **feed-in tariff** scheme ("KÁT system"). In 2016, the FiT was closed to new projects and replaced by **a new support system** ("MÉTAR system") consisting of **15-year Contracts-for-Difference (CfD)** granted through technology-neutral tenders.

### United Kingdom

The United Kingdom has supported the **development of renewables through a 15-year two-way Contracts-for-difference (CfD) scheme**, awarded through auctions, since 2013. This scheme has progressively replaced the former Green Certificate.

Under the **CfD scheme**, "**established technologies**" which include onshore wind and solar PV, **compete for budgets in each allocation round**. Less mature technologies have a separate "pot" of the allocated budget. For the first time, in the **2023 auction, offshore will compete with mature technologies**.

### Vietnam

In Vietnam, **onshore wind projects** were supported under **two different Feed-in-tariff (FiT) regimes**. Projects were granted a **20-year PPA with EVN**, the state utility. However, as the latest feed-in tariff was closed for new projects, a new support scheme is expected to be released soon, and most likely, competitive auctions will be introduced.

The FIT schemes are no longer available. However, a transitional scheme has been published for renewable projects that had a FiT signed but failed to commission on time. The transitional scheme would be subject to price negotiation with EVN.

### Other APAC

In the Asia Pacific region, many geographies enacted **Feed-in-tariff (FIT) schemes** in the early stages of renewables development, such as Japan, Taiwan, India, and Thailand among others. However, most of these geographies are now transitioning to other schemes, **mainly auction-based systems**, and are opening up to the **possibility of private corporate power purchase agreements (PPAs)**. For example, South Korea, Malaysia, and some states in Australia are now allowing for private PPAs.

Other geographies, such as India or South Korea, have opted for Green Certificate (GC) systems, although this system has not been widely used in the Asia Pacific region.

An increasing number of geographies in the region are setting auctions to remunerate renewable projects, such as Singapore, Japan, China, some states in Australia, Taiwan, India, and Malaysia.

### USA

The major update in 2022 was the passage of the **Inflation Reduction Act (IRA)** in August, the most robust federal commitment to clean energy to date. This new US law allocates **\$369 billion for energy and climate provisions**, over a 10-year period, **three times the current annual budget for energy**. The technology-neutral tax credits and other funding will push toward the energy transition, making it easier to deploy renewable energy, build out green technologies and subsidize consumer adoption from electric cars to heat pumps.

The IRA extended and expanded the clean energy tax credit system. The credit rate available for Production Tax Credit (PTC) and Investment Tax Credit (TC) can increase if labour,

domestic content, and location requirements are met. If all bonuses are met, the maximum PTC value is \$31.2 /MWh and the maximum ITC value is 60% of the capital expenditure.

One of the highlighted provisions of the IRA that is different from past energy legislation is the **domestic manufacturing credits**. These credits apply to OEMs manufacturing in the US and give a 10% bump to the ITC and PTC for projects that meet the domestic content requirement. This new proposed measure led to **several companies already publicly announcing intentions to bring solar manufacturing to the US**. Wood Mackenzie estimates an additional 15 GW of announced manufacturing capacity by 2023, while BloombergNEF tracked 28 GW of US-based module factory new announcements in 2022.

In April 2022, the **AD/CVD tariff investigation** was initiated, and it has been impacting the US solar developer's market ever since. On December 2, 2022, the **US Commerce Department has delivered a preliminary finding** that four of the eight major solar exporters it was investigating from Thailand, Malaysia, Cambodia, and Vietnam **had helped Chinese solar suppliers circumvent decade-old anti-dumping duties**. However, an executive order President Joe Biden issued in June 2022, which suspended any new tariffs resulting from Commerce's inquiry until June 6, 2024, should **blunt the ruling's impact on US solar development**.

Another key regulatory update of 2022 was the **enforcement of the Uyghur Forced Labour Protection Act (UFLPA)** on June 21<sup>st</sup>, imposing additional restrictions on solar modules made with polysilicon sourced from China's Xinjiang province. Its detentions began shortly thereafter, but even after several months, Customs and Border Protection (CBP) has not made major releases of equipment. The requirements to demonstrate compliance with the UFLPA are more rigorous than those for the Withhold Release Order (WRO) issued last fall.

## Canada

In November 2022, Canada's government proposed **new tax credits for investments made in clean technology and hydrogen** in its Fall Economic Statement, hoping to keep pace with the financial support provided to manufacturers in the US through the IRA. If enacted, **a tax credit of up to 30% of the capital cost of investments made in electricity generation systems as well as a tax credit of at least 40 % for the production of clean hydrogen**, would be made available from the first day of next year's federal budget and end in 2035 and 2030, respectively.

In Alberta, in October 2022, **Danielle Smith was elected the next premier**, after winning the leadership of the United Conservative Party. Part of her initial platform was the implementation of the Alberta Sovereignty Act, which would allow the province to ignore federal laws, such as the carbon tax. However, legal experts believed the Act, as proposed, had no constitutional grounds, which is likely why days after being elected she de-fanged it. While the current regulatory construct in Albert strongly supports renewables, **this act and Smith's hostile attitude towards renewable energy brings an uncertain direction for Carbon Policy & Net-Zero in this region**.

## Mexico

**In April 2022, the constitutional reform to the power sector was rejected by the Mexican Congress**. This proposal had been presented on October 2021 and would have granted CFE the monopoly in the electric energy value chain, taking over the regulatory activities of the industry, establishing tariffs, operating the electric dispatch, and executing the energy transition. The independent regulator of the energy sector, CRE, would have been eliminated, and the State-owned company would have acquired constitutional autonomy.

There were also updates on the **2021 Modifications to the Electricity Industry Law (LIE)**, which proposed reforms that would negatively impact the economic dispatch logic, cancelling the **Clean Energy Certificates** as well as all **generation permits and Purchase Power Agreements (PPA) for private market participants**. In April 2022, the Mexican Supreme court declared Constitutional the modifications to the Electricity Industry Law (LIE), but it also allowed legal procedures against its application. Later, in July 2022 **a federal judge granted an injunction with general effects against the LIE modification implying a return to the legal structure** before the modification for all market participants.

## Brazil

Old wind farms in Brazil receive support under a feed-in program known as "PROINFA". However, since 2008, the Brazilian government has implemented a new mechanism for supporting the development of wind energy through competitive auctions. Under this mechanism, 20-year Power Purchase Agreements (PPAs) are awarded to the winning projects. Additionally, electricity may also be sold under private PPAs in Brazil.

The non-refund for solar generation curtailment caused by electrical unavailability has been an issue for entrepreneurs in Brazil, but in 2022 the National Electrical Energy Agency (ANEEL) published transition rules to calculate the **compensation for the solar plants**

**constrained-off with regulated contracts.** ANEEL launched the Public Consultation nº 48/2022 to discuss the regulation for this compensation including solar plants with bilateral contracts.

Considering the **end of tariffs' discounts for solar and wind power plants** established by Law 14.300/2021, the Energy Research Office – EPE and the Ministry of Mines and Energy – MME released a Public Consultation to discuss the proposal for **guidelines establishing environmental benefits for the power sector**, including the creation of a **market for carbon credits**. The outcome of the Public Consultation has not yet been published.

### Colombia

In Colombia, wind farms are awarded **15-year contracts through competitive pay-as-bid auctions**. These contracts are signed with distribution companies, which guarantees the purchase of the energy produced by the wind farm.

Additionally, Colombian wind farms must secure **reliability charge contracts**, which provide a **monthly payment in exchange for having part of their capacity available** when the system is under tight supply conditions.

### Chile

In Chile, the government has implemented a **system of technology-neutral auctions** to support the **development of renewable and non-renewable energy projects**. These auctions award **15-year PPAs** with distribution companies.

Additionally, large non-regulated customers can also enter into PPAs directly with generators or organize a public auction.

## 3.1.5. Brazil

### 3.1.5.1. Regulatory Framework

Regarding the **power market opening**, the Minister of Mines and Energy (MME) launched a Public Consultation to discuss the liberalization for consumers with less than 500kW load and voltage levels equal to or greater than 2.3kV, from January 2024, represented by retailers. Another Public Consultation was launched to discuss an Ordinance draft proposing the liberalization, in which low voltage consumers could choose their energy seller from January 2026 onwards represented by retailers (Residential and Rural Consumers Class only from 2028). The Ordinance for low voltage consumers' market opening has not been published yet.

In 2022, an ordinary review **of the physical guarantee (GF) of hydroelectric power plants** was made, adjusting the GF for 2023. In this process, 4 of 5 EDP's hydro plants were eligible for the review. After the end of this process, some companies positioned themselves against the critical period<sup>5</sup> used in the GF's calculation. These companies took legal action, requesting MME a new calculation for their power plants using the critical period updated. If this legal action succeeds, it may worsen the GSF<sup>6</sup>, negatively impacting all power plants participants of the energy reallocation mechanism (MRE).

A regulatory framework was created for the development of **Distributed Generation (DG)** in Brazil. In summary, a transition period was established for the charge of levies over energy injected in the grid, signalling legal security and regulatory stability to this kind of investments, thus incentivizing clean energies. The main topics of this Law were:

- existing installations (current model up to 2045): Mini and micro-generators already established will only pay a component of the tariff over the difference, if positive, between total consumption and energy production injected in the distribution grid, up to 2045. The waiver will also apply to new investments if access to the distributor is requested within two months after the Law's publication. Only mini and micro-generators that require access to the grid until January 6<sup>th</sup>, 2023, shall benefit from the levies
- new installations (Tariff Transition): the Law created a transition period, of six to eight years, for the payment of distribution charges, with a gradual percentual increase up to 2028. The difference will be borne by distribution companies through CDE.

<sup>5</sup>Period of time under which the system supply goes from maximum to minimum storage, without intermediate refill, respecting some established tolerances. The critical period in hydrology is one element taken into consideration within the calculation of physical guarantees.

<sup>6</sup>Generation Scaling Factor

On June 27, 2022, was determined the allocation, in favour of consumers, of the amounts related to the exclusion of ICMS<sup>7</sup> of the database of the PIS/Pasep/Cofins<sup>8</sup>. This topic was object of several lawsuits. The Law established that the allocation of referred values should be made through the tariff processes of distribution utilities, as forecast and availability of credits by the Federal Revenue Service of Brazil.

Later in the year it was determined that **transmission concessions** will be auctioned at the end of the contractual term, with the possibility of renewal only as an exception (unfeasibility of bidding or in case of any prejudice for the public interest). This Decree was preceded by a Public Consultation opened by the MME in which EDP included some contributions.

Between 2024 and 2032, twenty-four transmission concession agreements will expire. It is worth noting that EDP's first transmission contract expires in January 2043.

Given that 2021 was the year with the worst water shortage in 91 years, the House of Exceptional Rules for Hydro management (CREG) decided to put in motion a simplified auction, as an exceptional measure to ensure a fast thermal energy supply between 2022 and 2025. The **Simplified Competitive Procedure (PCS)** was held on October 25<sup>th</sup>, 2021. However, the hydrologic situation was much better than expected at the beginning of 2022, making it doubtful to dispatch the power plants that bid in PCS, since these contracts have, on average, much higher prices, overcharging the consumers. Furthermore, these contracts have a clause establishing the contract termination if the projects didn't initiate the operation until May 1<sup>st</sup>, 2022, which was the case for the greatest part of the winning projects. MME released a Public Consultation proposing a friendly termination of the PCS contracts for those who have not violated clauses that imply contract termination, without charging fines and penalties, and for those who have violated those clauses, the strict application of contractual clauses. In December 20<sup>th</sup> 2022 was published the friendly termination guidelines.

<sup>7</sup>ICMS – Brazilian tax on the circulation of goods and provision of services.

<sup>8</sup>PIS: Program of Social Integration; COFINS: Contribution for the Financing of Social Security

## 3.2. Risk management in the year

The risk management at EDP group looks for acting in an integrated way across five fundamental pillars:

	Recurrent Activities	Developments In 2022	Priorities for 2023
In-depth knowledge about key sources of risk exposure	Mapping of key risks (and representation in a structured taxonomy). Quantitative analysis of exposures (based on average and maximum loss). Presence in national and international forums on risk management.	Development of the risk map with the main risks for 2023 and the Business Plan horizon. Identification of the main emerging risks for the EDP group in the next ten years. Development of the climate risk assessment. In-depth analysis of management and exposure to supply chain risks, exposure to inflation risk and electric mobility. Creation of the ESG risk taxonomy and updating of the EDP group's risk taxonomy.	Updating of the risk map exercise for 2023 throughout the year; development of the risk map with the main risks for 2024. Updating the annual climate risk assessment exercise. Deepening of knowledge about the main IT/OT risks. Continued integration of ESG risks in the EDP group risk management framework.
Definition of management strategy	Support for explanation and reflection on risk-return trade-offs (and risk appetite) in the main management decisions. Periodic updating of the risk appetite statement, formalized and disclosed in the Annual Report.	Strengthening the integrated management of counterparty risks, namely by revising quantification methodologies, exposure limits and mitigation instruments. Assessment of the maturity of the corporate risk management structure, and definition and implementation of a roadmap for the evolution of maturity.	Alignment of the EDP group's Risk Appetite Statement with the new Business Plan. Implementation of counterparty risk concepts and practices aligned between group entities, and centralization of risk metrics. Implementation of the Corporate Risk Management Roadmap.
Active participation of risk in key decisions and management processes	Risk advice/ support for the Business Plan and Budget exercises. Support for investment decisions (incl. participation in Investment Committee). Support the definition of coverage strategies for key exposures. Analysis and advice on topics with possible impact in the risk profile of the group. Follow-up and control of key exposures (through periodical reports at group level and for the most relevant BUs). Periodical Risk Committees (for debate of key sources of risk exposure and treatment measures).	Analysis of the EDP group's risk profile in relation to different asset portfolios. Analysis of the vertical integration of the generation and retail businesses with a view to risk mitigation. Active participation providing advice for the evaluation of EDP group investments.	Strategic Risk Reflection for the EDP group Business Plan.
Formalization of risk governance model	Establishment of policy and principles for risk management at EDP group.	Clarification of the responsibilities of the EDP group's risk-officers, strengthening of governance tools relevant to risk management, namely the local Risk Committees (at the level of the Business Units and Platforms), review of governance models and creation of new risk areas in some BUs.	Updating the EDP group's corporate risk management policy. Continued support for the dynamization of the risk-officers network and the maturing of the risk function (in the BUs with more recent risk governance models).

	Recurrent Activities	Developments In 2022	Priorities for 2023
<p>Promotion of a solid risk culture, transversal to the organization</p>		<p>Continuous dissemination of the risk governance model, and integration of the corporate risk structure with the risk officers of the various BUs, providing visibility on the main risk issues to top management.</p>	<p>Definition of policy and practices supporting the management of operational risk.</p>
	<p>Carrying out a wide range of awareness initiatives, adapted to the different target audiences:</p> <ul style="list-style-type: none"> <li>• Reflection sessions for top management;</li> <li>• Courses at EDP University for senior managers and middle management;</li> <li>• Specialized courses for all employees (e.g., ethics, health and safety, cyber-security).</li> </ul>	<p>Development of several sessions dedicated to risk:</p> <ul style="list-style-type: none"> <li>• Top management (executive and non-executive): three Risk Committees dedicated to the analysis of the main risk issues with the executive top management; participation in four sessions of the Financial Matters Committee, in the meeting of the Audit Committees and two plenary meetings with the General and Supervisory Board;</li> <li>• Risk-officers meeting: holding a session with the group's risk-officers network to share best practices;</li> <li>• Creation of a platform/ tool for sharing risk management information between the second line of defense ("EDP ERM Repository").</li> </ul>	<p>Consolidation of the program to strengthen the risk culture.</p> <p>Dynamization of the program for the EDP group's risk-officers network (including Risk-Officers Meeting).</p>

## 3.3. Business area analysis

### 3.3.1. Renewables

#### Financial Analysis

##### EBITDA Renewables

€2,528M

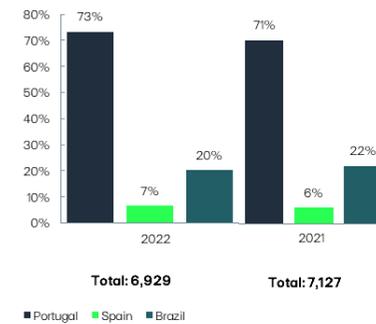
10% vs. 2021

- Renewables EBITDA (wind, solar and hydro) increased 10% vs. 2021 to 2,528 million euros**, supported by:
  - Wind and solar EBITDA increased to 2,157 million euros in December 2022 reflecting: (i) the benefits from portfolio expansion (average MWs installed +9% vs 2021), (ii) higher average selling price (+21% vs 2021), (iii) recovery of wind resources (+3p.p. vs 2021), namely in North America, (iv) exchange rate tailwind, namely USD and BRL (+89 million euros vs 2021), (v) and last year's Polar Vortex in February in US, most significantly affecting the Ercot/Texas assets (c.-35 million euros); more than offset the weak performance of Hydro Iberia mainly driven by poor hydro resources throughout the year coupled with pre-hedged volumes and increased electricity prices (-37% vs. long term average in Portugal in 2022 vs. -7% in 2021), despite some recovery in fourth quarter of 2022.
  - Hydro EBITDA decreased 163 million euros vs 2021 to 370 million euros.** In Iberia, EBITDA decrease 174 million euros impacted by the extreme dry weather in a context of very high wholesale electricity prices (total hydro production shortfall in 2022: 3.5 TWh normalized year vs. 3.3 TWh as of first nine months of 2022), despite the strong surge in hydro resources particularly in December (67% above long-term average). In Brazil, EBITDA increased +6% vs 2021 (+10 million euros) due to the recovery of hydro volumes which had a net positive impact coupled with 17% avg. BRL appreciation.

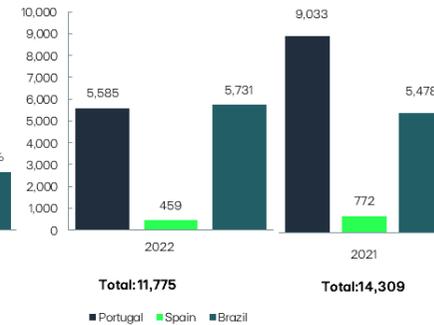
### Operational Analysis

#### Hydro Generation

INSTALLED CAPACITY HYDRO (MW)



NETELECTRICITY GENERATION HYDRO (GWH)



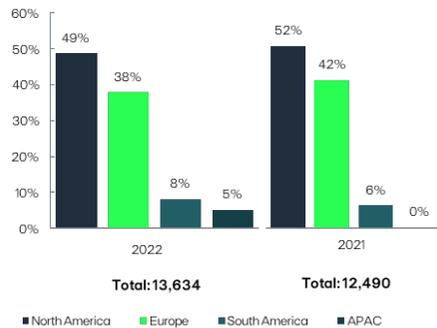
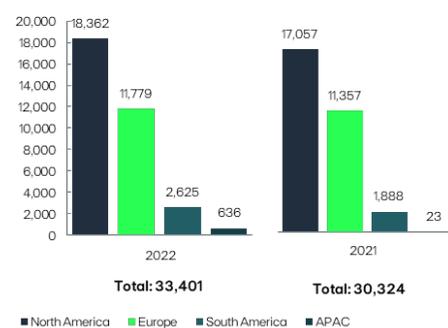
#### Iberia

- EDP's hydro production portfolio in the Iberia includes a total of 5.5GW of installed capacity, of which 45% includes pumping.
- Hydro generation in 2022 decreased 38% year on year (-3.8TWh), to 6.0TWh, reflecting the most extreme drought in the last 90 years in Iberia, with hydro generation coefficient of 0.63 in Portugal, compared with a coefficient of 0.93 in 2021.

#### Brazil

- The Hydro generation portfolio in Brazil includes a total of 1.4 GW of installed capacity which constitutes a decrease of 0.2 GW against 2021 due to the sale of Mascarenhas power plant (Energest). The portfolio also includes 0.6 GW of equity installed capacity.
- In 2022, following an improved hydrological scenario, the average GSF stayed at 86% (up from previous year's 77%). Consequently, the volume of energy production, considering the consolidated companies, was 5,731 GWh, an increase of 5% year-on-year.

## Wind and Solar Generation

**INSTALLED CAPACITY WIND & SOLAR (MW)**

**NETELECTRICITY GENERATION WIND & SOLAR (GWH)**


- The Group's wind and solar generation portfolio corresponds to a total of 14.7 GW of installed capacity, an increase of 1.2 GW (+9%) explained by the growth of the portfolio of EDP Renováveis ("EDPR") net of deconsolidations resulting from the asset rotation strategy.
- In 2022, EDPR added a total of 2,121 MW, including the acquisition of a solar portfolio in Vietnam (200 MW) and Sunseap's acquisition (+402 MW portfolio of solar and solar DG assets, in several countries in APAC).
- Regarding the EBITDA portfolio, EDPR added: i) 1,053 MW of onshore wind technology: 378 MW in Europe (145 MW in Spain, 100 MW Poland, 83 MW Italy, 33 MW France, 18 MW Portugal), 96 MW in Mexico and 580 MW in Brazil; ii) 597 MW of solar PV technology: 200 MW in the United States, 53 MW in Europe (36 MW Poland, 9 MW Spain, 8 MW Portugal) and 345 MW in APAC (340 MW Vietnam, 4 MW in Singapore, 1 MW Taiwan); iii) 455 MW of solar DG technology: 116 MW in the United States and 338 MW in APAC (225 MW Singapore, 44 MW China, 37 MW Vietnam, 31 MW Taiwan, 1 MW Thailand).
- Following the asset rotation strategy, EDPR concluded the following sales: 100% stake on 181 MW in Spain, 172 MW in Italy, 149 MW in Poland and 260 MW in Brazil wind onshore portfolios; and 200 MW of a Build and Transfer solar project in the United States.
- Regarding the equity portfolio, the variation was +15 MW on the back of Sunseap's acquisition (6 MW Japan, 5 MW Cambodia, 5 MW Malaysia).
- Wind and solar generation increased by 10% in 2022, reflecting the higher average installed capacity (+1 GW).
- At the end of 2022, EDPR had 4.0 GW of capacity under construction, of which 1.2 GW related to onshore wind, 2.4 GW solar PV and 0.4 GW offshore wind. Regarding onshore

wind, 188 MW were under construction in Europe (119 MW Italy, 22 MW Portugal, 20 MW Spain, 15 MW France, 12 MW Poland), 502 MW in North America (202 MW in the United States and 300 MW in Canada) and 504 MW in Colombia. Solar PV projects respect to 659 MW in Europe (193 MW in Italy, 184 MW in Poland, 170 MW in Portugal and 112 MW in Spain), 1,573 MW in the United States, and 126 MW in APAC (88 MW in Singapore, 26 MW in China, 6 MW Taiwan and 6 MW in Thailand). On wind offshore, 419 MW were under construction in the United Kingdom and 12 MW in France.

### Risk outlook

- Renewable generation volumes:** uncertainty regarding hydro generation levels, with high volatility, being 2022 an example of a year with very low production in the Iberian Peninsula; uncertainty regarding the remaining technologies with less annual volatility.
- Prices of PPAs:** rising trend of increase of capacity through auctions and directly by contracting corporate PPAs.
- Prices for generation to market:** increased price volatility in the energy market, including electricity prices, green certificates, and RECs (Renewable Energy Credits).
- Policy / regulatory support for renewables:** uncertainty regarding long-term regulatory frameworks (i.e., incentives, capacity, among others), as well as potential clawbacks to inframarginal technologies.
- Political/social risk in EDP geographies:** risk of political uncertainty and instability in EDP geographies, the most current example being Brazil, with the risk of social unrest increasing after the 2022 presidential elections.
- Counterparty:** possibility of counterparties defaulting on their obligations (i.e., energy sales contracts, equipment purchase contracts, among others).
- Interest rates and capital gains:** increased volatility of reference interest rates, impacting the expected profitability of new investments and impacting the lower-than-expected selling price of parks, leading to lower capital gains.
- FX:** potential evolution of key currencies leading to lower results in EUR.
- Construction and asset development:** delays in the allocation of construction permits and potential capex deviations and delays in the commissioning date, due to supply chain related constraints and cost increases.
- Asset operation and availability:** uncertainty regarding damage of assets and/ or loss of profit, risk of delays in maintenance and construction due to logistical and supply chain constraints.

**EBITDA Networks**

# €1,506M

**13% vs. 2021**

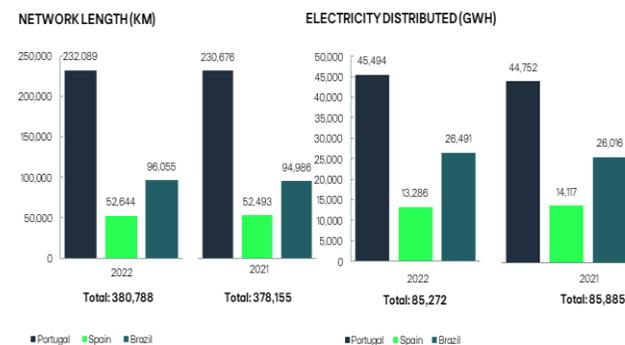
### 3.3.2. Networks

#### Financial Analysis

- EBITDA from networks increased 13% vs 2021 to 1,506 million euros**, mainly explained by: (i) 188 million euros increase in the Brazilian networks segment mainly reflecting the regulated revenues indexation to inflation (90 million euros), a stronger BRL (90 million euros) and a 32 million euros increase in the transmission's EBITDA from RAP indexation to inflation and new lines commissioned which more than offset the sale impact and gains associated with the asset rotation of the transmission lines in December of 2021 (37 million euros contribution in 2021 and 46 million euros gain). In Iberia, EBITDA was broadly stable compared to 2021 as the positive impact from higher Portuguese 10Y bond yields on the return on RAB and the benefits from integration of Viesgo were compensated by a normalization of OPEX, in Portugal, and "Lesividad" provision reversal, booked in 2021.

#### Operational Analysis

##### Distribution



#### Iberia

- The Distribution network in Iberia reached the length of 284,733 km in 2022 corresponding to a slight increase of 1% vs 2021.
- At the end of 2022, EDP reached 6.0 million smart meters installed in the entire distribution network in the Iberian Peninsula. Smart meters are aligned with the efficiency, digitalization and innovation strategies and are considered a strong bet in the Group, especially in Portugal where there was an increase of 15% against 2021.
- In 2022 the volume of electricity distributed in Iberia remained flat.
- The Installed Capacity Equivalent Interruption Time (ICEIT) in Portugal registered an increase vs 2021, reaching the value of 54 minutes, which is still below the regulator's benchmark. In Spain, the registered ICEIT value was of 18 minutes, a decrease from the previous year's value of 20 minutes.
- Regarding energy losses in the network, Portugal registered an increase in the indicator (measured based on energy output from the grid) which reached 8.74% in 2022 (+0.1pp vs 2021), remaining below the upper regulatory limit of 9.25%. In Spain (measured based on energy input into the grid), an increase to 4.8% was registered (+0.2pp vs 2021).

#### Brazil

- The Distribution network in Brazil reached the length of 96,055 km in 2022, corresponding to an increase of 1% vs 2021.
- In 2022, the volume of energy distributed increased 1.8%, (2.0% at EDP SP and 1.6% at EDP ES). This increase reflects the resumption of economic activity after the pandemic which still affected the initial months of 2021.
- The number of new customers increased 2.6% with free customers increasing by 14.5% (122 customers at EDP SP and 118 customers at EDP ES), due to the migration of captive customers to the free market.
- In both distributors, service quality indicators improved in comparison to 2021. At EDP SP and EDP ES, the Equivalent Duration of Interruption (DEC) was at 366 and 420 minutes respectively. As for the Equivalent Frequency of Interruption (FEC), it reached the value of 3.3 in both companies.
- As for energy losses in the network, both distribution companies showed improvements with EDP SP reaching a value of 7.9% (-0.4pp vs 2021) and EDP ES reaching 11.9% (-0.5pp vs 2021).

### Transmission Brazil

- During 2022, the acquisition of CELG-T (now “EDP Goiás”) was successfully concluded, and a new lot (Lot 2) was awarded to EDP after placing a winning bid at the auction.
- 2022 was also a year of great construction progress: the two lots that were in partial operation by the end of 2021, started fully operating in 2022. Additionally, of the three that were under construction and not yet operating, two of them started operations successfully.
- This way, by December 2022, 4 of the 5 transmission lots and EDP Goiás were in full operation (2,185 km), 1 lot was still under development (350 km) and 1 lot yet to start construction (188 km).

### Risk Outlook

- **Market price:** increased price volatility in the energy market, including the price of electricity, with impact across the business in Generation, Networks (in Brazil) and Retail.
- **Low voltage network concessions (Portugal):** uncertainty as to the timing of the launch of the tender and its terms, with possible fragmentation of the activity and increased costs for the system.
- **Political/social risk:** risk of political uncertainty and instability in EDP geographies, the most current example being Brazil, with the risk of social unrest increasing after the 2022 presidential elections.
- **Counterparty:** possibility of default or failure of counterparties to meet their obligations, leading to possible delays, penalties or lost revenue.
- **Construction and asset development:** delays in the allocation of construction permits and potential capex deviations and delays in the commissioning date due to supply chain related constraints and cost increases.
- **Asset operation and availability:** uncertainty regarding damage of assets; risk of delays in maintenance and construction due to logistical and supply chain constraints.
- **Business continuity:** impact of extreme events with possible materialization in a prolonged interruption of operations.

### EBITDA Client Solutions and Energy Management

€486M

297% vs. 2021

### 3.3.3 Client Solutions and Energy Management

#### Financial Analysis

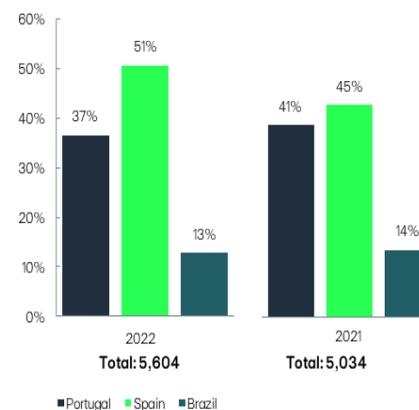
**EBITDA from Client solutions and Energy Management** (thermal generation, supply and energy management), increased to 486 million by:

- In Iberia, EBITDA increased significantly driven by: i) In Supply, a normalization of operating conditions vs 2021, despite seasonal effects of higher sourcing costs, ii) increase in thermal generation particularly in the first nine months of 2022 and iii) the positive impact of energy management results driven by a reduction in energy prices by the end of the year and adequate management of exposure vis-à-vis regulatory uncertainty and changes during the year.
- In Brazil, the segment performance benefited from: i) higher volume of electricity, ii) better optimization of the intermediation operation and iii) higher availability of Pecém thermal power plant.

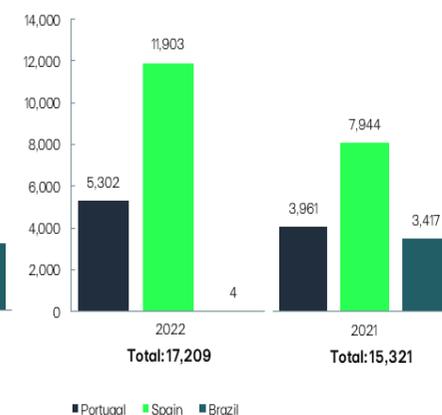
#### Operational Analysis

- Thermal Generation

INSTALLED CAPACITY THERMAL (MW)



NET GENERATION ELECTRICITY THERMAL (GWH)



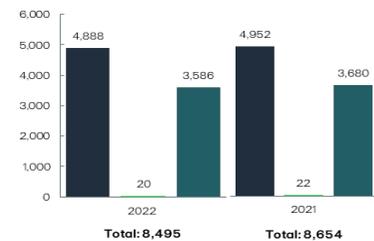
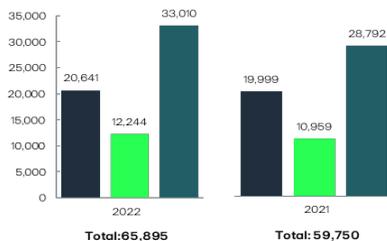
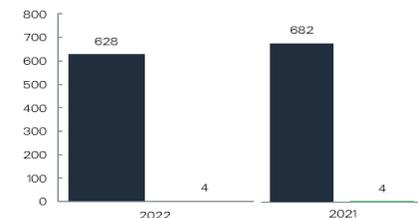
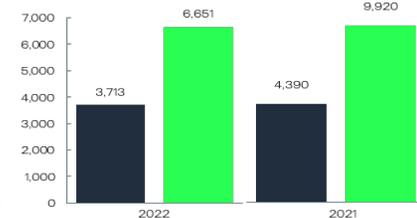
## Iberia

- The Iberian thermal generation portfolio has an installed capacity of 4.9 GW, with most of the capacity being CCGT (59% or 2.9 GW) and coal (37% or 1.8 GW). The remaining thermal capacity is divided between nuclear (0.2 GW), cogeneration and waste.
- Thermal generation increased 45% compared to 2021 (+5.3 TWh), to 17.2 TWh, reflecting the response of the impact of the drought in Iberia and the increase of electricity exports to France. Nuclear generation remained stable.

## Brazil

- In Brazil, EDP has 720 MW of installed thermal capacity corresponding to Pecém plant.
- In 2022, Pecém was not dispatched due to the improved hydrological scenario.
- Despite not being dispatched, Pecém's availability stayed at 97.5%.

## Supply

**ELECTRICITY CUSTOMERS ('000)**

**ELECTRICITY SUPPLIED (GWH)**

**GAS CUSTOMERS ('000)**

**GAS SUPPLIED (GWH)**


## Europe

- 2022 marked the most challenging year of the current century in terms of providing energy-related products and services. Wholesale energy and commodities prices soared during 2022 in response to gas supply shortage due to Ukraine-Russian conflict and sanctions taken by Western countries against Russian gas supply, which led to all-time high inflation levels in energy products and services.
- The already in place Energy Transition plans were fast paced worldwide with countries and companies committing to more ambitious Net Zero targets, which resulted in higher prices and supply chain disruptions. These decisions affected directly prices and supply of solar panels and Electric Charges to face a higher demand of customers looking for green solutions and energy independence.
- The high uncertainty and price oscillations led clients to go back to the regulated business. In Portugal the regulated electricity business (operated by EDP under SU Electricidade brand) increased 5% vs 2021 in number of clients to 1 million, and 20% in electricity sold to 3 TWh.
- On the other hand, and in line with the regulated business exodus, EDP liberalized electricity business saw a 3% reduction in number of clients to 3.9 million, and an increase of volumes sold to 18 TWh, mainly due to the increase in large accounts consumptions vs a 2021 impacted by the pandemic and lockdowns. As a direct effect of the increase in gas products and the governmental incentive in the regulated business,
- the liberalized gas business lost competitiveness, and therefore EDP portfolio of gas customers in Portugal reduced by 15% to 550 thousand, and volumes decreased by 17% to 3.5 TWh.
- In Spain, EDP also registered an increase of 12% in electricity sold to 12 TWh, due to no pandemic restrictions and lockdowns, and a decrease of 14% in gas volume sold to 3.3 TWh.
- In the services sector, among the main traditional services, emphasis should be placed on "Funciona" portfolio, which grew by 11% to 600 thousand customers and "EDP Saúde", which registered a total number of 220 thousand customers in Portugal, 13% more than in 2021.
- Regarding the commitment and the focus on to new services more focused on efficiency and energy transition, emphasis is placed on solar DG and Electric Mobility. Even with the global supply chain disruption, EDP installed in Iberia 200 MWac, 2.4x more than 2021. In mobility, EDP installed 2.3 thousand chargers, both public and private.
- Following the acquisition of Enertel in 2021 (a solar DG company in Italy), in 2022 EDP reinforced the strategy of Solar DG geographical expansion with the acquisitions of Soon

Energy and Zielona, two Polish providers of Solar DG solutions. In Italy and Poland, EDP installed 32 MWac in 2022.

### Brazil

- Following the trends in Iberia, the volume of energy sold in 2022 increased by 8% to 15 TWh, with the increase coming from the liberalized B2B business. The regulated business increased 1% to 13.7 TWh.
- The focus on distributed generation is also a reality in Brazil, even though it was the geography most harmed by the supply chain disruptions and installations delayed, with solar DG installations dropping from 33 MWac to 9 MWac, although the delays are planned to be executed during 2023.

### Risk outlook

- **Market price:** increased price volatility in the energy market, including electricity prices, with impact across the business in Generation, Distribution (in Brazil) and Commercialization, as well as fuel prices with impact on the Energy Management activity.
- **Risk on thermal revenue:** possibility of a fall in thermal generation spreads.
- **Retail margin/market share:** uncertainty regarding the evolution of retail margin or loss of market share, marketing of new products and services and potential deviations in demand vs. energy previously contracted).
- **Political/social risk in EDP geographies:** risk of political uncertainty and instability in EDP geographies, the most current example being Brazil, with the risk of social unrest increasing after the 2022 presidential elections.
- **Counterparty:** possibility of counterparties defaulting on their obligations (i.e., energy sales contracts, energy purchase contracts, equipment purchase contracts, among others).
- **Operation and availability of assets:** uncertainty regarding damage to assets and/or loss of profits, risk of delays in maintenance and construction due to logistical and supply chain constraints.

## 3.4. Group's financial analysis

### 3.4.1. Income Statement

EURO MILLION	2022	2021	Δ %	Δ ABS.
Gross Profit	6,121	4,835	27%	+1,286
Operating Costs	1,874	1,555	21%	+319
Other Revenues/(Costs)	38	335	-89%	-298
Joint Ventures and Associates	239	108	121%	+131
EBITDA	4,524	3,723	22%	+800
EBIT	2,530	1,931	31%	+599
Net Profit for the period	1,170	1,105	6%	+65
Net Profit attributable to EDP shareholders	679	657	3%	+22
Non-controlling interests	491	448	10%	+43

#### EBITDA

# €4,524M

22% vs. 2021

- **EBITDA amounted to 4,524 million euros in 2022**, a 22% increase vs. 2021. Excluding non-recurrent effects Recurrent EBITDA increased 21% to 4,522 million euros, benefitting from a strong growth of EDP Renováveis, Client Solutions and Energy Management recovery in Iberia and electricity networks in Brazil.
- In **Renewables**, 10% increase vs. 2021 to 2,528 million euros. This performance was mainly driven by a strong performance of EDPR, namely due to an increase in wind resources (+3 p.p. vs 2021), higher average installed capacity (+9%vs 2021), positive ForEx impact (+89 million euros) and higher average selling prices; on the other hand, Hydro Iberia EBITDA declined 49% vs. 2021 impacted by the driest year in a century in a context of extreme high prices where expected production was 100% hedged.
- In **Networks**, 13% increase to 1,506 million euros. Excluding one-off impacts (1 million euros in 2022 vs. 13 million euros in 2021), Recurring EBITDA increased 12% vs 2021 (+164 million euros), mainly driven by the 44% increase in networks EBITDA in Brazil, reflecting the update of revenues regulated to inflation, the start of four transmission lines, as well as the positive FX impact in the period.

**EBITDA**

# €4,524M

**22% vs. 2021**

- Client Solutions and Energy Management amounted to 486 million euros in 2022.** Excluding the one-off impacts (-6 million euros vs 2021, from net gain of 4 million euros in 2021 to net loss of 2 million euros in 2022), Recurring EBITDA increased 370 million euros vs 2021 to 488 million euros. The increase in thermal generation, as well as the positive results from energy management in the fourth quarter of 2022, and the supply normalization, more than compensated the negative impact from the largest drought in decades, that generated a -3.5 TWh deviation in hydro production vs. average, in a context of high wholesale energy prices.
- Opex costs** increased 21% vs. 2021 to 1,874 million euros. The tight cost control and successful implementation of ongoing saving programs, mainly in Iberia, were offset by the requirements needed to accelerate growth in renewables and EDP Góias integration.
- Other net operating revenues/(costs)** decreased by 298 million euros, to a net operating revenue of 38 million euros, mainly on the lower gains from the asset rotation and higher regulatory costs in Europe.
- EBIT increased 31% vs. 2021, to 2,530 million euros**, negatively impacted by the increase of amortizations mainly driven by portfolio expansion, impairments mainly related with thermal assets in Iberia and Brazil (335 million euros) and ForEx.

**EBIT**

# €2,530M

**31% vs. 2021**
**NET PROFIT  
Attributable to  
EDP Shareholders**

# €679M

**3% vs. 2021**

- Net Financial results** amounted to -910 million euros in 2022 penalized by -58 million of euros of ForEx. Net financial interests increased 32% to -726 million of euros in 2022, driven by ForEx and higher cost of debt indexed to inflation in Brazil. Average cost of debt increased to 4.4%, penalized by all currencies but mainly due to the increase in inflation in Brazil that more than doubled the cost of debt of EDP in that currency. Excluding BRL cost of debt increased ~20 bps from 2.5% to 2.7%.
- Income taxes** amounted to 398 million euros, representing an effective tax rate of 25% in 2022.
- Non-controlling interests** increased 10% to 491 million euros in 2022, including (i) 362 million euros related to EDPR, mainly explained by a better performance in projects with minorities and higher free float vs. 2021; (ii) 84 million euros related to EDP Brasil on the back of the strong growth in net profit and the impact of BRL, partly mitigated by an increase of EDP stake in EDP Brasil after buyback program; and (iii) 45 million euros mainly attributable to the 25% minority stake at the electricity networks business in Spain.
- Net profit attributable to EDP shareholders reached 679 million euros in 2022** (+3% vs. 2021). This result was penalized by non-recurrent effect of -€192m in 2022, including impairment of thermal in Brazil and Iberia, recurring net profit increase 6%, to 871 million euros in 2022, driven by strong performance of networks in Brazil and renewables in Europe and a better performance of Client Solution and Energy Management despite the adverse energy and weather context in Iberia. These factors were compensated by the increase in interest costs.

**EBIT**

# €2,530M

**31% vs. 2021**

**GROSS INVESTMENT**

# €6,673M

71% vs. 2021

### 3.4.2. Investment Activity

Expansion Investments (including Expansion Capex and Financial Investments), 6,018 million euros (+80% vs. 2021)

- **Expansion Investment represented 90% of total investment** and mostly dedicated to new renewables capacity and electricity networks (~96%).
- **Expansion Investment in new wind & solar capacity** amounted to 5.2 billion (+77% vs. 2021), distributed by North America (38%), Europe (26%), APAC (22%) and South America (14%).
- **In Brazil**, in local currency, Expansion Capex in transmission investments doubled while capex in distribution increased by 46% vs 2021, namely due to the acquisition of new transmission lines and grid expansion and improving quality of service in distribution.

Maintenance Capex, €656M (+15% vs. 2021)

- **Maintenance capex amounted to 656 million euros in 2022** and was mostly absorbed by networks in Iberia and Brazil (76 % of total).

**ASSET ROTATION**

# €1,967M

The execution of our asset rotation strategy was strong during 2022:

In 2022 we announced and closed several asset rotation deals, of which it's worth highlighting: (i) a 181 MW wind portfolio in Spain (233 Million euros), (ii) a 149 MW wind portfolio in Poland (315 Million euros), (iii) a 172 MW wind portfolio in Italy (382 Million euros), (iv) the Build & Transfer Agreement of EDPR's 200 MW Indiana Crossroads Solar in the US and (147 Million euros), and (v) a 260 MW wind portfolio in Brazil (133 Million euros). The remaining asset rotation proceeds resulted from transactions announced in 2021, which only were cashed-in in 2022.

**NET DEBT**

# €13,223M

14% vs. 2021

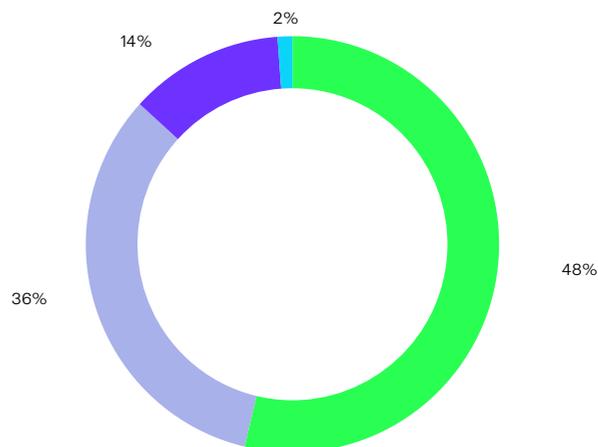
### 3.4.3. Net Debt

As of December 2022, net debt stood at 13.2 billion euros, 14% higher vs. December 2021, impacted by (i) a robust performance of the organic cash flow (2.6 billion euros); (ii) proceeds from asset rotations in the period (2 billion euros). This decrease was partly mitigated by our core expansion activity with the significant step up of our expansion investment (6.0 billion euros, including financial investments) and the annual dividend payment (753 million of euros).

### 3.4.4. Funding Policy

- Centralized policy for financial debt at EDP – Energias de Portugal, S.A. and EDP Finance BV (approximately 81% of gross debt), while the remainder is divided between EDP Brasil (ring fenced vs. the rest of the Group), project finance at some EDP Renewables subsidiaries.
- In 2022, the average cost of debt stood at 4.4% (+90 basis points vs. 2021), mainly driven by the cost and relative weight increase of Brazilian Real in our gross debt.
- Fixed interest rate debt represents 75% of overall gross financial debt.

Gross Debt by Currency in Dec-22 <sup>(1)</sup>



■ Euro ■ Dollar ■ Real ■ Other

<sup>1)</sup> After FX-derivatives

### Bond Issues

All EDP issuances in 2022 were senior green notes, detailed as follow:

ISIN CODE	CURRENCY	AMOUNT	COUPON	MATURITY
XS2459544339	EUR	1,250,000,000	1.875%	21/09/2029
XS2542914986	EUR	500,000,000	3.875%	11/03/2030
XS2532478190	USD	500,000,000	6.300%	11/03/2027

### Rating

Regarding EDP's rating, throughout the second half of 2022, EDP maintained its rating, namely S&P's rating of BBB with stable outlook, Moody's rating of Baa3 with positive outlook and Fitch's rating of BBB with stable outlook.

	LONG-TERM	SHORT-TERM	OUTLOOK
S&P	BBB	A-2	Stable
Moody's	Baa3	P3	Positive
Fitch	BBB	F2	Stable

## 3.5. Share performance

### 3.5.1. Share

EDP market price was 4.656€ per share at the end of 2022, 3.8% below the 4.838€ per share at the end of 2021. Based on the payment of dividends to shareholders held on April 6<sup>th</sup>, 2022 (0.19€ per share), which implied a dividend yield of 3.9% (considering 2021's year-end closing price), in 2022 EDP generated a total shareholder return (TSR) of 0.5%, assuming automatic reinvestment of the dividends received into new shares.

### 3.5.2. Market Performance

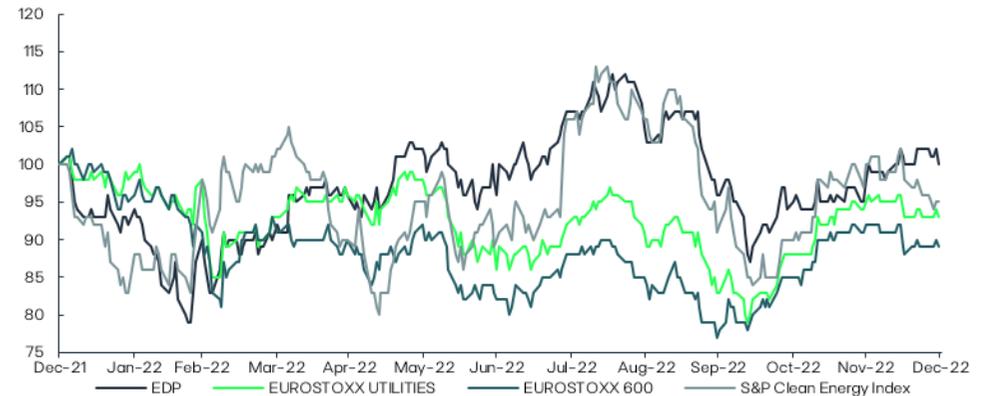
**In 2022, European Equities benchmark index, Eurostoxx 600, yielded a TSR of -11.4%** significantly impacted by geo-political tensions that challenged the trend of globalization, of which the most relevant was the invasion of Ukraine which triggered an exceptional energy and food crisis across most of the world. In most developed economies, a strong surge in inflation led the central banks to sharply increase the cost of money, pressuring the assets' real value.

**The Utilities Sector outperformed the Eurostoxx600 and exhibited total return of -7.1% return in 2022** as investors sought more defensive stocks during the market downturn and the setup of the European recovery plan and approval of the inflation reduction act (IRA) in the USA which is expected to strongly promote decarbonizing the economies and securing energy independence improved the renewables outlook. On the other hand, performance was affected by the increase of the interest rates as central banks tried to curb inflation. Furthermore, some energy companies were penalized by increasing energy sourcing costs caused by volatile energy markets and political intervention.

**In 2022, the global benchmark for clean energy-related businesses, S&P Global Clean Energy Index, registered a TSR of -4.7%**, mainly driven by easing of the global congestions in supply chains and improvement of the outlook for renewables development, namely in the EU and in the USA. These factors were offset by concerns on the sustainability of renewables' projects internal rates of return as the cost of capital increased due to higher interest rate.

**EDP's TSR of +0.5% in 2022 outperformed both European and Utilities benchmark Indexes**, benefiting from renewables stronger growth prospects, namely in Europe and in the US, relative regulatory stability in Portugal and recovery of the hydro conditions towards the

TOTAL SHAREHOLDER RETURN



end of the year. The performance was nonetheless hampered by concerns about the cost of debt, risk of regulatory intervention in Europe and volatile energy management results at EDP level.

### 3.5.3. Factors influencing the change in EDP share price

The performance of EDP's share price in 2022 was impacted by several factors. On one hand, the improvement of the macro situation on the back of the end of Covid-19's lockdowns led to a recovery of electricity demand as economies re-opened which caught supply chains unprepared. On the other hand, the execution and strong delivery of EDP's Strategic Plan growth targets in the first year of this plan.

Internal factors	Accelerated Sustainable Growth	Focused Growth 	<ul style="list-style-type: none"> <li>In renewables, the addition of 2.2 GW during 2022 and securing 11.2 GW of long-term contracts for new renewables capacity, representing 57% of our target for 2021-2025.</li> <li>In renewables, the strengthened position in the global renewables landscape, with the establishment of a renewable growth platform in APAC, through the completion of the Acquisition of Sunsecap, and reinforcement of EDP's presence in Europe, through the acquisition of Kronos' portfolio of developing solar projects, in Germany.</li> <li>In networks in Brazil, the award of 188 KM electricity transmission project.</li> </ul>	Debt Management 	<ul style="list-style-type: none"> <li>Issuance of three green hybrid bond of €1,250m, €500m and USD500m in Mar-22 and two in Oct-22 at 1.90%, 6.33% and 3.93% yield, enabling a reduction of average financing costs. A €858m matured at Jan-22.</li> <li>Debt ratings remained the same for three major rating companies, with Moody's keeping positive outlook and Fitch and S&amp;P with stable outlooks.</li> </ul>		
		Portfolio Optimization 	<ul style="list-style-type: none"> <li>€3.4 billion of secured proceeds, corresponding to 43% of the 2021-2025 targets.</li> <li>Portfolio reshaping in Brazil: Disposals of Mascarenhas HPP that has a 198 MW installed capacity, resulting in a net amount of R\$ 708 million. This transaction reduces the weight of conventional generation and namely hydro exposure in Brazil, in line with the 2021-2025 business plan targets</li> </ul>		Future Proof Organization	Efficiency 	<ul style="list-style-type: none"> <li>5% OPEX recurring increase on a like-for-like basis, excluding growth in 2022.</li> </ul>
		Investment Strategy & Criteria 	<ul style="list-style-type: none"> <li>Roughly 91% of secured capacity with fully contracted or higher Capex already embedded in Investment decision.</li> <li>Strong investment performance with IRR/WACC of ~1.4x, with an implied IRR to WACC spread of 300 bps.</li> </ul>		ESG Excellence		<ul style="list-style-type: none"> <li>Reassured presence in S&amp;P Global Clean Energy Index and leadership among electric utilities on the Dow Jones Sustainability Index after 2022's review.</li> <li>Maintaining large share of renewable generation despite adverse hydro conditions, and improved alignment with EU taxonomy.</li> </ul>
			Regulatory Environment		European Union 	Russia-Ukraine conflict 	<ul style="list-style-type: none"> <li>The military conflict between Russia and Ukraine, negatively impacted financial markets, prices of commodities, supply chain and compliance.</li> <li>Higher visibility on member states' overall energy policy, focused on renewables on the back of the Repower EU measures to foster renewables growth already being developed in some member states.</li> <li>RES energy target for 2030 doubled to 45% in REPowerEUPlan</li> </ul>

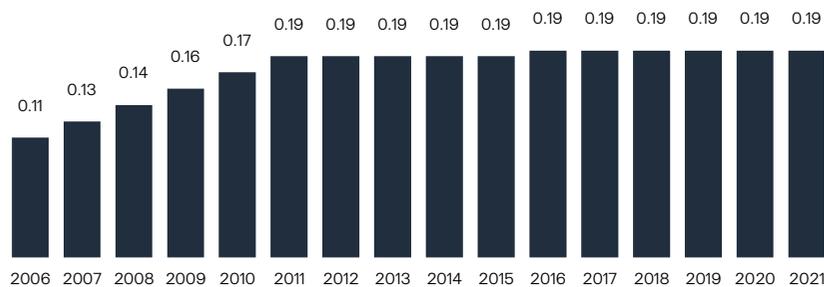
	USA		<ul style="list-style-type: none"> <li>Inflation Reduction Act (IRA) represents unprecedented US commitment on climate, aiming to reduce carbon emissions by more than 40% in by 2030</li> </ul>
	Spain		<ul style="list-style-type: none"> <li>Increased news flow about political intervention due to the surge of energy prices.</li> </ul>
	Portugal		<p>Stable Portuguese regulatory period, with maintenance end-user regulated electricity tariff, through a 420% decline in grid access tariffs.</p> <ul style="list-style-type: none"> <li>Enhanced visibility on a 35% decline of the Portuguese Electricity System Debt, over the next year.</li> </ul>
Supply Chain			<ul style="list-style-type: none"> <li>Bottlenecks throughout global supply chains have been responsible for strong inflationary pressures and delays.</li> </ul>
Energy Markets	CO <sub>2</sub>		<ul style="list-style-type: none"> <li>The increase in the price of CO<sub>2</sub> in the European market has been supportive to electricity wholesale prices, penalizing institutions with open natural short positions on energy and favoring renewable players.</li> </ul>
	Gas Prices		<ul style="list-style-type: none"> <li>Sharp increase in gas prices contributed positively for the electricity wholesale prices in Europe, penalizing institutions with open natural short positions on energy.</li> </ul>
ESG Trends			<ul style="list-style-type: none"> <li>The rise of sustainable investing has increased the focus in companies that comply with ESG factors (Environmental, Social and Governance), like EDP.</li> </ul>

### 3.5.4. Dividend

In the Strategic Update held virtually on February 25<sup>th</sup>, 2021, EDP reiterated its dividend policy, comprising a dividend floor of 0.19€ per share on the dividend going forward, which we delivered in 2022. The announced dividend policy dictates that the dividend should continue to evolve in tandem to earnings per share, within a payout ratio interval of 75% to 85%.

5,0%	6,8%	7,7%	8,1%	6,9%	5,7%	5,6%	6,6%	6,6%	6,2%	4,9%	3,7%	4,1%	Dividend yield
55%	58%	60%	67%	67%	65%	74%	72%	62%	87%	81%	90%	91%	Payout

#### Dividends per Share (€)



Accordingly, for the 2021 financial year the Executive Board of Directors of EDP submitted to the approval of the General Shareholders' Meeting of April 6<sup>th</sup>, 2022, a proposal for the allocation of 2021 profits, including 753 million euros to be distributed to shareholders in the form of dividends. The proposal was approved at the General Meeting and a gross dividend of 0.19€ per share was paid on the April 26<sup>th</sup>, 2022.

(1) 2018 Payout based on Net Profit excluding regulatory impacts (-€208m), impairments at coal plants in Iberia (-€21m), restructuring costs (-€21m), net gain on disposals (+€64m), debt prepayment fees and others (-€26m) and the extraordinary contribution for the energy sector (-€65m).

(2) 2019 Payout based on Net Profit excluding impairments (-€224m), the provision for Fridão (-€59m), provision reversal at S. Manoel and the gain on the revaluation of Feedzai (+€28m), restructuring costs (-€8m), provision for the sharing of some gains with customers and gains following the change in medical plan of employees in Brazil (-€12m) and the extraordinary contribution for the energy sector (-€66m).

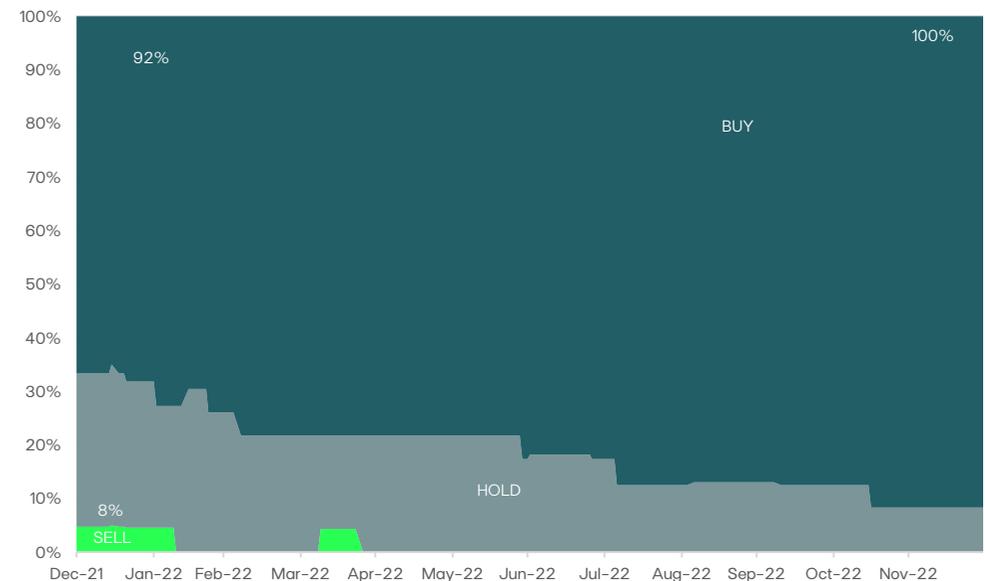
(3) 2020 Payout based on Net Profit excluding the net gain from disposals and investments (+€325m), impairments (-€252m, mainly thermal in Iberia), liability management costs (-€55m), regulation related items and other (-€18m) and HR restructuring costs (-€38m).

(4) 2021 Payout based on Net Profit excluding the adjustment of net gain and net profit contribution from disposals (-€384m), (ii) impairments and provisions (€269m, mainly thermal in Iberia), (iii) liability management costs (€55m), (iv) regulation related items and other (€17m) and (v) restructuring costs (€22m).

### 3.5.5. Analyst's Recommendations

There are currently 23 Equity sell side analysts with active coverage of EDP. During 2022, the weight of Buy recommendations by equity sell side analysts improved significantly to 100%, representing 8 p.p increase, due to an improvement in outlook for renewable players, cheap exposure to renewables/under-valued Iberian assets, hydro recovery, and regulatory stability in Portugal. Hold recommendations decreased from 8% to 0%, whereas Sell recommendations remain 0%. The average Price Target as of December 31<sup>st</sup>, 2022, was €4.656 per share, according to Bloomberg, implying a 22% upside potential.

#### Analysts' Recommendations

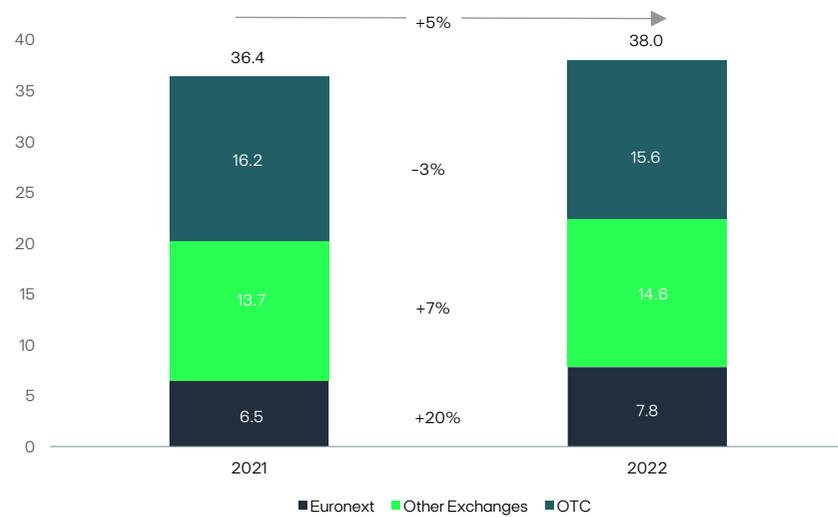


Fonte: Bloomberg

### 3.5.6. Volumes

EDP's ordinary shares are publicly traded not only in its main market (Euronext Lisbon), but also in other 27 stock exchanges (including Turquoise and Chi-X Europe) and 7 Over-the-Counter markets (including BATS Chi-X Europe and BOAT)

#### AVERAGE DAILY TRADING VOLUME PER TYPE OF MARKET IN 2022 (MILLION SHARES)



# Sustainability

3.6.1. Accelerated and sustainable growth	079
3.6.1.1. Decarbonising the world	079
3.6.1.2. Customer experience	087
3.6.2. Future-proof organisation	095
3.6.2.1. Ethics and compliance	095
3.6.2.2. Communication and transparency	102
3.6.2.3. Transforming our business	107
3.6.2.4. People management	115
3.6.2.5. Health and safety	120
3.6.2.6. Crisis management	122
3.6.3. Attractive Returns and ESG Excellence	127
3.6.3.1. Sustainable finance	127
3.6.3.2. Caring for our planet	132
3.6.3.3. Supplier management	144
3.6.3.4. Respect and advocate for Human Rights	150
3.6.3.5. Voluntary investment in the community	156

# 3.6

# Accelerated and sustainable growth

## Highlights 2022

- EDP Renewables constructs Indiana's largest solar park, with a capacity of 200 MW, which will produce enough energy to supply the average consumption of more than 36,000 homes per year
- EDP will provide 100 million euros by 2025 for investments in innovative solutions that can impact the business, through start-ups
- Inauguration of the floating photovoltaic solar park in Alqueva, the largest in Europe in reservoir. The energy produced by the approximately 12,000 photovoltaic panels will supply about 30% of electricity needs of the population in this region of Alentejo (Portugal)
- EDP has signed a global partnership to install up to 100 MWp of solar power in Faurecia units in Europe, Asia and the United States. By the end of 2023, EDP intends to install more than 60 self-consumption solar parks at the multinational's factories in Portugal, Spain, Italy, the United States, China, South Korea, Japan and Thailand. This is the largest distributed solar energy project secured to date by EDP, and the first to be installed with the same partner on several continents
- The European Commission has classified three EDP projects as strategic for the energy transition. This selection, made under the IPCEI Hy2Use, which involves 35 projects in 13 Member States, aims to promote the development of green hydrogen production in Europe
- EDP Renováveis has completed the installation of the two largest and most powerful onshore wind turbines in the Iberian Peninsula
- EDP Brasil produced the first molecule of green hydrogen (H2V) in its new generation unit in São Gonçalo do Amarante, Ceará, the first strategic step in the development of the hydrogen pilot project in the Pecém Thermoelectric Complex.

## Main challenges 2023<sup>1</sup>

- Companies and investors will navigate the increasing risk of litigation related to sustainability (in)actions
- Climate strategies will be reconsidered in the face of energy security and affordability concerns
- Addressing the challenges of market curability and uncertainty alongside the expected growth in the global sustainable finance market.

<sup>1</sup>Challenges identified by S&P Global in 'Key sustainability trends that will drive decision-making in 2023' (available in [www.spglobal.com](http://www.spglobal.com)) and recognized by EDP as relevant

# 3.6. Sustainability

## 3.6.1. Accelerated and sustainable growth

### 3.6.1.1. Decarbonising the world

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
	Installed capacity of renewable origin	79%	90%
	Smart meters installed in Iberia	87%	100%
	EV charging stations	6k	>40K

The fight against climate change and, in particular, the fulfilment of the climate goals of the Paris Agreement, reinforced in the Glasgow Pact, has led to a five-fold acceleration in the pace of decarbonisation of the world economy.

The electricity sector, through the use of renewable energies, is key to this acceleration by promoting the electrification of the remaining sectors, particularly transport, air conditioning in buildings and industry. EDP, by the nature of its activity, plays a pivotal role in this collective effort to combat climate change, an integral part of its global strategy.

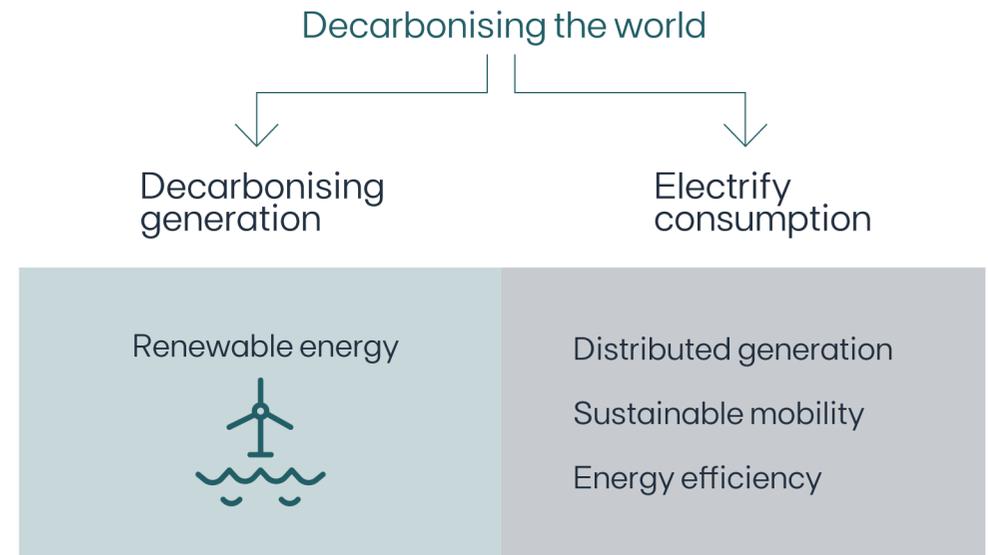
Leading the energy transition, contributing to a low carbon economy, has been a primary objective of the group, which is now a globally recognised reference among its peers.

EDP contributes to the decarbonisation of the world economy on two different fronts:

- through the decarbonisation of generation, through expansion into renewable energies and the progressive closure of thermoelectric plants
- through the electrification of consumption, offering new low carbon product and service solutions.

These services include:

- **distributed generation:** installation of solar photovoltaic systems on a self-consumption basis and adapted to customers and local characteristics, including energy communities
- **sustainable mobility:** support, advice and availability of in-home and out-of-home charging solutions currently available in Portugal, Spain and Brazil
- **energy efficiency:** more efficient equipment and lighting, such as LED lamps, high-efficiency motors, electronic variable speed drives and heat pumps, as well as advisory services and energy audits.



3.6.1.1.1. Renewable energy

KPI 2022	TARGET 2025
Renewable energy	
79% Installed capacity of renewable origin	>90%
74% Production from renewable sources	83%
974 MW Installed capacity in centralized solar systems	5.5 GW
700 MW <sup>1</sup> Installed capacity in decentralized solar photovoltaic systems	3.7 GW

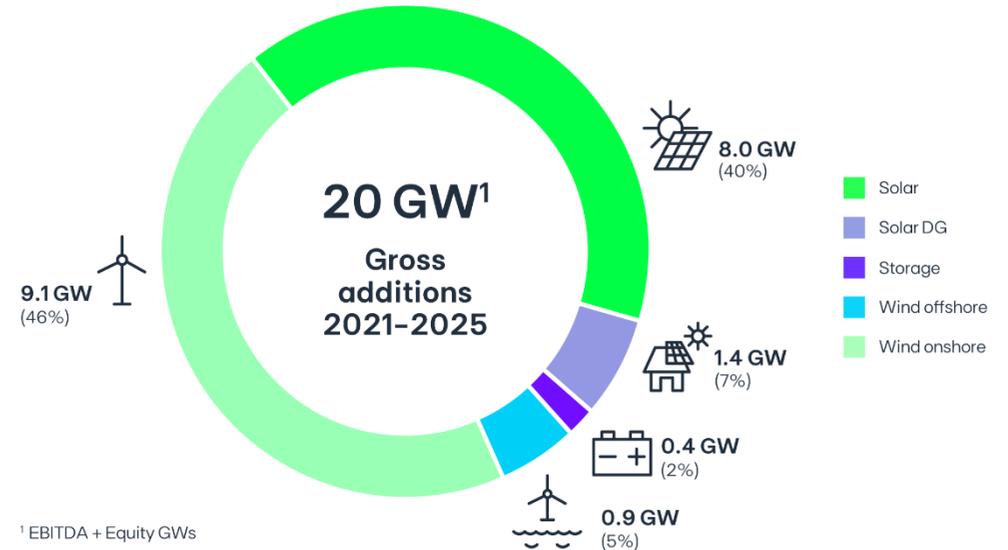
<sup>1</sup> North America installed capacity includes 1MW of storage.

The path to decarbonisation involves a strong commitment to electricity production from renewable sources.

The 2021–2025 Business Plan emphasised the acceleration of the group's investment in renewable energy, with a planned investment of 19.2 billion euros for its expansion, which corresponds to 80% of the group's total investment in the energy transition. This unprecedented investment in renewable energy includes wind, solar and green hydrogen complemented by energy storage technologies.

The Plan targets 20 GW gross added renewable capacity by 2025. On average, new gross capacity is estimated at 4 GW/year, during the period 2021 to 2025, preferably in low-risk markets with regulatory stability, favouring long-term PPA (Power Purchase Agreement) and energy purchases Contracts for Difference (CfD).

In technological terms, 47% of the total planned capacity, i.e., 9.4 GW, will be allocated to solar technology, 46% (9.1 GW) to onshore wind technology, 7% (1.4 GW) to decentralised solar and 5% (0.9 GW) to offshore wind, to be carried out by the company Ocean Winds (50/50 joint venture with Engie).



<sup>1</sup> EBITDA + Equity GWs

To increase flexibility, EDP also intends to expand its energy storage capacity beyond its traditional storage in hydroelectric plants with a pumped-storage reservoir. An increase of 0.4 GW of capacity is therefore planned for 2021–2025.

The group's asset rotation continuity strategy significantly contributes to this implementation. In 2022, EDP installed 1,053 MW of wind farms and 1,052 MW of solar farms, and sold a total of 790 MW, resulting in a net addition of 1,315 MW of installed capacity.

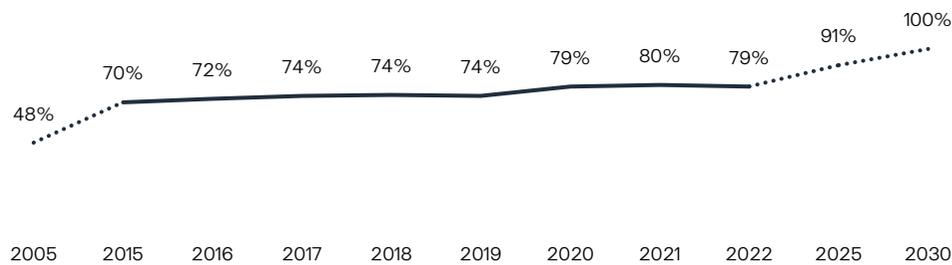
In line with the marked investment planned in renewable energies, EDP has set demanding targets, aiming to achieve full carbon neutrality (Scope 1 and 2 emissions) in 2030. By 2025, the installed capacity of renewable origin should exceed 90%, reaching 100% in 2030.

In relative terms, at the end of 2022, the percentage of installed capacity of renewable origin was 79%, i.e. a decrease of 1 p.p. compared with 2021. This variation was mainly due to the inclusion of the Los Barrios power station (coal) in the consolidation perimeter.

In 2022, renewable energy represented 74% of the electricity generated by the group, 2% less than in 2021. Of this 74%, wind energy represented 70%, hydro 26% and solar 4%. The slight drop in this indicator was essentially due to (1) the sharp reduction in hydroelectric generation in the Iberian Peninsula (IPH below 0.7) as a result of the severe drought that affected the Iberian Peninsula until November; (2) the sharp increase in generation from coal-

fired power stations in Spain as a result of the drought and the escalating price of natural gas, also a consequence of the war in Ukraine; (3) the increase in wind and solar generation and the fact that the Pecém power station has been shut down have not been enough to compensate for previous situations.

### RENEWABLE INSTALLED CAPACITY (%)



### RENEWABLE ENERGY GENERATION (%)



The decarbonisation route that the group has followed also involves the development of innovative projects, in anticipation of future business solutions. There is notable investment in areas such as energy hybridisation, which leverages potential synergies between different

technologies (solar, wind, hydro and storage), the medium-term production of green hydrogen and solar and wind installations on offshore structures.

In 2022, EDP completed the installation of the largest floating solar plant in Portugal, located in the reservoir of the Alqueva hydroelectric power station, with an installed capacity of 5 MWp and a battery of 1 MW/2 MWh. Also in this field, EDP secured the right to install a 70 MVA power plant on the same reservoir in the first floating solar plant tender launched in Portugal. The grid connection capacity allocated in this process should allow the installation of up to 154 MW of renewable energy, including the 70 MW of floating solar PV and, additionally, 14 MW of solar equipment and hybridisation of 70 MW of wind capacity.

EDP, through Ocean Winds, has been raising its profile in offshore wind growth with 1.5 GW gross capacity in operation by 2022, around 0.9 GW under construction and a portfolio of 14 GW under development. This focus on offshore wind goes far beyond what was foreseen in PN21-25.

#### 3.6.1.1.2. Distributed generation

Anticipating the new energy paradigm, EDP has been consolidating its presence in a future in which power production, consumption and distribution will be increasingly decentralised. In this sense, the group offers a variety of solutions aimed at the specific needs of the various customer segments, through a diverse and competitive set of products and services in the solar photovoltaic field, which avoid emissions in the final consumption of energy.

In addition to the suppliers in Portugal, Spain and Brazil, and the services offered in Italy and Poland by EDP Comercial, EDP Renováveis has also begun this activity:

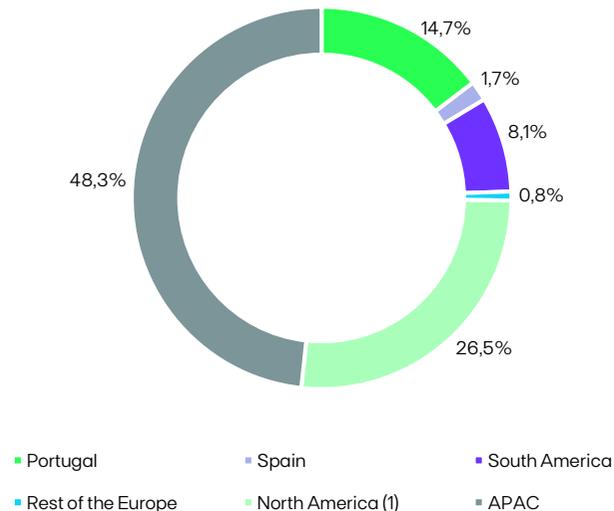
- in the United States, with the acquisition of a majority stake in the company C2 Omega, with a portfolio of 88 MWp of installed capacity and a short-term pipeline of more than 150 MWp in 16 states
- in APAC, with the consolidation of the acquisition of 91% of Sunseap in Singapore, the largest decentralised solar company in Southeast Asia, with 563 MW of solar projects operational and under construction and a portfolio of 10 GW of renewable projects in different stages of development

- in Germany, with the acquisition of a 70% stake in the company Kronos Solar Projects GmbH ("Kronos"), with 1.4 GW in installed solar projects and a portfolio of 9.4 GW in different stages of development in Germany (4.5 GW), France (2.7 GW), the Netherlands (1.2 GW) and the United Kingdom (0.9 GW).

In 2022, EDP installed a total of 256 MW of solar photovoltaic systems, both in the transactional format, with a customised installation service tailored to each customer, and in the as-a-service format, in which the investment and operation of the system is ensured by EDP during a certain contracted period with the customer.

The total installed capacity amounted to 700 MW, which produced 565 GWh and avoided 300 ktCO<sub>2e</sub> of emissions.

### DECENTRALISED SOLAR INSTALLED CAPACITY (%)



<sup>(1)</sup> North America installed capacity includes 1MW of storage.

### 3.6.1.1.3. Sustainable mobility

#### KPI 2022

Sustainable mobility

#### TARGET 2025

**76.5 K** Customers with electric mobility solutions

**180k**

**14.6%** Electrification of the light fleet

**100% (in 2030)**

**6,010** Charging points installed

**>40k**

EDP has made a pioneering commitment to promote electric mobility over the next few years. The objectives now outlined are in line with the conviction that combating climate change and decarbonising the economy will involve greater penetration of renewable energies and electrification of consumption, particularly in the transport, heating and cooling sectors.

In conjunction with the group's strategic objectives of achieving 100% renewable installed capacity by 2030 and reducing its specific CO<sub>2</sub> emissions by 90% in 2030 compared to 2015 levels, we are actively contributing to accelerating the transition to sustainable mobility. EDP is committed to achieving a 100% electric fleet (light vehicles) by 2030, which will require considerable investment in the renewal of its vehicle fleet. This transition will now be accelerated and will lead to a 70% reduction in CO<sub>2</sub> emissions from the global fleet, which consists of some 4,000 service vehicles.

EDP has also committed to the installation of 40,000 public and private charging points by 2025 in all the countries where we are commercially active (Portugal, Spain and Brazil), as well as for 180,000 customers with electric mobility solutions by 2025.

Within the scope of the services provided by EDP, which contribute to the decarbonisation of energy consumption, electric mobility also plays a fundamental role.

Given the potential for action, the company has internalised a great proportion of its efforts in the area of electric mobility through solutions (products, services and charging networks), mostly aimed at its customers, but also in internal measures at group level. In this sphere, EDP has established initiatives to encourage the acquisition of electric vehicles by its employees, maintaining the "Electric Mobility Employee Pack" initiative, which offers special conditions

to employees in Portugal for the acquisition of electric vehicles and the use of charging solutions.

**In 2022, EDP launched the "Sustainable Mobility Support Credits" initiative, which allocates an annual sum to employees for use in shared mobility programmes (excluding individual combustion-powered vehicles).**

In addition, EDP's approach has included the promotion of an ecosystem of partnerships and initiatives for electric mobility at international level:

- EDP actively participates in Eurelectric – where it will chair the E-Mobility Working group from 2023, contributing to the ongoing discussions within these organisations for the development of business-oriented regulations and frameworks to support the transition to clean mobility
- EDP is a board member of ChargeUp Europe, an association of EV charging infrastructure industry companies, which works actively on policy advocacy to promote the rapid and effortless deployment of EV charging infrastructure in Europe. EDP was the first Portuguese company to join this association
- It collaborates with the WBCSD on a multisectoral programme that addresses business solutions and guidelines for the decarbonisation of mobility
- It is a founding member of TDA, which brings together the 3 Cs (countries, cities/regions and businesses) as the key drivers of sustainable, low-carbon mobility – it aims to accelerate the global transformation of the transport sector to a net zero-emission mobility system before 2050
- EDP is part of The Climate group's ambitious EV100 initiative
- In order to give visibility to electric mobility, EDP continues to promote the "Portugal Mobi Summit", the largest urban mobility event in Portugal for the fifth consecutive year, in partnership with the Global Media group.

### Products and Services

The EDP group has a diverse commercial offer of products and services, particularly in Portugal, Spain and Brazil. Throughout 2022, EDP worked to make available the best charging solutions to its customers. The group focused, on the one hand, on the development of increasingly complete electric mobility solutions tailored to the needs of the growing market. And, on the other, on more competitive prices, and so progressively reaching more drivers of electric vehicles.

#### In Portugal

EDP Comercial supplies and installs charging solutions for electric vehicles through charging stations for the B2C and B2B segments.

EDP Comercial has refreshed its [website](#) with relevant information to help customers overcome the initial barriers of this new paradigm of sustainable transport, including a simulator to help customers choose the best solution for their electric vehicle based on their mobility profile and home electric installation.

In 2022, EDP Comercial made a huge digital transformation of the E-mobility ecosystem, which resulted in the launch of a new mobile app and web portals.

The EDP Charge application allows customers to run on the public grid, at home and in the workplace. Using this new app, customers can check charger availability, run simulations of charging session costs, start and stop digitally, resulting in a new and seamless customer experience.

The new EDP Charging Portals for condominium and B2B customers enable various charger management features, monitor charging sessions and take remote actions on chargers that give customers self-sufficiency and flexibility.

Smart charging was also launched in 2022. It offers a more convenient way to charge electric vehicles when there is less electrical power available. As a result of exponential increases in mobility, this topic has become a major concern for customers.

In terms of charging solutions for the B2B segment, the EDP Comercial platform that provides access to personalised energy efficiency recommendations and technical services adapted to the business, Save to Compete, has updated its offer with charging solutions adapted to the real needs of business customers, both for private and public access spaces, with different levels of customisation and also available as-a-service.

#### In Spain

The product MiVē, is an app aimed at the B2C segment, fully configurable by the customer through a calculator that covers all consumer needs in a single fixed monthly fee, particularly: charging at home, including the charger, the respective installation and energy consumption;

charging away from home, at the public charging stations on EDP's public charging app (MOVE ON); and other additional services.

In the B2B segment, EDP continued to invest in the promotion of the Save to Compete platform that offers the possibility of managing its charging points through MOVE ON. In this way, the corporate customer decides the conditions of access to its charging points (users, prices, etc.) and EDP manages them, subsequently returning the income generated to the corporate customer. The participating company thus obtains a potentially new source of revenue.

### Public charging network

Teleworking and the boom in micro-mobility have significantly boosted the demand for electric vehicles and the inevitable need for charging infrastructure.

#### In Portugal

The estimated electric charging needs for the coming years indicate a demand for 20,000 charging stations by 2025.

EDP has contributed positively to the creation of a vast public charging network, increasing the number of charging points in Portugal's key locations with strategic partners (Brisa, McDonalds, Burger King, etc.).

In 2022, EDP increased its number of contracted charging points by more than 70% and formed several important partnerships that resulted in more than 2,000 contracted charging points. EDP's growing network of partners, who provide space on their premises for the deployment of charging points, continues to be crucial for EV users, ensuring greater capillarity of the public charging infrastructure. It is important to note that 2022 saw the highest use of EDP's public charging network, with over 400,000 charging sessions in Portugal.

EDP leads the CEME market – the public charging market – with more than 50k customers benefiting from one of the most attractive tariffs in the public charging market.

#### In Spain

By the end of 2022, EDP accounted a total of 800 public charging stations in Spain.

Agreements have been established with various organisations, such as municipal councils and service stations, but also alliances with private companies such as the Ahorramas supermarket chain, where EDP plans to install 450 charging points in 140 car parks and company offices.

Together with Ahorramas, the alliance is being extended to include a large self-consumption solar project at its central platform in Velilla de San Antonio, consisting of more than 3,300 solar panels and having an installed power of 1,800 kWp, which will mean annual energy savings of 25% of total consumption at its logistics warehouses and central offices. With this installation, which will produce around 3,000 MWh annually, more than 1,650 tonnes of CO<sub>2</sub> will be avoided.

At regional level, in the Principality of Asturias, an agreement was also signed with Masymas (Hijos de Luis Rodríguez) for the installation of 20 chargers, each with a power of 22 kW, at eleven shops in the region.

The Mastercard pilot project was also developed, between EDP and Efibat, in which the first 5 public charging points were set up with technology that allows customers to pay using bank cards and/or mobile phones.

#### In Brazil

After the 2021 installation of two more charging stations at the Guarulhos International Airport and nine ultra-fast charging points (one of them being 350 kW, the most powerful in Latin America), EDP Brasil started, in 2022, the installation of an ultra-fast charging network covering the entire state of São Paulo and connecting the main electric corridors in the country. This project, which should already be completed by early 2023, is part of EDP Smart's initiatives in electric mobility presented to Aneel via Research & Development, totalling investments close to R\$ 50 million.

### 3.6.1.1.4. Energy efficiency

KPI 2022	TARGET 2025
Energy efficiency	
<b>38%</b> B2C Customers with sustainable services	<b>25%</b>
<b>11.9 MtCO<sub>2</sub></b> Emissions avoided by customer	<b>15 MtCO<sub>2</sub></b>

The set of energy efficiency, sustainable mobility and distributed generation initiatives carried out in 2022 led to an estimated energy saving of 490 GWh, avoiding the emission of 1,755 ktCO<sub>2</sub>, including those corresponding to the sale of electricity from renewable sources, through the guarantees of origin scheme. Since 2015, the savings generated from sustainable services have made it possible to avoid the emission of 11.9 MtCO<sub>2</sub>, which represents around 80% of the 2025 target.

EDP promotes the improvement of energy efficiency throughout the value chain as an important contribution to decarbonisation, contributing to greater efficiency in the end use of energy by offering its customers low carbon products and services.

In 2022, 38% of B2C customers on the liberalised market had sustainable services, such as energy efficiency, electric mobility or decentralised solar services. The aim is to ensure that we offer these services to 25% of these customers by 2025 and 50% by 2030.

In Portugal, the Casa Elétrica programme continued, focusing on B2C customers, which aims to promote the change of butane or propane gas consumption to electricity, with an impact on energy consumption and safety, and in alignment with the strategy of electrification of consumption.

In the corporate segment, EDP supports companies in the implementation of integrated energy efficiency services by offering solar energy, sustainable mobility and consumption management solutions.

In Brazil, EDP also invests in energy efficiency initiatives, either through distribution companies, which operate in the regulated market, or through the service company EDP Smart, which operates in the liberalised market. The distributors, according to the legislation of the Brazilian electricity sector, have the obligation to apply 0.4% of net operating revenue annually in Energy Efficiency Programs (PEE) and 0.1% in the National Program of Electric Energy Conservation (PROCEL). EDP Smart offers solutions to improve energy efficiency (lighting, air conditioning) and also in the area of electric mobility and distributed generation. By 2022, the implemented measures led to energy savings of 30 GWh and 32 ktCO<sub>2</sub> avoided.

Energy efficiency services generated around 491 million euros of income in 2022, representing a 88% increase compared to 2021.

# First Green Hydrogen molecule

The simplest, lightest and most abundant chemical element on the planet, hydrogen has a high energy value and releases, when ignited, three times more energy than other combustibles (such as gasoline, for example). The cost of producing green hydrogen is still high, but it tends to decrease year on year – just as has been happening for two decades with wind power and, for ten years, with solar.

Hydrogen production technology has been known and used for a long time but was associated with some type of previous burning (and, therefore, pollution and more emissions), followed water electrolysis, which generates hydrogen. In the case of green hydrogen, the energy used in its production comes from clean sources – like solar, hydro and wind. As a result, hydrogen is considered the fuel of the future and a safe bet for helping to contain the excessive global warming.

During 2022, EDP worked on a green hydrogen project at the Pecém Thermoelectric Power Plant (UTE), which was officially inaugurated in January 2023. Coal-fired plants use heavy oils in production start-up processes and EDP Brasil has replaced the burning of these oils with the use of hydrogen – thus generating an environmental improvement, even if the plant continues to operate coal-based. Through an investment of 41.9 million reais, this project is unprecedented in the country and consists of a solar plant with a capacity of 3 MW that feeds an electrolysis module for the production of hydrogen, ensuring a renewable origin and the capacity to produce 250 Nm<sup>3</sup>/h of gas.

In embracing this idea, EDP Brasil also aims to train its employees so that, in the future, they can be part of the green hydrogen production hub adjacent to the current Pecém

Plant structure. This hub will be 100 MW and will benefit from know-how developed in the construction of the 1.5 MW plant that makes up part of UTE Pecém.

In addition to boosting economic development in the region, these green hydrogen projects in Ceará have it at the forefront of energy transition. With permanent sun, a geographical location that makes it one of the closest Brazilian regions to Europe and a deepwater port (the port of Pecém) that allows the easy outflow of ammonia (into which hydrogen must be transformed for transportation), Ceará has almost unique conditions to become a major producer of green hydrogen, not only for domestic consumption, but also for export. EDP believes that Brazil can play this very important global role.

### 3.6.1.2. Customer experience

EDP provides energy supply and services to residential customers in the Iberian Peninsula and in Brazil, and business customers in Portugal, Spain, Italy, Poland and Brazil.

In Iberia, the regulatory framework defines the separation of distribution (regulated market), supply (liberalised and regulated market) and supply in the regulated market. While, in Portugal, EDP operates in the three activities through independent companies, in Spain it is present in distribution (regulated market) and supply (liberalised market). In Brazil, in the states of São Paulo and Espírito Santo, EDP operates in the regulated market, in distribution and supply, as well as in supply in the liberalized market.

In 2022, the growth in the market for solar solutions for self-consumption stands out. Although the demand for this type of solutions has increased in all countries, it is important to highlight the company's consolidation in relatively new territories through acquisitions. Such an example is the purchase of Soon Energy and Zielona-Energia.com, in Poland, and Enertel, in Italy, the later still in 2021.

In the current market context, there are several events and trends that put pressure on service quality and challenge the commercial relationship with customers, of which we highlight the following:

- the volatility in the energy markets that forces adjustments in price and contractual conditions and the search for solutions that favour price stability and predictability
- the priority to decarbonise and adapt to climate change, through continuous technological, digital and legislative innovation
- new regulatory dynamics and customer behaviour associated with decarbonisation objectives
- the growing importance of energy services compared to the traditional business of selling energy
- the increasing frequency of extreme events with an impact on infrastructure.

As a result, transformation dynamics in the market context are changing the classic segmentation of customers, widening their diversity and expanding business opportunities and challenges. In this area, special attention must focus on trends towards the energy rating of buildings, the acceleration of electric mobility, self-consumption and energy communities, and the increase in the divide between customers with the capacity to invest in energy efficiency and customers in the state of energy poverty.

The EDP group maintained its commitment to accelerating investment in commercial innovation by diversifying its portfolio of services and markets to ensure a highly satisfying customer experience through its commercial services, and excellence in the quality of the commercial relationship. Commitments that are part of the EDP's values and culture and translated into quantitative strategic objectives.

#### 3.6.1.2.1. Promoting sustainable consumption

In line with EDP's ambition to be the global leader in energy transition, the group has been broadening its portfolio to provide consumers with products and services that enable them to contribute to a more sustainable planet.

#### Efficient solutions and equipment

To achieve carbon neutrality, it is necessary not only to electrify consumption, but also to change the way in which we consume energy, making it more conscious. In this context, EDP has at its customers' disposal a kit of energy-efficient equipment that allows consumers to use less energy but meet the same day-to-day goals. Examples are air-conditioning appliances – which today are up to four times more efficient than traditional electric heaters – and water heaters, whose savings, in the case of solar water heaters, can account for up to 60% of water heating, among others. For those seeking an integrated solution, EDP also has the Casa Elétrica (Electric Home) service available, which includes advice, technical assessment and installation for the electrification of the home, resulting in greater levels of comfort and savings for the customer.

#### Solar energy

In a year of great volatility in the energy markets having an impact on gas and electricity prices for residential and business customers, the focus on solar energy has gained new relevance. This clean and virtually inexhaustible energy source allows customers to transition smoothly, at the same time reducing their exposure to fluctuating electricity prices and, consequently, their energy bill.

EDP offers its customers a portfolio of solutions to maximise the investment and benefits of solar installation, with emphasis on a consumption monitoring system and the possibility of installing a storage battery so that the customer can use solar energy during the day or store it for later use.

For the corporate sector, EDP is developing services tailored to the unique needs of each business, with an emphasis on the as-a-service model, in which EDP assumes the entire investment and takes charge of the installation, operation and maintenance of the power station.

2022 was also a year of growth for Solar Neighbourhoods, renewable energy communities that are democratising access to solar energy. In these neighbourhoods, producers make their space available for the installation of solar panels and the energy generated is shared among the neighbours of the community.

### Electric mobility

EDP helps in all steps of an electric vehicle user's journey, from initial research to charging solutions inside and outside the home. In this sense, in addition to information initiatives and integrated offers for private charging, EDP has significantly increased the public charging network, having exceeded 3,000 public charging points contracted at the Iberian level by 2022. Increasing the charger network is one of EDP's major focuses to reduce what is still an obstacle to the adoption of electric vehicles: the charging experience.

With a strong and clear focus on digital and user experience, in 2022, EDP launched the new "EDP Charge", the first application in Portugal to integrate the management of charging in public and private spaces. The app, already at 14,000 downloads, provides users with a map of charging points on the national grid, their availability and tariffs and can be used to link EDP's Electric Mobility card to charge with 100% green energy, fully digitally, at any station on the grid, in Portugal.

#### 3.6.1.2.2. Customer satisfaction

The EDP group has made the commitment to maintain a customer satisfaction level of over 75%. This objective is monitored through customer satisfaction in their interactions with the company, the number of complaints, and through satisfaction questionnaires carried out periodically.

In **Portugal**, in the liberalised market, a satisfaction level of 88% was achieved, an increase on the previous year. The NPS (Net Promoter Score) of the liberalised market, which measures the degree of customer recommendation in relation to the company, was 26% in B2C segment and 22% in B2B. In the regulated market, satisfaction levels reached 80%.

Despite having been a year marked by volatility and rising energy prices in wholesale markets, the actions implemented throughout the year, particularly in terms of communication with customers, allowed the usually negative effects of these increases not to be reflected in the satisfaction of the end customer.

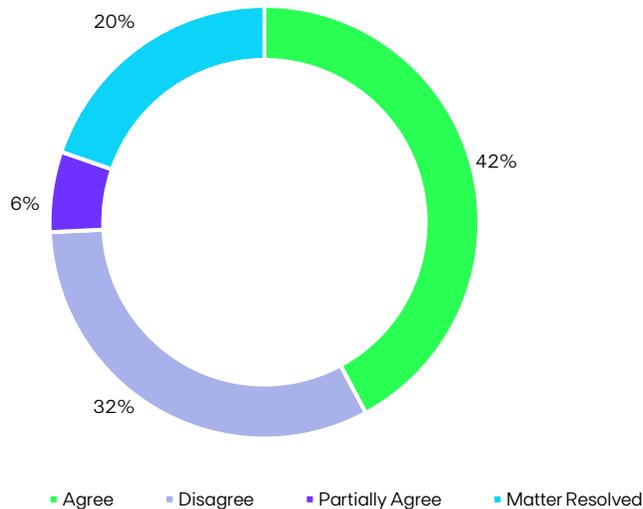
In **Brazil**, the main indicator used to measure customer satisfaction is the Quality Satisfaction Index (ISQP), obtained through the ABRADÉE Residential Survey. In 2022, there has been an improvement in the ranking (EDP São Paulo 69.5% and EDP Espírito Santo 74%).

In **Spain**, the B2B segment recorded an average satisfaction rate of 7.5 (on a scale of zero to ten).

#### 3.6.1.2.3. Complaint and claim management

The EDP group continuously invests in the development of channels and means of handling complaints and grievances, as well as improving customer experience. In addition to facilitating conventional means of service, alternative solutions to those provided by law are made available, such as the Customer Ombudsman, the Ethics Ombudsman (see [Ethics](#) chapter) and participation in citizenship initiatives, such as the Complaints Portal.

In Portugal, EDP has a Customer Ombudsman, an independent body whose role is to assess customer complaints in cases where they are not satisfied with the responses obtained from the standard system.

**RESPONSE DETAILS FROM THE CUSTOMER OMBUDSPERSON (%)**


In Portugal, in the liberalised market, despite the current context of natural gas price increase and integration of the Iberian CAP value, the energy supply segment recorded a significant reduction in the volume of complaints (-17p.p. compared to 2021), reaching the lowest value ever recorded. This result is mainly due to post-pandemic stabilisation, the greater robustness of business cycle processes and a less severe winter that resulted in fewer incidences of power failure and/or losses.

Regarding solar energy, there was a reduction in the volume of claims, despite a significant increase in installations. This was due to the continuous improvement of sales, installation and after-sales procedures and evolutions in the performance of the smart meter replacement process and settlement activation. As for electro mobility, due to the context of strong growth of this activity, there was a natural increase in the volume of complaints, although not significant when compared with the installed number of recharging stations and CEME cards.

In B2B energy in Spain, as in Portugal, the year was marked by complex changes in the energy sector that negatively affected the number of complaints. Several improvement and prevention measures were implemented, which contributed to a substantial reduction in the volume of complaints registered in 2022.

In Brazil, at EDP São Paulo, complaints had a very positive evolution. In September, the decrease against the same period of 2021 was already 16%. The FER (Equivalent Frequency of Complaints) improved 22% compared to 2021 (in the period from January to August), reaching a FER of 4.04, well below the regulatory target (16).

COMPLAINTS	UN	2022	2021
<b>Portugal</b>		<b>80,247</b>	<b>95,427</b>
B2B	#	1,796	1,034
B2C	#	77,873	93,727
SU	#	578	666
<b>Spain<sup>1</sup></b>		<b>450</b>	<b>921</b>
B2B	#	344	921
E-REDES	#	106	n.a.
<b>Brazil</b>		<b>56,565</b>	<b>49,678</b>
Company	#	45,131	40,799
ANEEL	#	2,444	1,828
PROCON	#	4,451	1,811
Justice	#	4,539	5,240

**3.6.1.2.4. Energy prices**

In the Iberian Peninsula, energy trading is free, and consumers can contract their supply with any trading company.

In Portugal, and according to ERSE, in September 2022, the liberalised market represented around 86% of total customers and approximately 93% of consumption, in Portugal, and the

<sup>1</sup>From December 2020, EDP stopped operating in B2C in Spain for the sale of electricity and gas. 2020 figure represents claims to 30 November 2020.

regulated market tariff is expected to be abolished at the end of 2025. Until then, liberalised market Normal Low Voltage electricity customers have the right to access a scheme equivalent to regulated tariffs and may return to the regulated market if their supplier does not provide this equivalent scheme. The average reference price tariffs for end user in Portugal, in 2022, was mostly composed of energy and supply costs (92.2%), as a result of the worsening of electricity prices in wholesale markets, with the costs of energy policy and use of networks representing, respectively, -11.2% and 19.0% of the total.

In Spain, on 30 September 2022, the liberalised market accounted for 64.9% of total customers, 98.8%, in the SME segment, and 99.1% in industrial segments, and 63.8% of customers in the domestic segment. Domestic prices in Spain had an energy policy cost component of around 25% of the final tariff, while the energy and network use components represented, respectively, 57% and 18% of the total.

In Brazil, in September 2022, the liberalised market represented 0.03% of total customers (30,086 out of about 89 million customers), about 34% of consumption. Since January 2020, all consumers with contracted power greater than or equal to 500 kW are eligible to migrate to the liberalised market, provided they purchase energy from renewable sources, with those contracting power greater than or equal to 2,000 kW being able to purchase energy from any source. Under Ministry of Mines and Energy (MME) Ordinance 465/2019, which set out the timetable for reducing the compulsory purchase of certain sources and opening the market, consumers with contracted power greater than or equal to 1,500 kW can, since 1 January 2021, purchase energy from any source as free consumers, with this threshold decreasing to 1,000 kW from 1 January 2022 and 500 kW from 1 January 2023. In September 2022, MME Directive 50/2022 was published, which allows consumers in the high voltage market to buy electricity from any supplier as from January 2024. In the same month, a Public Consultation was opened with a proposal for an Ordinance containing the schedule for opening the low voltage market starting from 2026, with predicted total opening by 2028, including residential and rural customers. With regard to the breakdown of the price of electricity, energy and sales costs constitute about 50% of the costs invoiced to the customer, with the costs of using the networks (transport and distribution) and energy policy corresponding to around 39% and 11%, respectively.

#### 3.6.1.2.5. Quality of service

Improving the quality of the technical service provided to customers is one of EDP's main aims as an operator of distribution networks. EDP maintains a rigorous process of monitoring technical service quality, allowing the adoption of mitigating measures when required. At the

same time, additional checks and analyses are carried out at the point of delivery to customers in accordance with regulatory provisions. These procedures aim to support the optimisation of the maintenance and operation of the distribution network, focusing on improving the quality levels of service provided.

In 2022, the quality of service remained high as a result of the technical teams' commitment, a joint effort between EDP and service providers, management measures, new investments, and cooperation and dialogue with stakeholders.

In Portugal, specific investments and maintenance plans in network assets, as well as modernisation projects and the automation of the AT, MT and BT networks that were developed over the last decade, have contributed to good performance in the distribution network, alongside stabilisation of the main indicators of service continuity in recent years, confirming the widespread progress that reflects E-REDES' good performance in improving Quality of Technical Service in electricity distribution.

In 2022, the distribution network was subjected to a number of unusual climatic phenomena, which included the storm in the southern region on 7 and 8 December and the Efrain depression between 11 and 13 December. In the southern region storm, the Tejo Valley, Metropolitan Area of Lisbon and the south of mainland Portugal were the regions most affected by these adverse meteorological conditions. In the Efrain depression, the entire country, with the exception of the Mondego Asset Area, was affected, with winds gusting at more than 110 km/h, impacting the national distribution network at all voltage levels.

E-REDES developed an effective response to these events, having alerted its entire operational structure with the activation of the POAC-RD (Distribution Network Crisis Operational Action Plan), resulting in the strengthening E-REDES teams, the contact centre (fault communication service) and its external service providers; and the enhancement of vehicle, generator and other specialised equipment allocation.

In 2022, E-REDES focused on the treatment of data already collected and made available by the various equipment that makes up the electricity network, with the clear goal of improving the operation and management of the network. Thus, was born the EasyINC. The project actioned a set of algorithms and rules for processing SCADA data in order to identify without delay a relevant set of information about an occurrence (affected phases, defect elimination time, success or failure of automatic reconnections, among others). This information allows the operation to deal with an increasing number of alarms and obtain essential information about them, ensuring high levels of effectiveness and diminishing the possibility of error. From

an operation management perspective, it was possible to build a control dashboard that ensures aggregate information about what type of defects occur most in a part of the network, or the success rate of automatic reconnections. It is also possible to observe and monitor the behaviour of some substation assets, such as the opening time of a circuit breaker on demand when its preventive performance is required, promoting a culture of action and foresight, avoiding the failure of technical assets.

Also, within the framework of initiatives to improve the Quality of Technical Service, work in the field of smart grids was intensified during 2022, with the development of projects aimed at enhancing the use of information provided by intelligent measurement equipment.

E-REDES España, for the second consecutive year, stands out as a leading company in safety and quality of supply, a consequence of the investment made mainly in the digitisation of the network so that it becomes totally intelligent, and in operational efficiency, articulated through the Veja project.

In Brazil in 2022, the indicators of distributors EDP São Paulo and EDP Espírito Santo remained below the regulatory limits established by ANEEL, mainly due to improvement actions and preventive maintenance. Distributors count on specific projects to improve quality indexes and are focused on remedying recurrent cuts, the improvement of internal processes and the acquisition of new technologies.

In the last year, the indicators of Equivalent Duration of Interruption per Consumer Unit (DEC) and Equivalent Frequency of interruption per Consumer Unit (FEC) recorded in both São Paulo and Espírito Santo was consistently better than the limits defined by the regulator and lower than that observed in 2021.

### 3.6.1.2.6. Safety of products and services

The safety of products and services sold by EDP represents a fundamental aspect for the sustainability of the business. Risk prevention and control of all activities and equipment is an essential organisational requirement, committed to at the highest level and adhered to by the entire group.

Within the scope of energy services in EDP's portfolio, there is a set of promoted practices that foster safety for products and services, namely:

- promotion of online simulators that allow solutions to be customised and sized according to each client's needs. In these offers, prior visits are made to adjust the solution and ensure that all additional interventions are considered
- steps are taken to ensure that the legal compliance of all services and products is met in accordance with the regulations in force
- training and supervision of all installation teams as well as the inclusion of instructions for use and safety rules made available to all customers
- specific studies for safety analyses of the structure of buildings and of accessory equipment, enabling safety risks to be mitigated or even eliminated, for continuous improvement
- regular inspection of assets, according to their function, type and regulation, to ensure their safe operation during their life cycle.

### 3.6.1.2.7. Vulnerable customers

Quality of life and well-being are directly dependent on access to energy and, in particular, to quality electrical energy at affordable prices. In an increasingly technological and digital society, ensuring that everyone can enjoy this essential asset is a challenge that the EDP group places at the centre of its business strategy, for which it has established quantitative objectives (more details at [www.edp.com](http://www.edp.com)) and a commitment to contribute to the targets of the United Nations sustainable development goals (SDG 7).

EDP's approach to customer energy vulnerability is based on three pillars:

COMMERCIAL COMMITMENTS	ENERGY POVERTY	ACCESS TO ENERGY
Service guarantee Adapted solutions	Social tariffs Energy efficiency	New business Social dimensions

### Commercial Commitments

EDP scrupulously applies the service guarantees specified by regulation and which aim to protect priority customers from interruptions in the supply of energy. Priority customers are informed individually about supply interruptions that are subject to prior notice, with the minimum adequate prior notice, and have priority in the restoration of service in the event of

breakdowns. Priority clients are health services, security forces, firefighters, civil protection, maritime and air safety, and penitentiary facilities. Similarly, for customers with special needs, with limited vision, hearing or oral communication or olfactory deficit, EDP adapts its information and communication systems and guarantees the same levels of quality of service and rights available to other customers.

EDP also provides the “Safe Invoice” service, which covers situations of involuntary unemployment, temporary incapacity for work or total and permanent disability.

### Energy Poverty

Energy poverty is associated with the inability of families to obtain the necessary energy services to ensure adequate thermal comfort, i.e., inability to heat and cool their homes adequately at an acceptable cost. The structural causes of energy poverty are poor energy performance of the housing stock and the inability of unemployed and poor families to invest in improving the energy efficiency of their homes. The social impacts of energy poverty are also well-known: deepening structural poverty and social exclusion, with significant impacts on public health.

EDP argues that support for energy poor customers should be directed at solving the structural problem, fundamentally through the implementation of energy efficiency measures and the adoption of preventive measures to avoid power being cut off in response to non-payment. In line with the European Commission's guidelines, the group also advocates that this type of measure be financed, preferably by the State, as an obligation of the Social State, or alternatively supported by other consumers as a national solidarity measure.

In Portugal, since 2010, legislation has provided for the application of a social tariff for electricity and natural gas, which translates into a discount in the access tariff awarded to economically vulnerable customers which is financed, in the case of electricity, by electricity producers in the normal regime and, in the case of natural gas, by the transmission system operator, distribution system operators and natural gas traders. In 2016, access to the social tariff was facilitated, with the extension of its eligibility criteria and its automatic allocation.

In the process of defining the tariffs for 2022, the Energy Services Regulatory Authority estimated a number of beneficiaries of the social electricity tariff in Portugal of around 845 thousand customers, with a discount equivalent to 33.8% of the gross price of the transitory regulated market tariffs, corresponding to €121 million, of which €81 million would be borne by EDP. In turn, it estimated around 57 thousand beneficiaries of the natural gas social tariff in

mainland Portugal, with a discount equivalent to 31.2% of the invoice before tax in the regulated market, corresponding to a value of 2.6 million euros, of which 220 thousand euros would be borne by the EDP group supply companies. In December 2022, the number of social tariff beneficiaries in EDP's customer portfolio was approximately 529 thousand customers for electricity and 19 thousand for gas.

In addition, the support measures for customers exposed to the pandemic (unemployment, drop in household income equal to or greater than 20%, or infection by COVID-19) remained in force until 31 March 2022, cutting off electricity and natural gas supply due to non-payment was prohibited and debt payment was made more flexible, by dividing the amounts owed into up to 12 monthly instalments, with no late payment interest.

In Spain, the social tariff has been implemented since 2009, covering, however, only electricity customers. The mechanism currently in force distinguishes three categories of social tariff beneficiaries, depending on their income level: vulnerable customers, with a 25% discount, severely vulnerable customers, with a 40% discount, and customers at risk of exclusion, with a 100% discount. However, as a result of the publication of Decree-Law 18/2022, of 18 October, vulnerable customers and severely vulnerable customers see their discounts increased to 65% and 80%, respectively, until 31 December 2023. The discounts in question apply to fixed term and maximum energy consumption. The social tariff is not granted automatically and must be requested and renewed periodically by the customer, if they meet the eligibility conditions, in particular, income-related criteria. Following the sale of the B2C commercial business to Total in December 2020, there are no social tariff beneficiaries in the customer portfolio of EDP's suppliers in Spain. From the beginning of 2022, the financing of the social tariff discount is assumed by all agents of the electricity sector value chain in proportion to their turnover, following the decision of the Spanish Supreme Court, which considered the previous model discriminatory because it only applied to electricity suppliers. The sum financed by the EDP group, accumulated to the October 2022, amounts to €14.1 million.

In Brazil, the Social Tariff was implemented in 2002 and consists of a benefit created by the Federal Government applicable to low-income families. This is a discount on the tariff applicable to the residential class of the electricity distributors, which can vary between 10%, 40% and 65%, according to the consumption of each residence, up to a maximum of 220 kWh/month. Indigenous and quilombola families who meet the specified requirements benefit, in turn, from a 100% discount up to a consumption limit of 50 kWh/month. In 2022, EDP's two energy distribution companies had approximately 464 thousand customers in the social tariff (base December 2022). ANEEL provides monthly databases with the information

necessary for distributors to cross-check the information, so that if a customer is identified as falling within the social tariff criteria, the benefit will be granted automatically.

The EDP group's contribution to protecting vulnerable customers is not limited, however, to the promotion of the social tariff and compliance with legal obligations. Voluntarily, through its [Social Investment Policy](#), EDP also develops programmes to combat energy poverty (see chapter [Voluntary investment in communities](#)).

### **Access to Energy**

This third axis is aimed at promoting access to energy for populations without connection to electricity networks, either through investments in start-ups with this theme in mind, or through the provision of an annual financing fund for accessibility to electricity projects in countries with a high energy deficit. The theme of voluntary contributions to mitigate energy poverty and promote access to energy is addressed in greater detail in the [Social Investment Report](#) of the EDP group.

# Future-proof organisation

## Highlights 2022

- Recognition of EDP Renováveis as Top Employer Europe in six countries (Spain, France, Portugal, Italy, Poland and Romania) and, for the first time, in Brazil
- Launch of the EDP Label Merit Award that distinguishes the best master's or PhD thesis in topics such as renewable energy, decarbonization and technological innovation, in all markets in which the group is present
- Creation of a new common identity – EDP Y.E.S. – You Empower Society, a global brand, transversal to all geographies, to invest more than 300 million euros in social impact projects by 2030
- EDP was one of the signatories of the nine UN Global Compact Sustainable Ocean Principles, which provide a framework for sustainable business practice in all industries and regions and recognize the urgency and global importance of ensuring a healthy ocean, committing itself to take measures that would support the sustainability of the oceans for current and future generations
- The *Access to Energy* (A2E) Fund launched its fourth edition with twice the amount of funding: one million euros to support projects in five African countries – Mozambique, Nigeria, Malawi, Angola and Rwanda.

## Main challenges 2023<sup>1</sup>

- Adapt employment practices to new workforce dynamics in a context of economic and labour market uncertainty
- Need to allocate more resources to managing the impact of human rights in supply chains alongside the emergence of new European regulations on the subject.

<sup>1</sup>Challenges identified by S&P Global in 'Key sustainability trends that will drive decision-making in 2023' (available in [www.spglobal.com](http://www.spglobal.com)) and recognized by EDP as relevant

## 3.6.2 Future-proof organisation

### 3.6.2.1. Ethics and compliance

The EDP group assumes Integrity and Good Governance as one of its sustainable development principles, which is reflected in compliance with established legislation and ethical standards, upholding and promoting respect for human rights within its sphere of influence and ensuring governance of participatory, competent and integrity-based business.

Accordingly, to contribute to its sustainability objectives, since 2005 EDP has had a [Code of Ethics](#) that establishes group-wide ethical principles and commitments applicable to all activity, complemented by other policies such as the [Code of Conduct for Senior Management and Senior Financial Officers](#), the [Integrity Policy](#), the [Information Security Policy](#), the [Personal Data Protection Policy](#), the [Supplier Code of Conduct](#), the Code of Good Conduct for Preventing and Combating Harassment at Work, the [Policy of Respect for Human and Labour Rights](#), which are implemented through specific procedures.

In turn, there is a Compliance Management System which includes a range of policies, organizational rules and responsibilities, action plans and procedures defined at corporate level and applying to the whole group. Whenever necessary, corporate guidelines are specified by the business units, in order to meet the specific requirements of the different geographical areas and activities.

#### 3.6.2.1.1. Ethics

##### **Ethics Office (ETH) and Ethics Ombudsperson activity in 2022**

Since 2019, the **Ethics Office's** activity has been based on the design, management (and implementation as far as it is responsible) of **Ethics Programs**.

Having concluded the 19–21 three-year period and with it the business ethics program aimed at strengthening the Ethics infrastructure at EDP – the program was called "Raising the Ethical Building @EDP – a new program was designed for the 22–24 three-year period whose main

goal is, now, to strengthen the "substance" of business ethics in the Company's daily life – we therefore call the **program "Making Ethics Real"**.

In both programs, but with particular emphasis on the current program, one of the main objectives is the **alignment of the business ethics policy throughout the EDP group**, which is sought to materialize mainly through the sharing and implementation of practices in organizational matters, training, and communication.

In the first year of the new program, 2022, the Ethics Office and the Ethics Ombudsperson's activities focused on **increasing the Company's involvement with the Business Ethics Policy and strengthening employees' trust in the whistleblowing management process**, issues whose importance became more evident because of the ethical climate survey conducted at the end of the previous year.

As part of the efforts to further embed the Corporate Ethics Policy in the EDP universe, updating and revising the [Code of Ethics](#) was one of the most relevant initiatives, in which, while maintaining the essence of the Code in force, an attempt was made to update the document with new ethical topics and, as far as possible, make it more relevant and useful for all stakeholders. EDP's new strategy and purpose were incorporated, the commitment to an effective Speak Up policy was strengthened and the role of managers in exemplary behaviour was emphasized. The entire image of the document was revised and aligned with the Company's new brand.

Another important action in this line of increasing awareness of the importance of Ethics in the Company's activities was the dissemination, through meetings with management, of the results of the Ethics survey conducted at the end of the previous year. This sharing, carried out in all geographies, made it possible to identify the main areas for improvement in this matter and to encourage the corresponding mitigating action plans.

Similarly, training and communication in Ethics were also activities that marked the year 2022, as foreseen in the Ethics Program, having been developed several training sessions, this year mainly aimed at managers, and in which we highlight the face-to-face training "Approaching Ethics", held for about 170 middle managers, as well as the "Lead Now" sessions held for 50 new managers. In the live online version, we highlight the training, already started in 2021, on "Ethical Risks in Business", which this year reached 77 middle managers, and also

the "Leading Through Others" session for 30 top managers at international level. The overall completion rate of these sessions was 65%.

Most of this training was designed and implemented in cooperation with AESE Business School as part of the Ethics Chair held between the school and EDP.

Training in Ethics for Partners remained a priority and the smart learning map initiative developed last year continued to be replicated with the main suppliers. A new e-learning solution has since been built and will be launched in the first quarter of 2023.

Aware of the impact that adequate communication can have in disseminating an ethical culture, several notes on the importance of Ethics at EDP were published in the various internal channels during the year. Of special note was the global celebration, in October, of Ethics Day, as well as the publication throughout the 12 months of the year of the comic strip "Do the right thing!", that allowed to alert employees, through a "friendly" format, to several themes of Ethics and Compliance present in the Code of Ethics.

The **strengthening of employees' confidence in the whistle-blower management process**, a very clear recommendation resulting from the aforementioned Ethics survey, was addressed by revising the entire management model – processes, procedures, reporting channel – along with the emphasis given, namely in the text of the revised Code of Ethics in the second part of the year, to the speak up and non-retaliation policy.

As such, and taking advantage of the opportunity created by the publication in Portugal of Law No. 93/2021, of December 20, which transposed into Portuguese law Directive (EU) 2019/1937 of the European Parliament and of the Council, of October 23, 2019, on the protection of persons who report violations of European Union law, EDP revisited its performance in this area, and rebuilt the entire whistle-blower management model, seeking for greater effectiveness, efficiency and quality in the instruments made available to all stakeholders and, in particular, its employees.

The Ethics Office was therefore deeply involved, in partnership with the Compliance and Legal areas of EDP, and also with the Digital Global Unit, in the reconstruction of this model, which involved the redesign of processes, the drafting of new procedures and a new design of the IT support system – namely through the centralization of the multiple channels for reporting existing denouncements – and also its adaptation to the new processes created,

while maintaining the same technological platform that previously supported the corporate Ethics Channel.

The new model, which allows for full compliance with the legal provisions in force in Portugal, was also implemented at EDP R and constitutes an example of excellence that we believe will ensure the desired confidence of all stakeholders. Although in production since June last year, a transversal training session on the operation of the new model is being prepared.

The process of managing potentially ethical contacts – **responsibility of the Ethics Ombudsperson, shared in the new model of whistle-blower management with the Compliance Department regarding topics of a legislative and/or integrity nature** – followed its normal course in 2022. After analysis and if considered potentially ethical after investigation, the contacts are assessed by the Ethics Committee, which issues the competent opinions and informs the interested parties.

The **Ethics Ombudsperson**, with the support of the Ethics Office, is also responsible for supporting the activity of the Ethics Committees of EDP S.A. and EDP R, and participating in the meetings of the Ethics Committee of EDP B. In 2022 in particular, the Ethics Ombudsperson prepared the quarterly status reports for the Annual Ethics Plan 22, as well as the Whistle-blower Management Scorecards throughout the year.

### 3.6.2.1.2. Compliance

The EDP group undertakes to carry out its activity in strict compliance with current legislation and regulations, together with the promotion of responsible action guided by the highest standards of ethics and integrity, requiring its entities, employees and service providers who act on its behalf to conduct themselves in accordance with this commitment.

EDP therefore undertakes a **zero-tolerance policy for Compliance** in relation to any act that fails to comply with the applicable legal and regulatory rules, based on the principles of transparency and justice, to prevent and combat illegal acts, particularly bribery, corruption, money laundering and financing terrorism, among others.

To put this commitment into practice, EDP's Compliance & Internal Control (C&I) area is responsible for promoting it by implementing a Compliance Management System in line with International Best Practice, namely with Standard ISO 37301 – Compliance Management Systems, EDP SA having obtained the respective certification by an independent entity. EDP's Compliance Management System breaks down into nine components (see image next page)

consisting of different Specific Compliance Programmes (SCPs), as follows: (1) Integrity/Anti-Corruption; (2) Personal Data Protection; (3) Competition; (4) Prevention of Money Laundering; (5) Separation of Activities; (6) Environment; (7) Health and Safety; (8) Internal Financial Reporting Control System. This structure has harmonized the guidelines and methodologies of Compliance management throughout the organization and in different regulatory areas.

The Compliance Management System, as well as the respective SCP, are continuously monitored by the C&I and periodically subjected to internal and external audits, which may result in the identification of opportunities for improvement, considered for the purposes of improving compliance management.

In this context, a global Survey was also carried out in 2022 among all the group's employees to assess their perception and position regarding Compliance issues, as well as to identify potential areas for improvement.

**Corruption, bribery, fraud, money laundering prevention**

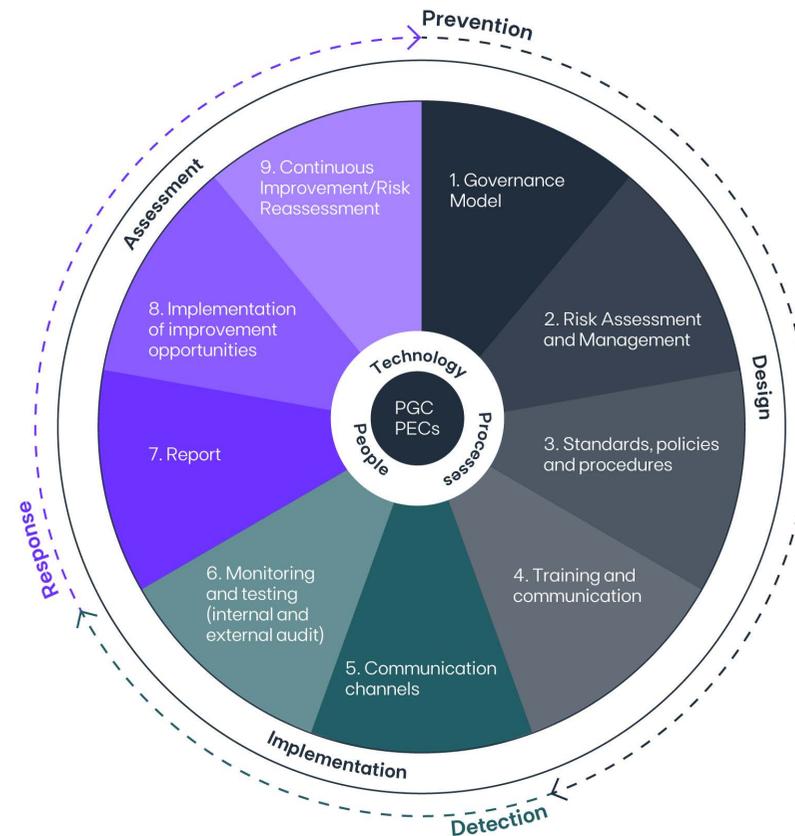
In EDP SA, EDP in Spain, EDP Renováveis and EDP Brasil, the group has implemented a Specific Integrity Compliance Programme, which is certified according to the requirements of Standard ISO 37001 - Anti-corruption Management Systems.

In this context, [EDP's Integrity Policy](#), which also applies to its service providers, reinforces the policy of zero tolerance for corruption or bribery practices, clarifies the prohibition of facilitation payments, and details the principles related to: preventing conflicts of interest; donations and sponsorship; gifts and invitations to events; contribution to political parties; relationships with politically exposed persons (PEPs); monitoring international sanctions; preventing money laundering and combating the financing of terrorism. This policy also establishes guidelines for carrying out integrity Due Diligence with third parties.

The principles and guidelines set out in the Integrity Policy are embodied in specific internal procedures, of which we highlight the following:

- the integrity due diligence procedure of third parties with whom EDP has relationships, namely suppliers, business partners/counterparties, beneficiaries of sponsorship/donations, employee candidates and other third parties, evaluating the various integrity risks (if necessary, using specialised external consultants) through analysis of possible existing legal proceedings, adverse news, involvement with PEPs, inclusion in sanctions lists, situations of conflict of interest, etc

**COMPLIANCE MANAGEMENT SYSTEM**



- the procedure for relations with PEPs, which provides for specific rules of action, foreseeing the need to record and communicate certain types of interaction
- the procedure for offers and invitations to events, defining rules of action and thresholds for their award and acceptance, as well as review and approval mechanisms
- the procedure for the attribution of donations and sponsorships, under which the integrity of the respective beneficiaries must be ensured, and the actual application of the support granted must be monitored

- the conflict-of-interest management procedure establishing rules that guarantee impartiality and transparency in decision-making and to prevent misconduct or inappropriate behaviour
- investigation procedure, defining the principles of action and rules to be followed in an investigation, involving five phases: preliminary analysis, documentary investigation, interviews, investigation and the release of a final report.

In 2022, 6,317 (2021: 6,395) third parties were analysed under the third-party integrity due diligence (IDD) procedure.

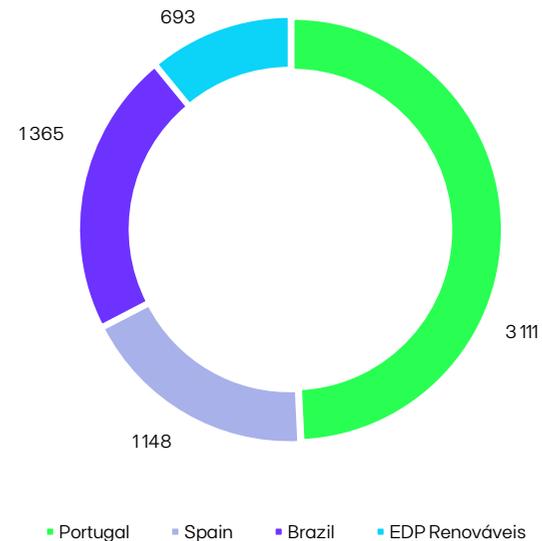
The conclusions of IDD are attributed a rating and set out in an opinion that includes specific recommendations on the approval of the transaction, the adequacy of the contractual conditions and monitoring of contract performance.

As part of its commitment to compliance, the EDP group provides various channels for making complaints, some of them global and others specific to certain matters or with a specific scope of application by company, country or subgroup, whose management is ensured by independent and impartial bodies. In this context, globally, one incident relating to corruption and bribery remained open in 2021, and 20 new cases were registered in 2022. Among the total incidents recorded, the analysis of 14 cases had been completed, by the end of 2022, of which two were found justified. These two cases triggered disciplinary actions against the contractors involved and an awareness-raising action was promoted among the respective teams. Specifically in the scope of Prevention of Money Laundering and Combating the Financing of Terrorism, in 2022 no reports were received, nor any suspicious operations identified at group level.

In 2022, training and awareness-raising actions were also developed across the board to ensure the strengthening of the culture of compliance and Integrity, complemented by specific initiatives developed at local level according to the needs identified, of which the following are highlighted:

- cross-cutting training "Compliance - The right way", addressing the principles and methodology of compliance management at EDP
- cross-cutting training "ComplianceFLIX | How I met Integrity", with practical cases relating to the application of the procedures
- monthly cross-cutting publication of comics "Do the Right Thing", illustrating principles of Ethics and Compliance.

### INTEGRITY DUE DILLIGENCE (# OF ANALYSED TRANSACTIONS)



In this context, a total of 25,637 participations were recorded in the various sessions available (2021: 23,978), corresponding to a total of 7,445 hours of training (2021: 7,706 hours).

In terms of ongoing improvement, the following initiatives are also highlighted throughout 2022:

- formalisation and public disclosure of the Corruption Risks Prevention Plan (covering all required EDP companies in Portugal) following the entry into force of the General Framework for the Prevention of Corruption
- review of the whistleblowing channels and creation of new "Speak up" channels, meeting the requirements of the European Directive on Whistle-blower Protection and its implementation into national legislation
- review / improvement of risk analysis methodologies and internal regulations on integrity, taking into account the changing context and continuous adherence to best practice.

## Data protection

Strict respect for privacy and protection of the personal data of its customers, employees, service providers, suppliers, partners and other stakeholders is assumed by EDP as a commitment throughout the value chain. In this context, the Specific Personal Data Protection Programme is one of the main cross-cutting programmes of EDP's Compliance Management System.

This commitment is set out in the [group's Data Protection Policy](#), which guarantees compliance based on observance of the following principles: (1) Lawfulness and purpose; (2) Transparency and Loyalty; (3) Proportionality; (4) Monitoring; (5) Privacy from the very start; (6) Responsibility and (7) Safety.

These principles are embodied in the different norms and procedures across the group that guide the actions of the various group companies and that address, namely:

- the Privacy by Design processes
- the risk assessments of processing activities and data protection impact assessments
- management of subcontractors
- the response to the exercise of rights process
- the handling of personal data breaches.

These are complemented by specific procedures and controls defined at the level of each Business Unit for the entire life cycle of processing activities, according to their respective exposure to Personal Data Protection risks.

In their relationship with customers and other data subjects, the group companies provide information on the data processing carried out, either by themselves or by their subcontractors, namely through the Privacy Policies available on their respective sites or informative disclaimers provided on data collection forms or in contractual clauses. In these documents, the EDP group entities identify, among other aspects, the purposes for which they process the data, the respective grounds for lawfulness, retention periods, if applicable, whether they share the data with other parties, as well as providing the contact details of the entity responsible for data processing and the contact details of the respective Data Protection Officer (DPO), through which the data subjects may exercise their rights in relation to the protection of personal data, request information or clarification about their data, and lodge complaints.

With regard to incidents with personal data, in 2022, the EDP group entities:

- received a total of 324 Customer complaints (2021: 364); and
- notified the respective control authorities of three breaches of Customers' personal data in Portugal (2021: nine) and two in Spain (2021: zero) Of these, were also communicated to data subjects, one data subjects in Portugal (2021: two) and zero in Spain (2021: zero).

	RECEIVED DIRECTLY FROM THE CLIENT		REFERRED BY THE CONTROL AUTHORITY	
	EDP COMMERCIAL CHANNELS	DPO	OTHER CHANNELS	DPO
PORTUGAL	258	37	29	0
SPAIN	0	0	0	0
BRAZIL	0	0	0	0

The management of this Specific Compliance Programme is based on a specific governance model, based on the Global Compliance System, which establishes the responsibilities and the paradigm of relationship between the different participants and which relies, in particular, on the coordination of the Compliance & Internal Control Global Unit, specific teams responsible for promoting the dissemination, knowledge, training and implementation of the Compliance programme in the respective areas of activity and with the Internal Audit Global Unit in the third line of defence, conducting specific audit work to verify the adequacy and effectiveness of the implemented control mechanisms. Whenever legally required, this Governance Model also includes the DPO.

Under the Personal Data Protection Compliance programme, a total of 11,619 participations were recorded in the sessions provided in 2022, corresponding to a total of 4,374 training hours (2021: 6,158 employees/3,976 hours). In this context, we highlight the cross-cutting training, "ComplianceFLIX | The Data Protection Officer", with the staging of practical cases from different areas of data protection and special awareness raising on personal data breaches.

With regard to ongoing improvement initiatives developed in 2022, the following stand out:

- the revision and updating of the SCP Governance Model, with the aim of systematising and clarifying the main areas of intervention, adjusting some functions and responsibilities
- the review process of the Personal Data Protection regulations, with a view to updating, better systematising, clarifying and streamlining procedures
- the identification and implementation of improvements to the Personal Data Protection Programme Management Tool.

### Fair competition practices

EDP promotes strict compliance with Competition rules, based on the commitments assumed in its Code of Ethics, its Integrity Policy, its Commitment to Healthy Competition and its Competition-related Specific Compliance Programme.

The Specific Compliance Programme (SCP) – Legal Obligations for Competition aims to strengthen the EDP group companies' guarantees of compliance with the legal requirements in matters of competition in Portugal, particularly with regard to contracts and the performance of its employees in accordance with the highest standards of ethics, integrity and competitive compliance, contributing to the sustainability and development of the markets in which EDP operates.

The SCP was approved at the end of 2019, with a focus on the EDP group companies operating in Portugal, comprising the following elements and documents:

- **Governance Model of the EDP group** in respect of compliance with national and European community competition legislation, which establishes the relationship model, the rights and the responsibilities of the various participants who act within the scope of the SCP
- **EDP group's Competition Manual**, which is required knowledge for employees. It contains the rules of conduct that must be followed by employees in their work, with a view to promoting strict compliance with competition law
- **training courses** among EDP group employees in Portugal on the basic concepts of Competition, the main rules of conduct to be observed and the consequences of non-compliance with competition rules
- **specific e-mail address** for employees to clarify any doubts they may have about the application of Competition rules

- **specific controls** for compliance with competition rules in the different business units covered. Such controls are periodically monitored by the heads of the different business units, with the support of the Competition & Energy Policy
- **checklist and standard clause** to ensure that contracts comply with the Competition rules. These rules also apply explicitly to EDP's participation in associations of companies
- **internal policies and procedures** regarding the activity of the EDP group, namely in matters of wholesale and retail offers and access to networks, in order to ensure that the principles to be followed in matters of Competition are respected.

2020 was the pilot year for the implementation of the SCP in the various EDP group business units operating in Portugal, the results of which were extremely positive, with proven adherence by employees and business units to fair jurisprudence practices. The business units presented evidence of their performance in accordance with the competition rules.

Since then, and based on the results obtained over the years, some opportunities for improvement have been implemented in the business units, with revisions to existing elements and new elements of the SCP approved, namely:

- update of the Generation Offers Procedure
- revision of the Competition Manual, with dissemination to all employees, with the sponsorship of the Chairperson of the Executive Board of Directors
- new Coordination Procedure for the notification of concentration operations to the Competition Authorities
- launch of a new training course in 2021 on the concepts of Competition and the main rules of conduct to be observed by employees.

Two online training courses are currently available to all EDP employees in Portugal regarding the Competition rules: the course, "100% Compliant – the Competition Game", launched in 2020, and the "Competition Quiz", launched in 2021. Both training courses have had very high access rates, over 70%, and the course launched in 2020 is part of the programme for welcoming new EDP employees.

At present, two legal proceedings of a competition law nature are ongoing:

- in the first case, EDP, S.A. and EDP Comercial were charged by the Portuguese Competition Authority (AdC) with entering into an alleged non-compete agreement with Sonae MC – Modelo Continente. This decision was appealed before the Portuguese Competition, Regulation and Supervision Court (TCRS), which reduced the fines by 10%,

to EUR 2.6 million and EUR 23.2 million, respectively. This TRCS decision was appealed before the Lisbon Court of Appeal. In April 2021, this court referred the case back to the Court of Justice of the European Union, which scheduled the trial hearing for November 2022. The decision is pending

- in the second case, EDP Produção is accused by the Portuguese Competition Authority (AdC) of abusing its dominant position in the secondary regulation band market, with the imposition of a fine of EUR 48 million. EDP Produção has appealed against the decision of the Competition Authority to the TCRS. This court confirmed the conviction of EDP Produção, which appealed this sentence to the Lisbon Court of Appeal in September 2022. Even so, EDP Produção has already been judicially ordered to pay the fine by AdC even before the trial and the final decision of the TCRS. Following this process, the lus Omnibus Association filed a citizen suit, anchored in the AdC decision, claiming the payment of compensation to all consumers in Portugal allegedly harmed. This process is suspended until a final decision is taken on the appeal by EDP Produção
- the EDP group is fully convinced that in neither case were offences committed.

A similar approach to preventing and mitigating practices that restrict competition is being implemented for the remaining countries, without prejudice to the codes and manuals already in place.

### **Internal Control System for Financial Reporting (ICFR)**

EDP, within the scope of its financial reporting obligations, has an Internal Control System for Financial Reporting (ICFR), consisting of a model for the evaluation and mitigation of financial reporting risks, through the monitoring of the execution of control activities and the identification of potential improvement actions and their implementation.

The EDP group's ICFR was developed and implemented based on the criteria established by the internal control regulatory framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO 2013") in relation to business processes and overall controls, and by the Control Objectives for Information and related Technologies ("COBIT") in relation to general information technology controls. In 2022, the ICFR mapped and monitored a total of 3338 controls that contribute to mitigating the risks in Financial Reporting, including those of fraud and information systems.

Currently the ICFR is undergoing an external audit by an independent body, and since 2010 it has been considered, in all materially relevant aspects, an appropriate and effective internal control system and is certified by the external auditor without conditions and comments.

### 3.6.2.2. Communication and transparency

#### 3.6.2.2.1. Responsible political involvement

##### Representation of interests

EDP group institutional engagement and external affairs are managed in accordance with legal requirements and in line with the principles of action established in the [Code of Ethics](#), [Integrity Policy](#) and other internal provisions of the Company governing its relations with stakeholders, in particular those of integrity, transparency and responsible political involvement. EDP is now preparing a Policy of Representation of Interest, to be enforced in 2023, but has throughout its activity followed its principle of responsible political involvement: It prohibits any contribution or association of the EDP brand to political parties, candidates, political campaigns/candidacies or to related people or entities. This covers the direct or indirect delivery of goods or provision of services on behalf of, or representing, EDP. It also includes the prohibition on using EDP resources for actions related to political processes.

None of the group's companies have made monetary contributions or contributions in kind to political parties, although permitted in some of the legal regimes in countries where the EDP group operates.

Nevertheless, EDP participates in public decision-making processes, and engages in activities with various national, European and international institutions, with a view to conveying to public bodies their legitimate interests and/or those of the sector, which it considers worthy of consideration within the scope of legislative processes.

These activities include:

##### 1. Awareness of specialized people and institutions

EDP Renewables undertakes awareness activities for specialized individuals and institutions according to local legislation.

In addition, and in accordance with US law, and at the request of US employees, EDP Renewables North America (EDPR NA) provides duly regulated mechanisms for the participation of employees in political processes and has established a policy action committee (PAC) called "EDPR NA PAC". The EDPR NA PAC is funded entirely by **voluntary personal monetary contributions** made by members of the PAC, who are employees,

according to US law. Decisions on which political campaigns to support are made with the approval of the PAC's Board of Directors, whose members are elected PAC members, also in accordance with US law.

The activities representing the interests of EDPR mainly involve the following awareness-raising initiatives, presented below which exclude the amounts under EDPR NA PAC.

- **Contributions to America Energy Action activities**

EDP Renewables North America contributes to the activities of America Energy Action, a social welfare organization established under Section 501(c) (4) of the US Federal Internal Revenue Code. This type of organization can legally participate in political activities by defending or opposing candidates for public office. However, these kinds of activities must be absolutely independent of specific candidates or campaigns: they can be undertaken for ideas, concepts or public interests.

- **Contributions to Non-Governmental Organisations (NGOs)**

EDP Renewables North America works with a number of organisations with social or environmental objectives, pursuing goals aligned with support for decarbonisation and the transition to a low carbon economy. This type of organisation can support a candidate with its own funds, but its communications cannot be coordinated by a political party, campaign or candidate.

- **Procurement of lobbying services**

EDP Renewables North America has lobbying consultants operating with the US Government and in some US states. These political consultants are prohibited from making contributions to candidates or political parties and campaigns on behalf of EDPR NA, to ensure that their activities never violate the prohibition on making political contributions, established with the EDP group.

## 2. Participation in the main European or international Sectoral or Industrial Associations

During 2022 EDP sought to raise awareness among the various stakeholders in the context of the European institutions (European Council, European Parliament and European Commission) on a number of issues central to sustainability in the field of energy, either proactively or as part of public consultations. The Energy Crisis brought upon by the Russian invasion of Ukraine enforced public European discussions on Market Design and Permitting, that revealed EDP group's commitment within the main European sectoral associations, in particular Eurelectric, WindEurope, Solar Power Europe ChargeUp Europe, European Distribution System Operators (E.DSO) or the European Federation of Energy Traders (EFET).

At the same time, to promote the development of the energy sector, its sustainability and efficiency, EDP strengthened alliances with similar parties to establish macro platforms for joint public positions that reflect the vision of the sector as a whole vis-à-vis the major decarbonisation commitments undertaken internationally. In this context, the following are of note, i) the argument for putting the development of renewables as key to guarantee the EU's energy independence, ii) the letters sent to European Commission representatives, for example supporting the RePowerEU plan and its objectives; iii) the various initiatives advocating for the publication of the Green H2 Delegated Act in order to materialize a clear framework for the development renewable hydrogen; and iv) the multiple contacts with decision-makers in different institutions seeking to contribute to opinion-forming and communicating the Company's views on such wide-ranging and decisive issues as the Market Design, Permitting, European Funds, and Biodiversity.

Membership and activity undertaken in global associations such as the World Business Council for Sustainable Development group (WBCSD); the joining at Partner level at the World Economic Forum, or at European level such as Eurelectric, or yet at national level, in the different geographical areas, such as the Portuguese Association of Electricity Sector Companies (Elecpor), the Spanish Association of Electric Energy Companies (Aelec), The Brazilian Association for the electrical grid (Abradee), The North American Solar Energy Industry Association, The American Energy Action, the Transport Decarbonization Alliance and others, clearly identify the shared and constructive path that the EDP group continues to build, advocating sound climate action, world sustainability and security, all aligned with [EDP's Human and Labor Rights Policy](#).

## **Advocacy to combat climate change**

Active participation preparing the COP27 in Egypt; the UN Compact continuous work pursuing the EDP all green by 2030 commitment; the preparation of Davos Annual Meeting in themes like CyberSecurity or Solving for net zero through industrial Clusters, or yet the Hydrogen Acceleration, built up to behaviour and positioning commitments among energy utilities in all of these fronts, fulfilling the corporate strategy on leading the energy transition, by creating superior value on a path aligned with the ambition of the Paris Agreement. The persistent advocacy in all representations of the Climate positioning, following the Paris Agreement as stated throughout EDP's policies and public commitments, is mapped in the group's Strategy, mirroring the transparent, scrutinized, and constructive positioning of the EDP group's growth.

The 2022 commitment towards a NetZero planet can be identified at the 74% of the TOP20 external representation being relevant and involved work on Climate position Organizations, through an investment of 2,5 million euros.

From our selected TOP20 representations of interest, 98% of the work was taken through Business or Sectoral Associations, and 2% through lobbying.

## 3. The direct or indirect Involvement of employees appointed/designated for this purpose

At European level, the transparency of lobbying activities carried out by appointed lobbyists is ensured through the publication of their activities in the [European Union Transparency Register](#), a public register in which organizations representing specific interests in the European Union register and provide up-to-date information on these interests. Internally, EDP group has developed a [Stakeholder Relationship Policy](#), with the definition of principles and guidelines for interaction with strategic groups, in particular Employees and Politically Exposed Persons and, based on four guiding commitments: Understand, Communicate, Trust and Collaborate. There is also an internal compliance platform for registration with PEP; another to record actions and contacts established (TRUST) and a shared map of EDP's external representations in society.

### Value of the activities of representation of interests

For the year 2022, the costs of representation of interests were around 6 million euros and related particularly to the decarbonisation of the economy, electric mobility, energy efficiency and security of supply. Facing the energy crisis and dealing with the European Market Design were strategic focuses, bringing Renewable Energies as key to guarantee Independence. The focus of advocacy work with the main national energy sector associations (UNESA, Eurelectric, American Wind Energy Association and TDA), above all, concerned matters related to the European Green Deal and market design, the National Climate and Energy Plans of the member states and biodiversity as a whole.

For details of lobbying activities undertaken in 2022, at global and climate action level, go to [www.edp.com](http://www.edp.com).

#### 3.6.2.2.2. Tax transparency

### The fiscal footprint of the group

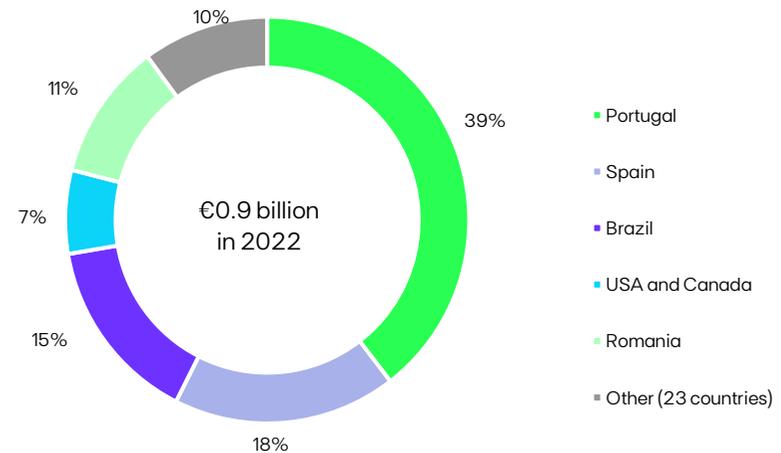
EDP is a utility present in 29 countries, the value chain of which includes the activities of production, transportation and distribution and sales of energy. These activities involve various types of taxes, levies and financial contributions which, when considered in a global manner, determine the level of taxation to which the EDP group is subject.

Of all the phases in the EDP value chain, its energy production activity is the one that contributes most significantly to the payment of taxes and other contributions.

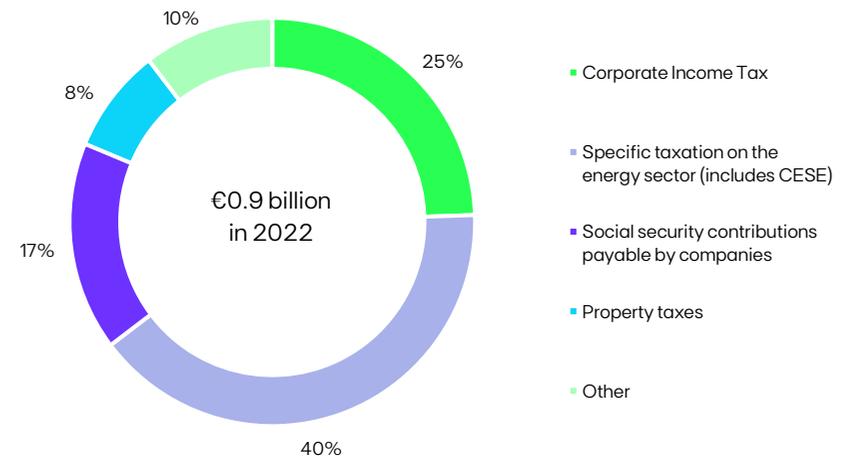
### Global contribution of the EDP group

In 2022, the EDP group's overall tax contribution to the public revenue of the various countries where it is present amounted to around 3 billion euros, of which 891 million euros corresponded to taxes and contributions borne (paid) by the EDP group and 2.1 billion euros to contributions to the State on behalf of other economic actors, as seen in the charts:

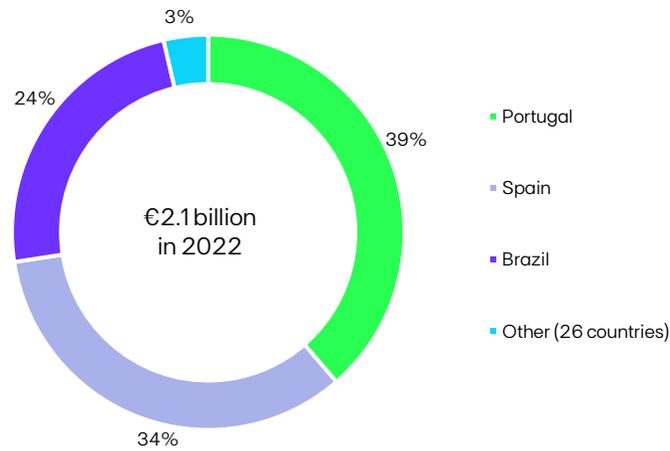
### TAXES BORNE (PAID) BY THE EDP GROUP, BY GEOGRAPHICAL AREA



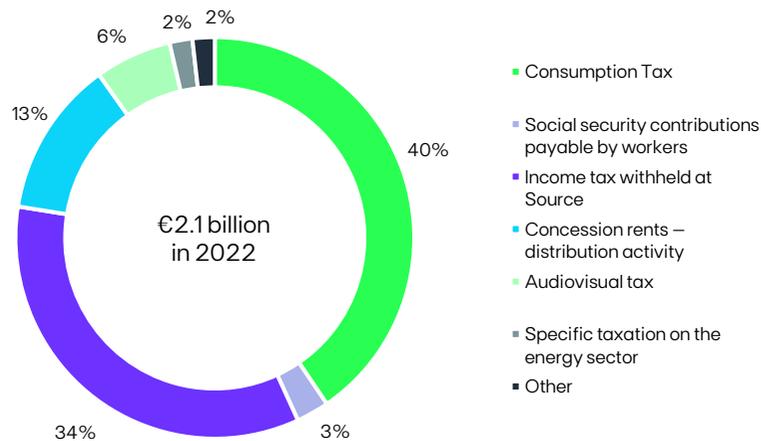
### TAXES BORNE (PAID) BY THE EDP GROUP, BY TYPE OF CONTRIBUTION



### TAXES COLLECTED BY THE EDP GROUP AND DELIVERED TO THE STATES (BURDEN OF OUR AGENTS), BY GEOGRAPHICAL AREA



### TAXES COLLECTED BY THE EDP GROUP AND DELIVERED TO THE STATES (BURDEN OF OUR AGENTS), BY TYPE OF CONTRIBUTION



Regarding the taxes borne by the EDP group, Portugal is the country with the highest level of taxation, accounting for 40% of total taxes borne by the EDP group.

Considering the set of taxes that are the burden of the EDP group, the most relevant tranche (34%) concerns specific taxation on the energy sector (including the windfall tax paid in Romania and Italy and the Extraordinary Contribution to the Energy Sector in Portugal – ECES), followed by income tax (24%) and, finally, social security contributions borne by companies (17%).

As regards income taxes, in the main countries in which it operates, the EDP group is subject to nominal rates of taxation varying between 16% in Romania and 31.5% in Portugal, adding municipal and state surtaxes to the nominal rate in the case of companies located in Portugal.

In Portugal, taxes borne (paid) in 2022 amounted to 352 million euros, essentially underlining the burden of specific taxation for the energy sector, of which 52 million euros refers to the ECES, and 74 million euros of social tariff. To these amounts should be added 77 million euros of social security contributions payable by the companies and 92 million euros relating to other taxes and levies.

With regard to taxes collected by the EDP group and delivered to the states where it carries out its activity (third-party costs), this value rose to 2.1 billion euros in 2022, mostly associated with the collection of excise taxes (e.g.: VAT).

#### Specific taxation for the energy sector in 2022

In the context of energy emergency and with a view to tackling high energy prices, Council Regulation (EU) 2022/1854 of 6 October 2022 (Regulation) came into force, which provided for, among other things, the introduction of price cap mechanisms for market revenues obtained by electricity producers from, essentially, renewable energy, and a temporary solidarity contribution applicable exclusively to companies active in the crude oil, natural gas, coal and refining sectors.

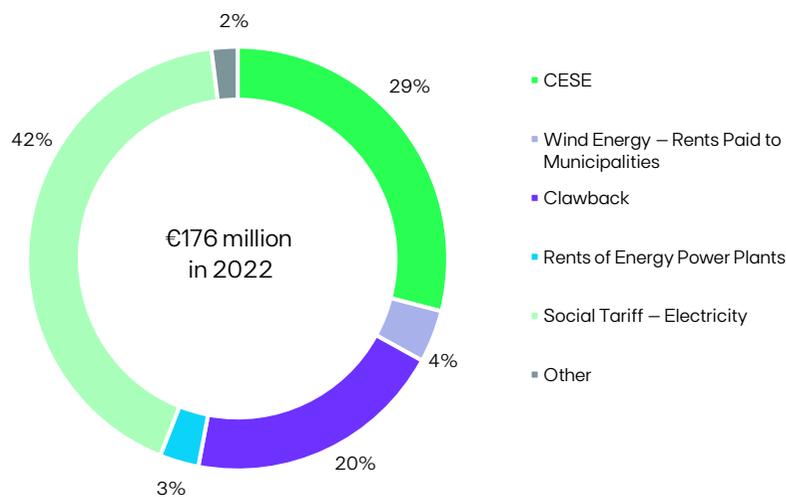
Although the rules contained in this Regulation are aimed at creating standardising measures in the European Union in response to rising energy prices, certain countries where the EDP group is present have introduced unilateral measures, giving rise to the payment of windfall taxes in Romania and Italy, amounting to approximately 95 million euros and 9.5 million euros respectively.

Nevertheless, based on the set of countries where the EDP group operates, Portugal continues to be the one with the highest level of energy taxation, both in the number of taxes and in amounts collected, having represented, in 2022, a charge of 176 million euros, as presented here:

- The social tariff consists of a discount on the electricity bill allocated to economically vulnerable consumers, the number of which has been extended over time, and which is fully financed by ordinary electricity producers. In 2022, the amount borne by the EDP group in this respect amounted to approximately 74 million euros

- In 2022, EDP group paid 51.5 million euros by way of ECES. This tax is on the net assets of the production, transport, distribution and marketing of electricity
- The mechanism to restore competitive balance between electricity producers operating on Portuguese territory and electricity producers operating in Spain (known as clawback) was created following the introduction of the Impuesto Sobre el Valor de la Producción de la Energía Eléctrica in Spain. The latter was suspended in Spain during 2022, and Portuguese legislature also provided for the suspension of clawback for the same period. However, the chart shows an amount paid of approximately 36 million euros, which corresponds to payments for the years 2019 and 2020.

**SPECIFIC TAXES AND CONTRIBUTIONS ON THE ENERGY SECTOR BORNE (PAID) BY THE EDP GROUP, IN PORTUGAL, IN 2022**



### 3.6.2.3. Transforming our Business

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
	Investment in R&D+i	289	1,000 M€
	Investment in digital	532	1,000 M€

#### 3.6.2.3.1. Digital transformation

EDP's **Digital Global Unit (DGU)** has the mission of defining a global technological strategy and vision for the group, making EDP a truly digital organisation, integrating digital technology into its business domains and transforming the way it works and delivers value. In 2022 the DGU progressed to version 2.0, with a new organisation guided by three main objectives: (1) more global focus, enhancing an integrated and transversal approach to all the group's regions, (2) more digital, accelerating a digital transformation focused on value creation, and (3) closer to business, strengthening the partnership relationship with the different business platforms.

The **energy transition** imperative has a profound impact on the energy sector along the value chain, requiring both an increase in electricity consumption in the final energy consumption mix and an increase in renewables in the electricity production mix. These two conditions imply not only a change in technology and customer behaviour, but also a more robust integration of energy systems, only feasible through a true **digital transition**. In this context, digital transformation plays a key role in the Energy Transition - digital transition technologies such as Cloud, Big Data & Analytics, Artificial Intelligence, IoT, AR/VR and Blockchain will be key for the energy sector in its energy transition journey, as enablers and also as accelerators.

In this way, digital transformation is a central part of the EDP group's strategy and is fundamental to achieving the ambitious commitments of the 2021-25 strategic plan and EDP's vision of leading the energy transition. Therefore, EDP has committed to invest a total of €1 billion CAPEX in digital transformation in the period of the present strategic plan.

Digital transformation at EDP is based on three key points:

- **digital strategy**, setting priorities for digital transformation and ambitious targets in close collaboration with the business, and monitoring developments with an integrated overview
- **digital products**, accelerating the digitalisation of business with the introduction of new technologies and digital tools, which create value for all EDP stakeholders
- **digital culture**, driving the adoption of new, agile and collaborative ways of working, and the attraction, development and retention of talent.

EDP's digital transformation is transversal to all businesses, and to all its people, processes and tools. In addition, it has a transversal contagion effect on the group's wider stakeholders' ecosystem, with special emphasis on the digital acceleration of partners and suppliers, in Portugal and in the different countries where the group operates.

#### Digital Strategy

To steer the group towards the intended digital transformation, ambitious objectives have been set in the group's various business and operating strands, reflected in the group's **digital KPIs**. By 2022, some of these Digital KPIs have already reached the goal set for 2025, according to:

Strategic pillar	Target 2025	KPI 2022
Digital Culture and ways of working	75% Agile adoption in IT	76%
Data centric decision making	90% Predictive maintenance in generation	65%
Efficient operations	95% Digitalized processes	83%
Digital 1 <sup>st</sup> and new business	70% Customer selfcare interactions	72%
Zero trust security	≥740 Cybersecurity BitSight rating	810

The levels achieved by these digital KPIs reveal EDP's robust digital performance, which has allowed the group and its businesses to reach high levels of **digital maturity**, according to the annual assessment carried out by external entities.

In 2022 the **digital roadmaps** of each group platform were also updated, defining a digital ambition both at group level and for each business, prioritising and giving visibility to a group of digital initiatives focused on accelerating value creation.

## Digital projects

The adoption of disruptive digital solutions by the business accelerates its digital transformation, boosting performance improvement and value creation for the different stakeholders, involving them in the various stages of product development.

As of mid-2020, and the current digital product portfolio of Digital at EDP covers four distinct typologies, depending on their duration and scope, namely:

- **digital boost:** integrated and transformational solutions, which promote significant changes in organisation, processes and ways of working, of entire areas (development >6 months)
- **MVP (Minimum Viable Product):** solutions, based on Agile methodologies, that deliver a tool ready to operate with the necessary and sufficient functionalities for the business in a short period of time, and that can be subsequently scaled (development 3–4 months)
- **scale-up:** solutions that allow a previously delivered solution to scale up with additional functionalities, integrations and/or scope, boosting the adoption and impact of the original solution, as in the case of MVP, for example, (development <3 months)
- **quickWin:** agile and pragmatic solutions that solve a business problem by leveraging standard tools like Office365, PowerBI, MSTEams, PowerAutomate, or new ways of working, like Virtual Communications, Design Thinking (development <1 month).

In 2022, EDP focused on delivering more global solutions, transversal to the group's different businesses and regions, leveraging synergies, opportunities and efficiency, **with more than 100 digital products having been delivered** to the business during this year, of which we highlight:

- **Digital4Vega:** a solution that uses artificial intelligence to predict vegetation growth near the power grid, supporting the identification of necessary interventions
- **trading decisions tool:** analytical models to support renewable energy traders' decision-making in scenarios of uncertainty or volatility, reducing the associated risk
- **documents & files security:** cataloguing, cleaning and migrating ~120TB of files to the cloud, boosting security and employee productivity

- **due diligence automation:** automation of the Due Diligence process, ensuring compliance with the procedure established by EDP in alignment with the money laundering law
- **EDP Yes (You Empower Society) website:** independent website for the presentation of all the group's social investment projects and respective content management
- **analysis of the proximity of fires to power lines:** solution for monitoring fires close to power lines, triggering the dispatch of a team to the field to assess/prevent damage to assets and the population
- **customer communications' centralized management:** application for centralized management of customer communication templates and massive change management, making communication with customers clearer and more effective
- **fleet Management Tool:** mobile application that allows employees to book service vehicles, including the possibility of "offering a lift", reducing the environmental impact of corporate travel.

## Digital Culture

Digital transformation is only possible with the change of the organisation itself, implementing a digital culture common to the entire group, materialised in the adoption of new ways of working and a digital mindset by all employees.

For the implementation of this digital culture, in 2022, EDP stepped up the pace for developing different digital communication and collaboration initiatives, such as:

- **digital talks and clinics (seminar):** interactive sessions in online format, to increase knowledge on digital topics, with 66 sessions having been promoted in 2022 that addressed topics such as artificial intelligence, cybersecurity, blockchain and automation and that made known some projects developed in the EDP group
- **DGU Weekly:** weekly newsletter sharing the main events and progress made at digital and technological level in the EDP group by DGU
- **Digital Global Community:** virtual community that promotes collaboration and sharing of knowledge and experience on digital technologies and methodologies (e.g.: IoT, AR/VR, Blockchain, Agile), currently with over 1,700 members

The creation of this **Digital Global Community** resulted from the strategic review carried out in 2021 on the positioning and objectives of the 9 Virtual Communities developed in 2019, which led to 4 Global Communities being launched in 2022, including this one dedicated to Digital. The launch of this new Community – part of initiative #21 of the Changing Tomorrow

Now... With You programme, which is part of the strategic axis Future proof organisation – developed by the Digital Global Unit (DGU) in partnership with P&OD, aimed to bring together employees with high knowledge and experience in the digital area, as well as those with an interest in increasing their knowledge of the topic, promoting a more global, agile and efficient company. New dynamics were created in the communities that, combined with the pre-existing ones, contributed to an increase in participation.

Within the scope of **digital training and upskilling**, training is a decisive element in the development of the employee's digital skills. In 2022, EDP continued to strengthen the diversification of its training offer in digital topics, complemented by informal on-the-job and collaborative learning. In addition to the focus on e-learning courses produced in-house, this year the offer was enriched with the subscription and availability of the Udemy platform, reinforcing the democratisation of access to content in self-service format.

The training offer of digital content, provided by EDP University with the support of the DGU, addresses themes such as Digital Transformation, new ways of working, Design Thinking, Cloud, AI and advanced analytics, among others. In 2022 there was a high level of performance in digital training: 9,095 employees of the current staff were trained in digital topics, and during the year 31,239 hours of training were given, of which 95% were given in remote formats (live online or e-learning), providing increasingly flexible and global learning.

At the same time, EDP has been strengthening its focus on training group employees in the use of collaborative and productivity tools, which are increasingly essential in a hybrid working model supported by technology.

Externally, EDP also has a proactive presence in **international forums** on digitalisation, such as participation in Eurelectric working groups (e.g.: [Digitopia Working group](#)), where it contributes to the sharing of best practice and promotes the development of the electricity sector at European level, and leadership and participation in R&D projects in the sector, critical to its transformation and digitalisation (e.g.: [www.e-redes.pt/pt-pt/transicao-energetica/projetos-europeus/euniversal](http://www.e-redes.pt/pt-pt/transicao-energetica/projetos-europeus/euniversal)).

Additionally, EDP also participates in initiatives that promote **digital transformation and inclusion**, of which we highlight Digital with Purpose and MUDA.

- **Digital with Purpose**

After EDP joined Digital with Purpose (DWP) in 2021 – an initiative of the Global Enabling Sustainability Initiative (GeSI), whose main objective is to promote the progress of the technology industry combined with sustainable practices – it participated, in 2022, in the **DwP Assessment**. EDP's result in this evaluation allowed for an increase of one level in the classification attributed by this organisation in comparison with the previous year. Additionally, EDP sponsored and actively participated in the DwP Global Summit 2022 event, held in Lisbon on 23 September 2022.



- **MUDA**

The digital projects developed for the different EDP group business units resulted in the creation of a number of products contributing to the digital inclusion of customers: Making services available online, electronic invoicing, interaction through mobile applications and attendance by virtual assistants are some of the products that improve service efficiency and speed, as well as customer satisfaction.



EDP has been a partner of MUDA – Movimento pela Utilização Digital (Movement for Digital Utilization) since its launch in 2017. Promoted by several private entities and the Portuguese State, it has merited recognition from the European Commission since 2018, under the DESI (Digital Economy & Society Index), namely for the actions it developed to enable all citizens to have access to information (i.e., reducing information-exclusion) and benefit from digital transformation through the acquisition and development of digital skills (inclusive and participatory).

In 2022, the following themes, developed or supported by MUDA, in which EDP actively collaborated, were of note:

- **digital and social inclusion with democratisation of internet use in Portugal, including:** (1) The "EUSOUDIGITAL" Programme to increase the digital literacy of adults in the use of the Internet, through 175 centres and +5,000 volunteer mentors; (2) "MUDA NUM MINUTO" Programme on RTP1, RTP3 and Antena1; (3) "Chave Móvel Digital para todos" Programme extended to services in companies, with EDP being a pioneer
- **Encouraging the use of online business and state services with "MUDAR É GANHAR", including:** (1) Activation of more than 1M codes with the participation of 1.5M people, offering +5,700 prizes in 5 months of the contest; (2) EDP's contribution with +127k codes activated (top 3), +86% vs. the previous year, and award of ~1,200 prizes
- **EDP's active participation in the Digital First Initiative**, with the aim of guiding the determination of targets and public policies for the Digitalisation and Administrative Modernisation of Portugal that will enable a Digital First economy and society to be built. The results of this initiative will be presented at a conference in March 2023
- **Promotion of EDP initiatives on the news portal [MUDA EM CASA](#)**, in which articles were published on EDP Services such as Planeta Zero EDP, NOS and EDP together for a greener future and how to optimise energy consumption, with the help of EDP.

### 3.6.2.3.2. Innovation

#### Overview

Innovation has long been a traditional investment priority for EDP, with EDP Inovação (EDPI) as the key promoter for innovation within the group. It was established in 2007 with the objective of creating an autonomous entity responsible for internal innovation activities as well as fostering stronger links with the entrepreneurial ecosystem.

EDP's innovation operating model is based on a fast adopter logic with a well-defined purpose of accelerating new businesses with impact and promoting the rapid adoption of innovative solutions to lead the energy transition. It seeks to solve the energy transition problems through the integration of new technologies, processes, and products, as well as innovative business models in EDP's business to enhance competitiveness and create value for stakeholders.

EDPI follows an Open Innovation philosophy that engages and promotes adoption through three innovation paths that act in parallel and complementary to one another, fed by a

transversal sourcing process, namely: internal delivery (innovation portfolio developed internally), external partnerships through the open innovation ecosystem (start-ups, corporates, universities, among others), and external investments through EDP Ventures.

#### INNOVATION STRATEGY TO BE DELIVERED THOUGHOUT 3 INNOVATION AVENUES



These innovation avenues are supported by the right funding and investment, coordination, and expertise development to ensure EDP is at the forefront of market trends and innovation. EDPI also ensures the development and management of the infrastructure to disseminate innovation culture and best practices across the organization, fostering both entrepreneurship and intrapreneurship.

EDPI focuses on seven (+one) innovation domains aligned with corporate strategy and market trends, which positions EDP along the energy industry value chain.

- Renewable energies, their integration and flexibility, to help EDP achieve its renewable energy targets
- Networks, an enabler of the energy transition
- Distributed energy systems that support B2B and B2C customers in developing their distributed generation solutions
- Green hydrogen to support the energy transition in sectors whose activity is preponderantly dependent on carbon-emitting solutions
- Energy storage and flexibility, which tests new storage technologies, flexibility management

- Sustainable mobility, which supports EDP customers in their transition to electric mobility and provides associated services
- Decarbonisation of energy uses, which supports EDP customers' decarbonisation efforts by developing new solutions and speeding up their adoption
- Moreover, EDPI continuously searches for new solutions. The “Open Box” domain creates space for ideas/projects to be developed that do not fit rigidly into any of the other domains.

start delivering the first opportunities within the innovation funnel. 2022 also marked the return of the face-to-face events, with editions of the Free Electrons and Energy Starter, in Chicago / São Paulo and Oviedo, respectively, and a large presence of EDP teams at the Web Summit taking the Innovation at EDP and its message to the largest global Innovation and Technology conference. In terms of investments, this was also a particularly exciting year, with new portfolio companies totalling ≈€14 million invested.

Overall, 2022 was a very important consolidation year, setting the stage for the ambitious goals for the forthcoming years.

### Internal delivery

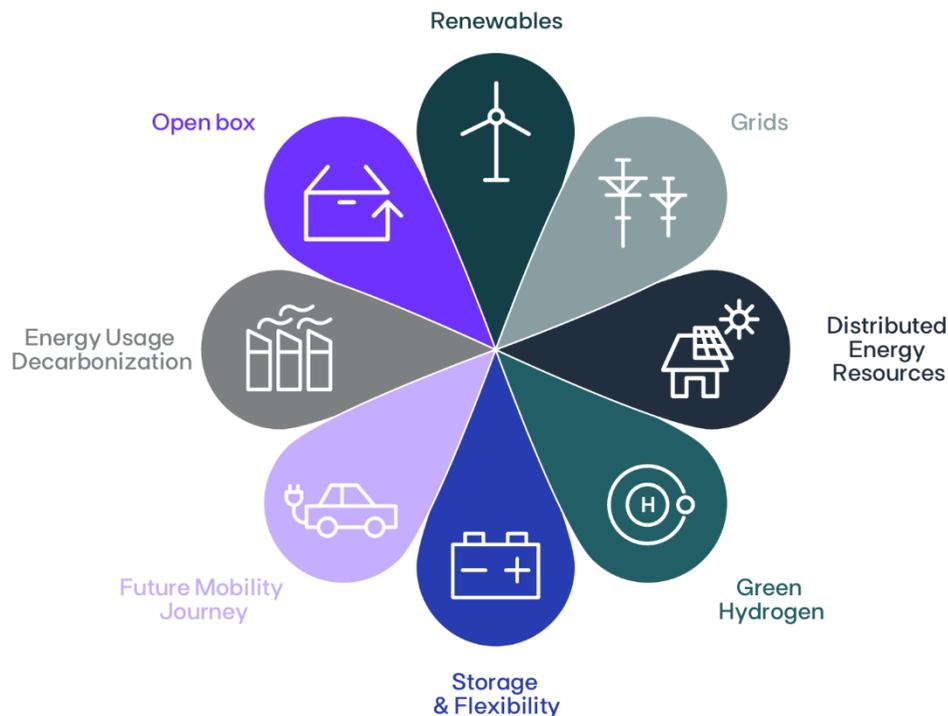
This was the first year of the new internal incubation process, developing an internally sourced portfolio (though internally and externally scouted), supported by a de-risking funnel from opportunity to scale-up solutions & businesses, aligned with EDP strategy and priorities.

20 new emergent business opportunities (EBO) were submitted for evaluation of a global innovation decision committee. Based on its merit to move-forward, and competition for resources between opportunities, 11 EBOs were selected. Out of these, three were later stopped at the Validation phase and today eight impactful projects are moving on. 2022 set the stage for a business scale-up expectation already in 2023 with two projects in the build phase.

Below are some of the projects in the funnel:

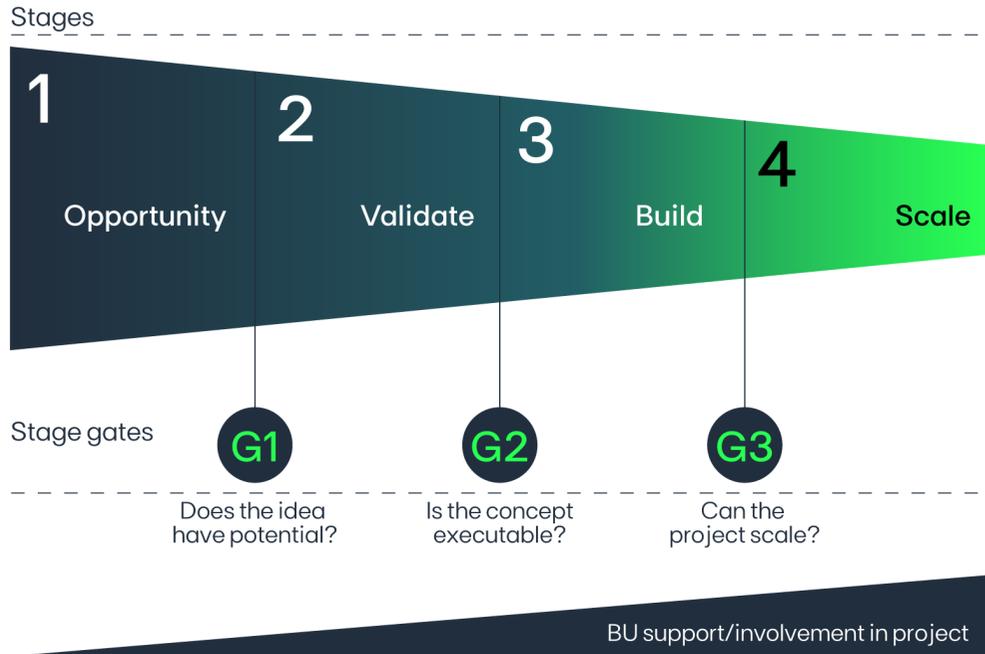
- in the validate phase - The Automating PVs Installation project – with the objective to incorporate advanced solutions to automate critical construction tasks of utility-scale solar PV power plants. Relevant cost savings can be achieved by a mindset shift of the installation process from construction to manufacturing
- in the build phase - The Going Net Zero project – with the objective to help C&I customers to decarbonize by a digital platform able to offer fully automatized one fits all emissions assessment and reporting with advisory-based service, able to prescribe detailed reduction plans.

All these 11 EBOs involved six different EDP business units and more than 100 people across geographies.



### 2022 in summary

Last year marked an important milestone at EDP in innovation: Following the definition of the innovation model last year, 2022 was a year of consolidation. EDPI aligned and prioritized its opportunity spaces along its domains for greater team focus and also reinforced its team to



**Open ecosystem**

The year 2022 represented a return to the execution of Open Innovation programs in face-to-face format, particularly the Free Electrons (founded by EDP, it is already in its sixth edition with a total of +4,000 start-up applications and +\$80M investment) and Energy Starter programs, with execution in multiple geographies, as well as the carrying out of pilot projects with start-ups. Among the multiple programs in which EDP was involved in 2022, there were +1,000 start-ups evaluated, +100 meetings to explore opportunities with start-ups and nine pilots started with new solutions and technologies.

- In 2022, two face-to-face events of the Free Electrons programme were held in Chicago and in São Paulo. In São Paulo, EDP was the main host, receiving 15 start-ups, more than 30 intentions of pilots, five of which are pilots with EDP. There was also an open day of the Program with an exposure to the Brazilian ecosystem of Free Electrons projects and initiatives, involving more than 150 participants in person and almost 500 digitally
- During the year, the Energy Starter program was restructured in line with EDPI’s recent innovation model and corporate strategy, comprising three verticals: Grids, Renewables

& Green Hydrogen, and Customer Solutions. Within Grids and Renewables & Green Hydrogen, the first session took place with four pilots approved, as well as a face-to-face bootcamp in Oviedo. Sessions on Customer Solutions are expected for 2023. The Energy Starter program engaged more than 100 people from EDP in multiple geographies and business units

- From the pilots kicked off in 2022 the most remarkable ones are with Power to Hydrogen, a US-based start-up focused on electrolyser technologies, that kick off a two-year pilot with a consortia formed by EDP and three other major energy player across the world which can lead into a Venture Capital investment; the second pilot project to highlight is a collaboration between EDP Innovation and E-REDES to further develop technologies for voltage control together with three start-ups – Elexys, Idenergie and IONATE – that will support grid improvement and reliability.

**Ventures**

2022 was a remarkable year for EDP Ventures:

- record year in terms of investment: ~14M€ of venture capital investments (compared to ~5M€ of average annual investment in 2018-21)
- seven new portfolio companies added to the portfolio, across different domains
- first investment in Green H2 domain (Hysilabs, which developed a novel hydrogen carrier technology able to transport and store H2 in a liquid state)
- first investment in Singapore (Green Li-ion, which developed a technology to rejuvenate li-ion batteries)
- significant rounds raised by portfolio companies, namely Sepio Systems, Probely or Yotta Energy
- EDP Ventures has sourced +550 start-ups
- sponsorship of Ecosummit and Energy Tech Summit event, giving additional visibility to EDP Ventures within the VC climatech ecosystem.

Current portfolio is composed by 38 companies across all the innovation domains from several geographies, from USA to Australia and offers high valuation and exit perspectives which result from solid pipeline and high internal and external sourcing efforts.

During 2022, there were several collaboration projects between companies in EDP Ventures portfolio and EDP business units, in several geographies, contributing to innovation within the group; currently, +90M€ of total contract value was closed between portfolio companies and

EDP group. Several opportunities with relevant tickets are in negotiation and expected to close during 2023.

### Innovation enablement and expertise

Last year market a significant dissemination of the innovation culture across the organization: EDPI initiatives reached 830 internal audience FTEs (with 15% participating in more than one initiative) and a further 1,482 colleagues from 29 corporate areas and 22 different countries via our online Innovation Global Community.

Below are some of the highlights:

- the Innovation Immersion Program in Tel Aviv immersed 15 colleagues from 12 Business areas and three Geographies. In 1Q 2023, to the program will take and extended delegation to visit Singapore's innovation ecosystem
- the Innovation Global Community, with its +700 subscribers from 15 countries and 22 Business areas hosted 16 live sessions and five workshops with over 1 500 participants since its launch in February 2022
- once again, EDP returned to the Web Summit conference with a delegation of 185 EDP colleagues from four countries and 15 business areas, and Executive Board speaking opportunities on the Planet Tech and Corporate Innovation stages. During the four days EDP registered 1,230 participants' engagements on the EDP stand and in parallel over 600 meetings were held with prominent stakeholders that led to +200 qualified Innovation leads
- groundbreakers brought together 82 colleagues, from 12 business areas, ten nationalities and the five Innovation hubs at EDP, the first in person meeting of the Innovation Global Team.

In parallel, EDPI was also particularly active this year in the development of expertise on the Energy Transition, bringing significant value added to the Business Units and for top management decisions.

### Final remarks

Overall, 2022 was very important consolidation year, which reinforced the importance of the innovation at EDP, and of EDPI in catalysing EDP's businesses and providing optionality for potential future businesses for the group.

### 3.6.2.3.2. Research and development

EDP NEW – Centre for NEW Energy Technologies is EDP's Research and Development Centre, fully dedicated to the development and implementation of innovative / R&D projects across different areas of the energy sector.

NEW adopts a collaborative approach to innovation, partnering with EDP's business units and multiple European institutions, companies and universities to develop large R&D projects leveraged by public competitive funding for Research and Innovation – like the European Commission's Horizon 2020 and Horizon Europe programs. EDP NEW's current project portfolio includes nearly 40 ongoing projects covering all the 7 (+1) innovation domains in EDP's innovation model. These projects focus on developing, testing, validating and scaling-up innovative concepts, technologies and business models that contribute to EDP's objectives and to the global decarbonization targets. Organized around five technical areas closely matching the innovation domains, NEW currently boasts over 50 researchers with distinctive and increasingly diverse academic backgrounds and profiles and complimentary skillsets.

Since its establishment in 2015, NEW has secured close to €30 million in funding for R&D and innovation for EDP, which have supported NEW's growing and sustainable operation based on an agile, project-based structure complimented by international technical consultancy and partnerships.

NEW is also continuously scouting for emerging solutions and technologies in the energy sector and beyond, crucially supported by its wide network of 700+ top tier partners across Europe, to continue to create knowledge and help shape the energy future through applied R&D.

# Case studies: key projects at EDP NEW

## EU-SysFlex

EDP was one of the leading partners in the recently concluded R&D project [EU-SysFlex](#). This project aimed to contribute to the acceleration and massification of deployment of renewable energy. For four years, the project's 34-partner consortium developed and tested several flexibility tools to help ensure a stable, safe and reliable integration of large shares of variable renewables in the European power system. Pilots of the various solutions created were carried out in 6 different European countries, including Portugal, with EDP taking the lead of the demonstrations of two concepts. One was a utility-scale Virtual Power Plant (VPP), for the joint operation and management of variable (Wind) and controllable renewables units (Hydro). The successful tests in operating EDP's assets established the VPP as a powerful generation portfolio management tool which may prove an alternative option to enable the participation of variable RES in energy markets. The other concept, the Flexibility Hub, is a new market platform to source and integrate flexibility from the various players in the power system – consumers, grid assets – and then use this flexibility to ensure grid stability and reliability.

## POCITYF

The [POCITYF](#) project is coordinated by EDP and is aimed at creating positive energy blocks – zones of a city with an annual positive energy balance: locally-produced renewables energy superior to the energy demand. The project covers the heritage cities of Évora, Portugal and Alkmaar, Netherlands, as well as six more fellow cities spread across Europe.

Through the implementation of these positive energy blocks, POCITYF aims to transform the urban fabric of these cities, with relevant cultural and historical areas, more affordable, healthy, accessible and reliable for its citizens. In Évora, building integrated PV innovative solutions, such as shingles and glass, will be installed respecting the architectonic and cultural heritage of the city. Additionally, a Community Solar Farm will be built, and second life residential batteries will be used, together with a P2P energy trading platform and control algorithms to provide flexibility and market services.

### 3.6.2.4. People management

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
	Employee Engagement	84%	High performance company
	Female employees	27.5%	30%

#### 3.6.2.4.1. Our purpose

EDP is committed to evolving as a global, agile and efficient organisation, with a people-centred approach that seeks to attract, develop and retain the skills needed to meet the challenges of the future.

In order for EDP to be a truly future-proof organisation, an ambitious People and Organisation (P&O) strategy has been defined, with the intention of fulfilling the following in the coming years:

- provide its people with a human and meaningful experience, through global purpose and skills, and concrete measures of wellbeing and flexibility
- focus on attracting and retaining internal talent, through a strong global strategy of employer branding and onboarding, as well as a customised career and development strategy
- foster growth opportunities for all employees in an engaging manner, in line with a global development mindset
- invest in collaboration and promotion of mobilities as a way of sharing knowledge, and individual and organisational development
- treat diversity, equality and inclusion as catalysts for innovation
- promote agility and efficiency through the improvement and digitalisation of processes in order to reduce decision-making time
- use the global tools of *people analytics* as instruments to support decision-making and strategic planning.

The major events of 2022, which continue to transform the global labour market, reinforce the importance of today for the changes of tomorrow and of preparing EDP for the challenges of the future whilst at the same time meeting the needs of its people, which has grown significantly compared to 2021:

- increase of 7.4% in the global population (906), considering the inclusion of six new markets and 19 new headcount companies, representing 17 new nationalities
- increase of 1.6% in voluntary turnover (5.7%)
- increase of 0.8% in the global representation of women (27.5%) and of 1.9% in leadership positions (28.4%)
- generations Y and Z already represent around 61% of the global population, with an increase of 5.5% of generation Y in leadership positions (42%)
- growth of 1.4% of people working outside their country of origin (3.6%), in a reality where 60% of the global population continue to work in a hybrid model.

Considering the current size of the EDP group, the work developed in terms of people management in 2022 was based on the activation of a new people narrative through the integration of a global purpose, supported by 12 human skills, in the main people management processes, strengthening the sense of belonging and pride in employees:

### Our energy and heart drive a better tomorrow

#### 3.6.2.4.2. Our energy

Is the strength, legacy and motivation of EDP's people to deliver green energy continually, leading to an increasingly empowered organisation.

#### Organisation

EDP seeks to promote the sharing of best organisational practices and ensure the delegation of skills and digital tools suitable for the fulfilment of its objectives.

In 2022, the transition to a management model by business platforms continued, with the unification of the Generation platform (Portugal and Spain) and the implementation of the Client Solutions, Networks, Shared Services and Energy Management platforms. In addition, platform KPIs were added to the organisational performance management model and global guidelines were approved for a greater Span of Control, a decrease in the number of

management levels (from seven to five) and a general reduction in the weight of Enablement Functions.

### Efficiency and decision-making

In 2022, the efficiency of the P&O and decision-making systems was also assured, with the implementation of various improvements that allowed a reduction of more than 1,300 hours of work and the introduction of five new attributes in the About Me platform, allowing greater refinement of people data.

To continue improving the efficiency of its processes, a three-year digital roadmap was also followed up in 2022, with the aim of improving digital maturity, governance model and P&O reference architecture.

### Cooperation

EDP has also been discovering new opportunities to bring its people together, through digital collaborative tools such as virtual global communities. Currently, EDP has already implemented eight global communities (Finance Ahead; ESG; People & Organization; Global Energy Management; Brand & Communication; Innovation; Digital; Generation), connecting more than 30% of the global population and providing access to content and initiatives in an innovative and customised way to each functional family.

#### 3.6.2.4.3. Our heart

People are at the heart of EDP's strategy, and this dimension of its global purpose reflects their importance and fundamental role in delivering the organisation's commitments to customers, partners and communities. Recent years have led the EDP group to rethink its working models in favour of a more flexible and balanced working environment and to an active listening strategy that has demonstrated the organisation's work in this direction.

### Organisational climate

The organisational climate constitutes a fundamental, active-listening tool for monitoring different dimensions of employee experience, and the 2022 climate survey had the participation of 93% of EDP group employees.

In terms of engagement, it was found that 84% of employees feel involved with the company, where the majority show pride in working for EDP (89%) and would recommend EDP as a great place to work (80%). In terms of empowerment, it was also concluded that 72% of employees have a high perception of organisational support, where 79% feel they have the opportunity to carry out challenging work and 75% believe that their skills and abilities are well used.

### Rewards and benefits

The work environment at EDP must also create global conditions of equality and recognition. Therefore, in 2022, and through the global compensation strategy defined in the previous year, it was possible to standardise compensation concepts in all EDP markets and define a global compensation strategy, encompassing annual base salary, short and long-term incentives, customised competitive benefits and guidelines for total remuneration of merit programmes. Furthermore, the organisational segments associated with a set of job grades were reviewed and a new functional family model was defined, fostering branching career paths.

EDP globally assigns long-term incentive plans to the Top Management segment and critical positions in the Senior Management segment. The Executive Board of Directors (EBD) considers the attribution of these incentives as a tool for attracting and retaining talent, focusing on achieving results, and complying with the business plan.

### Flexibility and welfare

In 2022, in addition to consolidating its hybrid working model, EDP extended Flex Fridays to all its markets, a voluntary measure to make working hours more flexible, allowing employees to adapt their weekly working hours and not work on Friday afternoons.

Throughout 2022, continuity was also given to the global strategy of well-being defined in the previous year, based on five pillars (physical, social, professional, financial and emotional). To this end, global awareness campaigns have been developed (e.g.: Global Well-being Week; Mind Your Mind) to encourage the adoption of healthy behaviours, the accountability of the organisation's leaders was promoted and the global offer was revised and simplified for better communication and access to the different channels and helplines.

In recent years, EDP has promoted the Mind your Mind campaign in order to raise awareness of the importance of mental health. As part of its global well-being strategy, this campaign calls for preventive behaviours and publicises the various assistance and support services available, through different types of initiatives (eg., talks, workshops, testimonials).

Gabriela Pesente, an EDP Brasil employee, shared her personal experience through one of the initiatives of this campaign, the "Trust Space".

"Here at EDP, I have always been lucky to have managers I could talk to, but I have also had other people I could always talk to, such as in the health area, always available, work colleagues. So, I think that as a company, we have to be aware of how significant we are in the life of the individual and keep the doors open to give a person access. When I make myself vulnerable before another person, they know they can count on me."

Gabriela Pesente,  
Planning Consultant, EDP Brasil

To access the full interview, [click here](#).



Gabriela Pesente



Maite Schneider

**In 2021, EDP Brazil launched the first electrician school exclusively for trans people, a pioneering initiative in the electricity sector. There were two classes, both formed in June 2022, and of those 19 people, 73% are now members of staff at EDP or its partners.**

formation of this school is one of those moments. A project that goes beyond employability and thinks about equity and real inclusion, that builds bridges across such a giant abyss of multiple inequalities. I am proud to be part of this beautiful seed that will now not stop producing good fruit."

"I've been working with the transgender population since 1990, and I can count on the fingers of one hand the number of truly revolutionary projects that actually changed the lived experience of this truly excluded and forgotten group. Without a doubt, the

Maite Schneider,  
TRANSEMPREGOS Cofounder

### **Diversity, equality, inclusion and sense of belonging**

By ensuring fairness and inclusion for its people, EDP is also creating a more diverse working environment. To reflect the EDP group's maturity in these matters, the acronym DEIB (Diversity, Equity, Inclusion and Belonging) was adopted in 2022 and included in the revision of the Global Policy, which determines a set of responsibilities and mechanisms to promote a more human and innovative company.

In addition to various awareness-raising initiatives and continued efforts to promote increasingly inclusive recruitment, the first Global DEIB Council was held in 2022, which set out the priorities for the next business cycle, and the Gender Equality Plan (2022–2023) and Equal Pay project were reviewed, ensuring internal cross-cutting practices to guarantee pay parity.

#### **3.6.2.4.4. Our impetus**

This dimension of EDP's global purpose reflects its ambition of, and leadership in, bringing about change as an organisation prepared for the challenges of the future.

### **Talent attraction**

For EDP, it is essential to develop a strong employer branding strategy that is increasingly global and attractive, which, in 2022, meant revising its employee value proposition to reflect the company's global positioning and its flexible, inclusive and development-oriented culture.

Overall, in 2022, the EDP group impacted more than 55,000 people, through more than 190 initiatives and strong positioning on its main social networks, which resulted in more than 500 people-related content. In addition to this digital communication, EDP used other digital tools to strengthen its relationship with candidates – for example, a monthly newsletter with 6 issues and around 80 mail shots.

In 2022, the attractiveness strategy gave rise to more than 235,000 applications in EDP's different markets, resulting in 1,797 admissions and 647 internships, mostly with fully digital recruitment processes.

In 2022, the first global Onboarding experience was also designed and the EDP group's Mobility Policy revised, processes that play a fundamental role in attracting and retaining employees.

These efforts resulted in several distinctions, such as a new recognition by the Top Employers Institute, highlighting the EDP group's strong positioning with candidates and employees, and its dedication and commitment.

### **Talent development and management**

2022 was a turning point, with the implementation of a global development model based on a holistic assessment of the employee, considering his/her past individual performance, his/her skills in the present and his/her capacity to face future challenges. This mindset is supported by regular development conversations and a new learning and development experience, which enables access to a myriad of on-demand content. The change management process for this mindset involved over 300 sessions and over 9,000 employees.

Throughout 2022, a new development approach was also established for EDP's leadership, characterised by a focus on prioritising topics related to the areas of leadership, digital, innovation, safety, ethics and compliance. By 2022, total EDP group training was more than 200 thousand training hours.

The EDP group's employee succession plan is also crucial to ensure the continuity of the business, acting as an important people management tool. In 2022, objective criteria were defined to continue to build a global and diverse leadership pool, with the succession exercise involving the positions of the Top and Senior Management segments. As a result of this exercise, 173 successors and 355 potential career moves for 71 Top Management positions and 620 successors and 1,125 potential career moves for 290 Senior Management positions were mapped. Considering EDP's growth, the competitiveness of the market and the scarcity of talent, several customised development initiatives for these segments and their successors were also ensured in 2022.

#### **3.6.2.4.5. A better tomorrow**

EDP's current strategy sets out ambitious commitments for the coming years, allowing it to become a future-proof organisation focused on providing a better tomorrow for current and future generations.

In this sense, EDP's P&O strategy will continue to focus on meeting the challenges of attracting, developing and retaining the skills needed to meet the challenges of the future, ensuring:

- a global organisational design strategy that supports management by platforms
- a strong employer branding strategy to attract the best talent
- greater digital maturity and efficiency of processes
- greater collaboration through the implementation of new global communities
- an inclusive and flexible working environment that promotes well-being
- a culture geared towards learning and development that holds employees and leadership accountable.

With people at the centre of its strategy, EDP will thus continue to work towards an increasingly human and meaningful experience for all its employees, guaranteeing that what we do today makes a difference tomorrow.

### 3.6.2.5. Health and safety

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
	Severity index (employees and contractors)	118	<150
	Fatal accidents (employees and contractors)	5	0

EDP uses Humanisation as one of its fundamental values and places people at the heart of its strategic agenda. Safeguarding the health and safety of employees (both inside and outside the group), suppliers, external service providers (ESP), customers and stakeholders, is an EDP group priority. For the group, no situation or emergency can justify endangering a person's life!

In fact, EDP guides its action in this matter by the principles established in the Health and Safety at Work Policy, a binding document that covers all group employees and external service providers, making the entire hierarchical structure responsible.

To this end, the EDP group requires everyone to adopt practices in line with the principles of this policy, in order to ensure continuous improvement.

#### Safety practices

##### AUDITS, INSPECTIONS, VISITS AND OBSERVATIONS

74,642

The implementation of EDP's annual occupational health and safety programme was based on a set of actions aimed at preventing occupational accidents, as measured by a reduction in the frequency rates and the seriousness of accidents and occupational illnesses, and included training for EDP employees and service providers, 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.

##### TRAINING EDP WORKERS AND ESP

349,741 h

The Plan of Strategic OHS Objectives contains the repository of commitments and initiatives undertaken by the different organisational units for the execution of the six vectors of intervention defined on a strategic and corporate level, concerning OHS approved for 2020/25: (1) Commitment of leaderships to OHS; (2) Behaviour, preventive activities and learning from mistakes; (3) Streamlining, digitalising and standardising OHS processes in the EDP group; (4) Skills; (5) Communication and involvement; (6) Management of OHS in the contracting of SHP.

With regard to emergency preparedness and response, 460 simulated drills were carried out throughout the EDP group, covering various industrial, administrative and construction sites, in order to test the effectiveness of the planned response capacity in potential emergency situations. These drills included the participation of the civil defence force, the fire brigade, police and public safety authorities, as well as employees, service providers and the surrounding communities.

In order to prevent electrical accidents involving third parties not involved in the group's activity, EDP ensures that the risks associated with its facilities and equipment are identified and communicated. However, in 2022 there were 41 accidents of electrical origin with third parties, which resulted in the deaths of 14 people. These accidents were the result of civil construction activities, tampering with the grid and leisure, among others.

#### Safety indicators

The Health and Safety at Work Policy within the EDP group demonstrates its commitment to a model of Health and Safety Work Management based on continuous improvement and the conviction that working in a safe, healthy environment is instrumental for employee satisfaction and provides added value for successful results. To improve management of the Policy objectives, EDP has a Corporate Safety Management System based on ISO 45001:2018 and the ILO-OSH 2021 recommendation. This system can be adopted in its entirety by each of the companies, or, alternatively, taken as a reference for the implementation of their own systems. In 2022, the EDP group counted a total of 10,604 employees covered by ISO 45001:2018 certification. The certification covers 96% of net installed power in production activities.

In EDP group, 133 work-related accidents occurred out of all EDP employees and service providers (ESP), representing a reduction of 13% compared with 2021. The frequency rate (FR) amongst EDP employees and service providers in 2022 grew 3% compared with the previous year, consequently we were unable to achieve the target of 1.69 set for 2022.

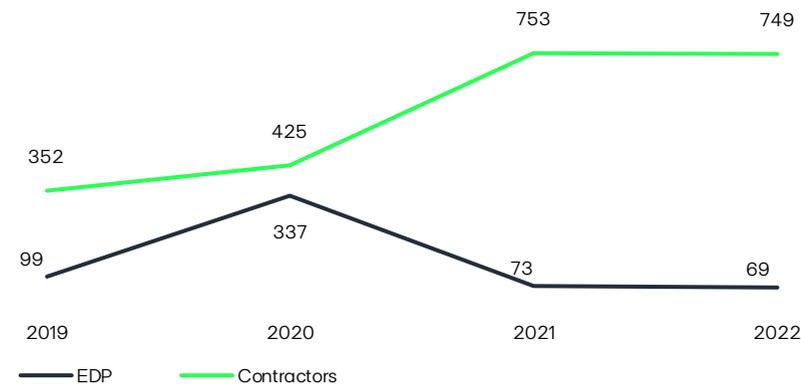
During 2022, there were six fatal accidents at work with service providers (fall from height, electrical origin) and one accident in commuting (road).

Additional information visit [www.edp.com](http://www.edp.com).

**FREQUENCY RATE (Fr)**

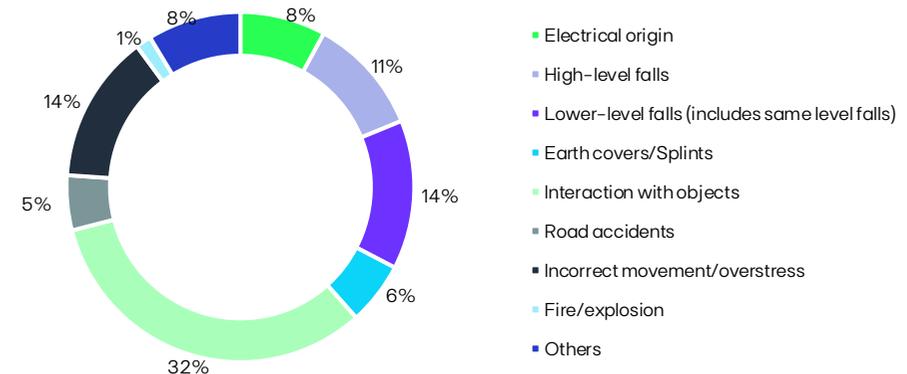


**SEVERITY RATE (Sr)**



Accidents that occurred due to interaction with objects are responsible for 33% of accidents, followed by incorrect movements or over-straining at 14%, 11% being falls from heights, 8% of electrical origin, and 20% attributed to other causes.

**TIPOLOGY OF ACCIDENTS AT WORK (%)**



**Health promotion**

The health and well-being of the group's employees are promoted and protected through compliance with occupational health monitoring requirements, in accordance with applicable legislation.

Health monitoring programmes guarantee fulfilment of the regular medical examinations plan, workplace inspections, participation in the Occupational Health and Safety and Internal Accident Prevention Committees, and the implementation of a range of preventive campaigns.

During 2022, 10,311 medical exams, 1,175 consultations with employees who have nutrition programmes, 1,105 cardiovascular screenings and 3,776 vaccination programmes against influenza, pneumococcal infection, hepatitis B and yellow fever, which covered 1,212 employees, were carried out in the EDP group. Also, within the scope of occupational medicine activities, 11 screening sessions for alcohol and drugs were carried out. EDP group monitors and follows up the occurrence of occupational diseases.

In 2022, two cases of occupational illness were recorded.

### 3.6.2.6. Crisis management

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
 	BitSight rating	810	≥740
	Climate change adaptation plans implemented	50%	100%

Organizations today face a multiplicity of adverse situations, as a result of their international positioning, making them more exposed to the materialization of disruptive events with high negative potential. Being aware of this position allows, on the other hand, to adopt a state of continuous monitoring and alertness, for the evolution of possible crises on a global scale with impact on the organization.

The EDP group assumes Crisis Management as a strategic capacity that enhances its supported and sustainable response to abnormal situations, characterized by high uncertainty and with potential negative impact on its strategic and business commitments and objectives, requiring urgent attention and action to protect the life and physical integrity of people, the environment, the assets, and reputation of the EDP group.

The EDP group Crisis Management Plan (OS 4/2021/CAE), which is transversal and strategic in nature and aligned with the reference BS 11200:2014, establishes the management structures, guiding principles for decision making and practices to be observed in the three phases of the crisis management process: before, during and after the crisis. Alongside the Crisis Management Plan, the Crisis Communication Plan was established, which supports the actions of the teams responsible for ensuring effective communication – transparent, coherent, and consistent – in these highly complex and volatile contexts.

Designed to allow a strategic response to crisis and pre-crisis situations of a diverse nature and with different levels of complexity, these plans are reflected in the Business Units and Divisions of the Corporate Centre, when applicable, ensuring the tactical and operational capacity to respond to the Crisis, and an adequate escalation to the EBD and the EDP group's Crisis Management Office.

In order to strengthen its resilience, the EDP group established, in the OS 1/2018/CAE, its approach to Business Continuity Management, also specifying the methodological parts to be observed, in alignment with the ISO 22301:2019 benchmark, strengthening its ability to detect and respond appropriately to risks with potential impact on its activity.

EDP has therefore developed and has a robust set of human, procedural and technological controls, and safeguard measures that it has been improving, complemented by recovery plans at the operational level, such as the Business Continuity Plans for priority processes/services, Contingency Plans or Disaster Recovery Plans, among others. These allow EDP to increase its capacity to continue to provide its services at acceptable levels even in the face of incidents, emergencies, and disasters, fulfilling the assumed objectives. To ensure their effectiveness and adequacy, the plans are subject to periodic exercises and simulations, both internally and in collaboration with external entities relevant to EDP's value chain.

Also noteworthy is the creation of the Safety, Security & Business Continuity Unit (SSBC) in January 2022, which allowed the strategic reframing of the themes of Crisis Management and Business Continuity, Safety (prevention and security) and Security (physical security and duty of care), with a view to the holistic and transversal management to the group of a set of related themes and whose complementarity and integrated approach adds benefits to EDP.

With a view to strengthening this commitment, the EDP group has defined the Security Policy (OS 8/2022/CAE), which establishes the guiding principles to be followed by all Business Units and Corporate Centre departments.

#### Monitoring the evolution of the Russia-Ukraine conflict

In February 2022, following what was established in its Crisis Management Plan and Crisis Communication Plan, EDP assumed to be facing a Pre-Crisis Situation, motivated by the emergence of the Russia-Ukraine conflict, which resulted in a worsening of geopolitical instability in Europe and worldwide.

Starting an intensive follow-up of the evolution of this situation, a monitoring group was established that includes different areas of the Corporate Centre of EDP, S.A., and the Business Units, especially those with a greater presence in the region. This monitoring is carried out in terms of topics such as the physical safety of people and assets, cybersecurity,

business continuity, risk management, supply chain, energy management, finance, regulation and stakeholders, compliance, communication, and social support.

This monitoring group, under the coordination of the SSBC, meets regularly and is responsible for reporting to the EBD on the main risks existing at each moment, changes in the environment, the status of implementation of risk management measures defined, as well as measures proposed for adoption.

The presence of EDP Renováveis and, more recently, EDP Comercial in countries bordering the conflict zone led to the adoption of a series of immediate measures to safeguard its people in these regions and the EDP group's people from Ukraine and Russia who are in other operations, as well as its assets under construction and in operation, including Evacuation Plans.

As a complement to the analysis and monitoring of the situation by the different areas of EDP, it also opted to use entities specialized in the management of geopolitical conflicts, in order to acquire greater knowledge of potential developments and thus anticipate its response to potential risks or threats. Considering the possible scenarios of the evolution of the conflict, an evaluation was developed of the most relevant risks and impacts for EDP, and of the main risk management and impact mitigation measures.

### 3.6.2.6.1. Information security

EDP recognises information security as a strategic objective and a fundamental business requirement, and makes this commitment at top management level. The EDP group's Information Security Policy, approved by the Executive Board of Directors, establishes information security as a competitive factor, generating confidence in its stakeholders, but also as a critical responsibility in a social context, as a result of its role as an operator of critical infrastructures and manager of large volumes of personal data on customers and employees.

The governance of information security in the EDP group involves the existence of the Digital and Information Technology Committee. This committee includes members of the various business units' management, the Company's Chief Information Security Officer (CISO) and a member of the Executive Board of Directors, who chairs it. This committee has, among others, the task of discussing and issuing opinions on guidelines for the strategic planning of information security, and is also responsible for assessing the company's cyber-security risks, monitoring scenarios of serious incidents in the energy sector and the organization's cyber-security risk profile.

Every month, the Executive Board Director responsible for information security receives a report of activities and indicators from the organisation's CISO and the entire Executive Board receives the same information on a quarterly basis. The EDP group's cyber-security risk is presented annually to the members of the General and Supervisory Board.

### Cybersecurity in 2022 in the EDP group

2022 was marked by changes in cyberspace. From the beginning of the year we saw high-impact cyber-attacks on organisations from various sectors, such as media, communications service providers and retail in Portugal, but also attacks on European port terminals and other infrastructures supporting essential services around the world. Some of the attacks were only destructive with unknown motive, which, along with the conflict in Ukraine, confirmed the trend of joint and coordinated action between physical and cyber conflict ("Hybrid Warfare"), aggravating the risk of cyber threats, particularly in the energy sector, which became one of the main targets of attack.

In order to face the new cyber threats, EDP raised, in the first quarter of 2022, the cyber risk alert level to orange throughout the group, which resulted in an increase of 24/7 monitoring, at the same time as it integrated more information sources in its security operations, having also promoted additional business continuity exercises, specifically an exercise called "Red Button" that simulates a service disruption that forces the isolation of critical networks and systems.

Although there was an increase in cyber threats throughout the year, apart from a few DoS (Denial of Service) attacks on the corporate [edp.com](https://www.edp.com) and [edp.pt](https://www.edp.pt) websites in July and September, which resulted in temporary difficulties accessing these resources, no incidents with a significant impact on either the group's image or its operations were recorded throughout the group.

### Cybersecurity activities and indicators

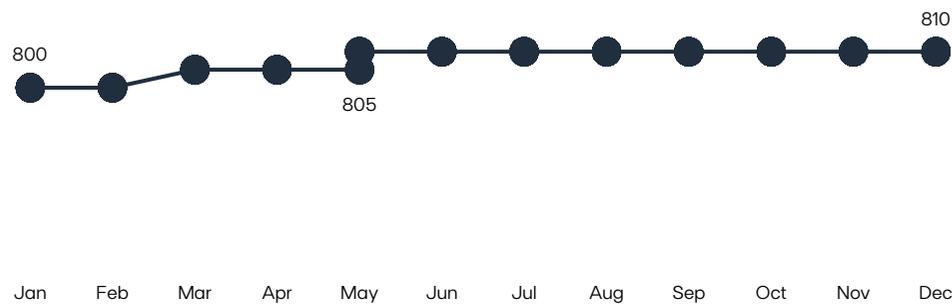
The rating adopted, defined as the group's KPI for this area, observes the EDP group's behaviour in cyberspace, specifically by checking aspects such as the security of its public websites, access from its networks to dangerous locations and incidents that affect the organisation publicly. During 2022, the rating remained at the advanced level, oscillating between 790 and 810 points, well above the average for the sector.

To support the challenge of energy and digital transitions, as well as efficient and secure operations in EDP's energy networks and facilities, a "Zero Trust" strategy for cybersecurity was adopted, comprising a plan of initiatives for the years 21-23, both in the domain of networks and IT systems and in the OT domain (Operational Technology that supervises and controls energy management infrastructures, some of which are mission critical). Plans are being executed without major deviations from the original.

With regard to awareness and training, because of the pandemic, which made face-to-face training impossible, the training schedule in EDP's "cyber range" (a unique cyber security training infrastructure in Portugal, which simulates, in the classroom and with real equipment, the power grid's control systems), and was also adapted to remote format. However, due to the easing of restrictions in the face of the pandemic, we had about 30 in-person trainees in 2022. There is also integrated programme of training, e-Learning and security exercises for delivery across the entire EDP group, which was delivered to 11,000 employees in 2022.

In addition to its operational capabilities, the EDP group's vision is to position itself as a company of reference in the use of best practice and innovation in the area of information security. In this sense, the EDP group continues to integrate several national and international work and study groups (such as CERT.PT, the World Economic Forum, the Cyber DSO group - Distribution System Operators - and the International Energy Agency), as well as European projects with other European counterparts, academic and governmental organisations.

**BITSIGHT SECURITY RATING**



**3.6.2.6.2. Critical infrastructures**

Directive 2008/114/EC defines "Critical Infrastructure" as "the asset, system or part thereof located in Member States which is essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being, and the disruption or destruction of which would have a significant impact in a Member State as a result of the failure to maintain those functions".

EDP has under its responsibility a set of critical infrastructures in Spain and Portugal, which include electricity generation and distribution infrastructures (physical and control facilities), as well as related customer service activities, which have been identified within the scope of the transposition of Directive 2008/114/EC into Spanish and Portuguese law.

It should be noted that a new European directive was recently approved, Directive (EU) 2022/2557 of the European Parliament and Council of December 14, 2022, on the resilience of critical entities (repealing Directive 2008/114/EC with effect from October 18, 2024), which is awaiting transposition into national law.

Due to the diversity of the critical infrastructures under its responsibility, EDP has proactively adopted strategies to respond to risks of different natures, such as physical risks (e.g., fires, earthquakes, atmospheric events, including extreme events), and technological risks (including, but not limited to, cybersecurity risks for operational systems and information systems).

In addition, the measures and tools adopted to mitigate these risks are diversified and different in nature, adjusted to the specifics of the infrastructures, necessarily covering physical security (safety and security aspects), technological security and cybersecurity, as well as the management of Business Continuity, leveraged by a strong component of training and exercises. EDP has developed, for each of the critical infrastructures, the respective security plan, supported by the conclusions of the risk analysis on them and the set of measures implemented, in line with the provisions of Directive 2008/114/EC and in alignment with the recently revised national legislation DL 20/2022 (repealed DL 62/2011).

Furthermore, it is important to mention the role assumed by EDP in promoting the adoption of good practices in the management of critical infrastructures in the sector, through its dissemination, but also through collaboration with external entities, participating in exercises and workshops relevant to the topic.

With a focus on establishing and developing a Security Culture, EDP promoted a set of awareness-raising activities, provided by SIS - Security Information Service; (i) the Knowledge and Sensitive Information Protection Program, which aims to alert entities in Portugal to espionage threats and raise their awareness of the importance of protecting knowledge and sensitive information and (ii) the Křitica Program, with the aim of contributing to improving the protection of critical infrastructures and sensitive national points against the terrorist threat.

Also, in this context and following the approval of the Sendai Framework for Disaster Risk Reduction 2015–2030, EDP has participated, in Portugal, in the National Platform for Disaster Risk Reduction (PNRRC in its Portuguese acronym), under the responsibility of a sub-committee coordinated by ANEPC (National Authority for Emergency and Civil Protection). We highlight the participation in the development of the Handbook on "Good Resilience Practices for Critical Infrastructure - Private Sector and State Business Sector", as part of the PNRRC activities for the 2015–2017 triennium, available on the [PNRRC website](#).

### 3.6.2.6.3. Infectious diseases

Preparation for crisis situations, particularly focusing on people's health and protection is part of EDP's performance and commitment.

The EDP group Contingency Plan was created during the course of infectious disease situations and in order to prepare the company for similar or more serious future situations, such as pandemics.

This track record for continuous monitoring of epidemiological situations through the implementation of Contingency Plans allowed EDP to be more prepared when, in 2020, the COVID-19 Pandemic was decreed.

The Contingency Plans define EDP's procedures for the adequate management of the impacts around these situations, which may affect employees and service providers, as well as the group's companies' business, which includes:

- safeguarding people's lives in order to reduce the risk of contamination in the workplace, strengthening the information and knowledge of the employees and favouring self-protection
- implementation of a decision-making and coordination structure in EDP and the group's companies

- activation of the Business Continuity Plans, in order to guarantee an adequate operational response capacity that simultaneously minimises the conditions for the propagation of the pandemic and ensures the functioning of essential services
- monitoring the progress of the disease, the effectiveness of the measures taken and the need for further action depending on the context within and outside EDP
- responding to internal and external notification and communication needs
- resumption of activity under safe conditions as soon as the country/region allows.

Given the pandemic data, the governments of the countries where EDP operates have established a plan for the gradual lifting of restrictive measures.

The evolution of vaccination against Covid-19 allowed for a move towards the relief of restrictions through a gradual and extended plan.

EDP accompanied this plan and, in accordance with the directives, went ahead with a survey of the measures applied in all the countries in which it operates.

# Attractive returns & ESG excellence

## Highlights 2022

- Launch of ESG Masterplan, a new strategic framework for the Sustainability area, with five focus areas aligned with the Business Plan and the company's vision
- Miguel Stilwell d'Andrade, president of the EDP group, was appointed a member of the Executive Committee of the World Business Council for Sustainable Development (WBCSD), the largest international business organization working in sustainable development
- EDP was recognized by CDP, for the 6<sup>th</sup> consecutive year, as one of the world's leading companies in the fight against climate change. The company received a double score of "A", the highest ranking in the categories of transparency and business performance on climate change and water safety management
- EDP retains the first place among integrated utilities of S&P CSA/DJSI, among 180 companies of different geographies evaluated, with a final score of 90 points (out of 100), the second best since it was part of this index for 15 consecutive years.

## Main challenges 2023<sup>1</sup>

- Respond to the increased pressure posed by the new Sustainability disclosure standards
- Accelerate investments in adaptation and resilience due to the rising costs associated with the risks of extreme weather events
- Climate change will continue to drive drought and water scarcity, sharpening the focus on water-related risks
- The importance of Biodiversity and nature-related risks becomes increasingly critical as more data and frameworks is available (TNFD and SBTN).

<sup>1</sup>Challenges identified by S&P Global in 'Key sustainability trends that will drive decision-making in 2023' (available in [www.spglobal.com](http://www.spglobal.com)) and recognized by EDP as relevant

### 3.6.3. Attractive Returns and ESG Excellence

#### 3.6.3.1. Sustainable finance

Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
 	Profits in line with the EU's Taxonomy	49%	>70
	Sustainable financing	44%	50%

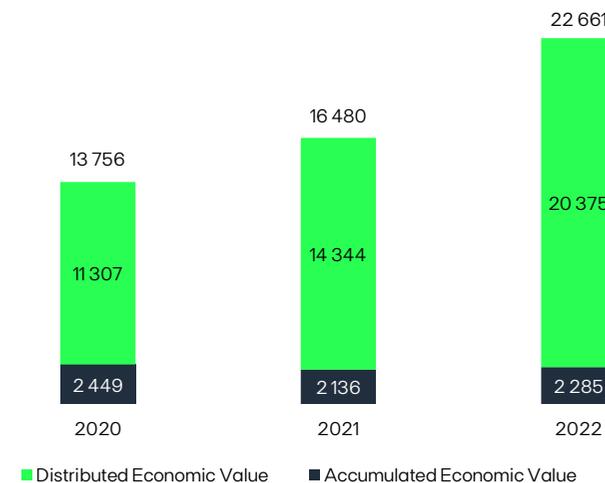
##### 3.6.3.1.1. Creation of a long-term value

We address the path of sustainability by facilitating the long-term investment in companies. This means to channel the capital into sustainable assets.

Since 2004, EDP has announced publicly the commitment to carry on its business while seeking a balance between the economic, environmental, and social aspects of the company's activity and pursuing an approach that incorporates the priorities of their stakeholders.

In 2022, the economic value generated by EDP was 22,661 million euros, compared to 16,480 million euros in 2021. This value includes turnover and other income. In 2022, 90% of the Generated Economic Value (GEV) was distributed in a total amount of 20,375 million euros. The aggregated economic value (AEV), the difference between the GEV and the Distributed Economic Value (DEV) corresponds to the remaining 10% and includes retained earnings and non-payable costs.

#### ECONOMIC VALUE GENERATED (€M)



##### 3.6.3.1.2. EDP ESG performance assessment

During 2022, EDP has carried on the efforts of providing ESG data (qualitative and quantitative) to several ESG analysts. Analysts are evaluating the group's performance on climate change, policy commitments, worker safety, diversity, governance and other ESG factors, based on each in-house methodology. This explains why scores, ratings and/or level of risk obtained based on different ESG performance indicators, such as GHG emissions or violations against the UN Global Compact (UNGC) used by the different analysts are not comparable with each other.

EDP achieved its objective of inclusion in the upper quartile in performance against the ESG ratings established for 2025, in the Dow Jones Sustainability Index, Sustainalytics, FTSE4Good Index Series, and MSCI ESG Indices.

It should also be noted that the group has responded to questionnaires that grant recognition in the areas of climate change and water management (CDP Climate Change and CDP Water Security), in sustainability (GRESB) and in ethics (Ethisphere Institute).

**ESG CORPORATE SCORES, RATINGS AND RANKINGS**


**2025 Goal: Top quartile in ESG rating performance ✓**

For additional information, click on the logos

**ESG CORPORATE SCORES, RATINGS AND RANKINGS**



Analist: V.E./Forum Ethibel/Solactive  
 Indeces: Index Solactive Global and Europe Corporate Social Responsibility Index PR

Included in the **Global and Europe Corporate Social Responsibility PR** indexes



Analist: Bloomberg  
 Index: Bloomberg Gender-Equality Index (GEI)

**Included in the GEI index**, since 2020  
 Score: 81.47 (out of 100)



Analist: World Benchmarking Alliance

Awaiting new assessment  
 #5 global Utilities  
 Score: 77.1 (out of 100) (in 2021)



Analist: Gresb  
 Index: GLIO/GRESB ESG Index

**Top 2 Global Infrastructure (Renewable Power)**  
 Score: 95 (out of 100)



Analist: S&P Global  
 Index: S&P Global Clean Energy Index

**Top 10**  
 Included since 2021



Analist: Etisphere

**Top most ethical companies in the world**, since 2011



Analist: ECPI  
 Indeces: ECPI Indices

**Included in the ECPI indexes**, since 2013

**For additional information, click on the logos**

**Other recognitions**

PORTUGAL



EDP Comercial

SPAIN



EDP España



★★★★★ 2022

Redes España

BRAZIL



EDP RENEWABLES



FTSE4Good



### 3.6.3.1.3. Facts & figures of sustainable finance

Since the 2030 Agenda for Sustainable Development and the historic signature of the Paris Agreement, there have been made important progress in the battle against climate change and towards a greener, more resilient, more inclusive global economy. Sustainable finance has the potential redirect the funds to climate action and transition to a climate-neutral economy.

According the last report of the Global Sustainable Investment Alliance – [GSIA Report 2020](#)) the global sustainable investment reached USD35.3 trillion in five major markets (Europe; United States; Canada; Australia; Japan)–. Sustainable investment assets under management make up a total of 35.9% of total assets under management, up from 33.4% in 2018. The GSIA expect that sustainable investment could exceed USD 50 trillion by 2025.

#### Investors

The year 2022 started with the implementation of the ambitious agreement “[Glasgow Financial alliance for Net Zero \(GFANZ\)](#)” established in November 2021, which assembled a few of the world’s most powerful financial institutions to fight global warming, by pledging to bring loan and investment portfolios to net-zero by 2050.

However, as the year unfolded, sustainable finance had to stave off a backlash against ESG policies. At the end of 2022, Vanguard group, the world’s second-largest asset manager and a major index investor, pulled out the GFANZ, saying it aims “provide the clarity our investors desire about the role of index funds and about how we think about material risks, including climate-related risks.”

#### Regulators

In July 2022, the European Central Bank (ECB) announced, a measure to be applied from October 2022, that will adjust the purchase of corporate bonds and the pandemic emergency purchase programme according to a climate score based on three factors: backward-looking emissions (issuers’ past emissions), forward-looking targets (issuer’s ambitious decarbonization targets) and climate disclosures (issuers’ reporting of greenhouse gas emissions: scope one, two and three).

The EU is following a step-by-step approach starting with the **climate taxonomy** (2022), **the environmental taxonomy** (2023) and **the social taxonomy** (with no date yet known). Other EU regulations are building on the different dimensions of the EU Taxonomy, as for example:

- the Corporate Sustainability Reporting Directive (CSRD)– This regulation was published on 16 December 2022 in the Official Journal. It will be applicable in 2025 to companies already subject to the Non-Financial Reporting Directive – NFRD
- the Sustainable Finance Disclosure Regulation (SFDR) – This regulation was published on 9 December 2019 in the Official Journal. It has been applicable since 10 March 2021. It is a key regulation to increase transparency and enable investors to reorient capital
- the Corporate Sustainability Due Diligence Directive (CSDDD). This regulation proposed, for the first time, a mandatory framework for companies registered or operating within the EU to carry out due diligence throughout their supply chains and to identify, prevent or stop adverse impacts related to human rights and the environment. The final text is expected in May 2023.

The last major introductions regarding sustainable finance, in 2022, were the following:

- **the EU Taxonomy:** The European Commission published and adopted the Complementary Climate Delegated Act. This legal text proposes that gas and nuclear activities are classified in the EU Taxonomy framework. Please see EDP’s position in our 2021 Sustainability Report, [page 166](#)
- the disclosure under the **article 8 of the EU Taxonomy:** EDP has disclosed, for the first time in 2021, information on eligibility and alignment with the Taxonomy under the mandatory tables for its revenues, operating expenses (OPEX) and capital expenditure (CAPEX). More details in the [Report on implementing article 8 of the EU Taxonomy Regulation](#)
- the disclosure of the **report on minimum safeguards** by the Platform on Sustainable Finance: The purpose is to orient companies on implementing article 18 of the EU Taxonomy
- the announcement of new reporting climate disclosures from Securities and Exchange Commission (SEC) and International Sustainability Board (ISSB): Their **final goal is to issue the final standards in 2023.**

## EDP

### Impact of ESG performance measurement

Currently, 29.8% of the capital of EDP's shareholder structure comes from SRI investors. EDP has demonstrated its expertise in ESG matters and its knowledge to reply to investors who follow active and passive investment approaches. Additionally, regarding the financing component, the group has responded to requests from investors, who are increasingly demanding in terms of mitigating the risks inherent in ESG factors.

### EDP Sustainability Linked Finance

In March 2022, EDP updated its 2018 green bond framework with a new Green Finance Framework. The new framework, which you can find on the following [here](#), is aligned with the Company's overall sustainability strategy and initiatives and will further contribute to EDP's key environmental priorities. The framework is aligned with the Green Bond Principles 2021 (GBP), as administered by ICMA, and Green Loan Principles 2021 (GLP), as administered by LMA, APLMA and LSTA. In addition, it is also aligned with the EU taxonomy. The framework is supported by a second-party review from Sustainalytics.

The proceeds of the issued green finance instruments are used to finance and/or refinance new and/or existing wind and solar assets of EDP Renováveis (EDPR). Eligible assets include the design, construction, installation and maintenance of wind and solar assets.

As of 31 December 2022, our green finance instruments (the first was in 2018) represent 44% of our total nominal debt. EDP has a target to have 50% of its funding from sustainable sources by 2025.

Our green bond reporting is done through our annual sustainability report that is audited by an external party. That information appeared on the [Report on the allocation and impact of Green Finance](#).

### 3.6.3.2. Caring for our planet

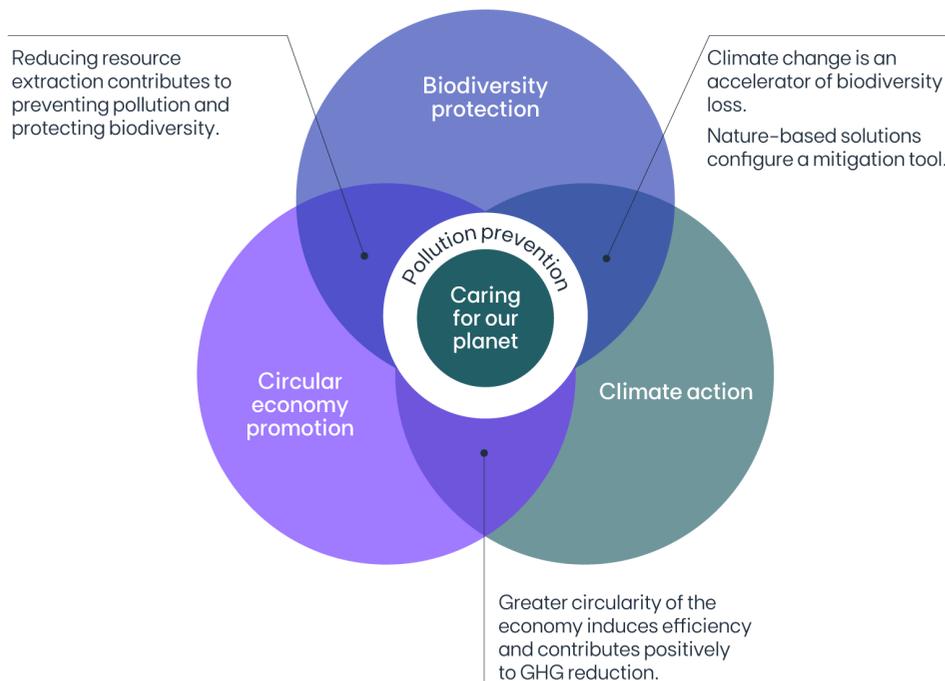
Alignment with the SDGs	Objectives	KPIs 2022	Target 2025
 	Reducing the intensity of CO <sub>2</sub> emissions (scope 1 and 2)	-56%	-70%
	Recycling of waste from activities	52%	85%

EDP contributes to Sustainable Development, recognising the Environment as a strategic management element and acting towards the prevention of pollution, mitigation of impacts and consequences of its activity. To this end, through its [Environmental Policy](#), the group assumes a set of commitments that safeguard the implementation and maintenance of environmental management systems, certified in accordance with ISO 14001:2015 by accredited external entities. To ensure ongoing improvement, the environmental management of the facilities/activities is aligned with objectives and a strategic plan supported in a Corporate Environmental Management System with the scope "corporate management of policies, commitments and environmental performance of EDP group worldwide".

The group's [Environmental Policy](#) is considered in the business plan, which leverages and realises the capacity to contribute to the prevention of pollution, resulting in positive evidence in terms of the protection of Biodiversity, decarbonisation, the efficient use of natural resources and the promotion of a Circular Economy.

The electricity generation and distribution activities have a significant direct environmental impact in terms of fuel consumption, use of chemical products, greenhouse gas emissions, atmospheric pollutant emissions, water consumption licences, effluent discharge after treatment, effects on fauna, effects on flora and noise in some assets' specific situations. To ensure the control and mitigation of these impacts, in addition to the existence of Environmental Management Systems certified in accordance with ISO 14001, the thermoelectric power stations are covered by demanding environmental licences, which establish continuous monitoring, taking into account the parameters and sensitivity of the environments in which are located. All thermal power plants have physical/chemical wastewater treatment processes, ensuring that they are disposed of according to the limit values established for each parameter. The reduction in thermoelectric production of coal-fired power stations in the Iberian Peninsula and the early closure plan, integrated into the decarbonisation strategy, result in a significant reduction in atmospheric emissions of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and particulates. In distribution, the main impact mitigation measures are the landscape integration of overhead lines, oil retention systems and the installation of acoustic barriers.

In the management of transformers with polychlorinated biphenyls (PCBs), in addition to complying with current legislation, EDP uses best practice for the identification, screening and appropriate final treatment of PCB waste. The deadline for decommissioning equipment contaminated with PCB concentrations above 50 ppm, defined in legislation and the plans of the relevant companies, is the year 2025. Also worth noting is the fact that in the Brazilian



distribution companies, all medium and low voltage transformers that are removed from the network are replaced by transformers equipped with vegetable oil.

In terms of emergency and incident response capacity in 2022, 99 small oil spills were recorded, containment and remediation measures were taken, also recorded were 101 environmental near-accidents and 270 simulations were carried out. The corrective and prevention measures implemented resulted in zero accidents with environmental damage. In addition, training and awareness-raising events on emergency response are also held for employees, service providers and others involved such as the local community (when applicable).

The number of environmental complaints has decreased again in all areas of activity and has reduced globally 15% (vs. 2021). The theme noise represents 23% of the reasons for environmental complaints, followed by the theme waste, with 16% representation.

On the other hand, in order to have a positive effect on the environment, EDP continues to invest heavily in improving technologies and in initiatives to prevent and mitigate the environmental impacts of its operations, totalling EUR 105.5 million by 2022.

### 3.6.3.2.1. Protection of biodiversity

Biodiversity is under threat, and it has never been more urgent to restore damaged ecosystems. Expectations lie in strengthening the global commitments and targets of the 2021-2030 agenda, the defining decade recognised as the United Nations Decade for Ecosystem Recovery. According to the United Nations Environment Programme (UNEP), the degradation of marine and terrestrial ecosystems significantly affects the well-being of 3.3 billion people worldwide, and has an associated annual cost of around 10% of the planet's gross product in terms of loss of species and ecosystem services essential for food, agriculture and the supply of quality water, among others.

In this sense, EDP assumes the Environment as a strategic management element, aiming to reduce the impacts of its activity through a set of general and specific complementary commitments, expressed by the **Environmental Policy**, among which is the protection of biodiversity:

- contributing to the reduction of biodiversity loss, prioritising mitigation line management and aiming for a positive outcome on the biodiversity balance sheet in the long term

- contributing to the deepening of scientific knowledge of biodiversity and ecosystem services, including through the establishment of partnerships.

In parallel, EDP also commits to "not building new electricity production facilities in areas that are part of Natural Sites on the UNESCO World Heritage List", to ensure that it continues to have no presence in these territories, and made a global commitment in 2022 to become positive for nature by 2025, which means going further and anticipating the "No Net Loss" commitment already made for 2030, and achieving a Net Gain of biodiversity in all new projects with significant residual impacts by 2025.

The location of own assets, leased, administered within or adjacent to protected areas and areas of high biodiversity value outside protected areas are shared openly, in the UN's own annual reports (EDP Brasil and EDP Renováveis) and in the annual reports, corporate website, and biodiversity reports.

In strengthening the biodiversity conservation objectives of the "Net Gain of Biodiversity" project, EDP makes two additional commitments in the baseline mitigation line-management approach, also by 2025:

- No Net Deforestation
- 100% of its assets with Biodiversity Action Plans (BAPs) defined and implemented, when these facilities are recognised as having high biodiversity risks.

At project management level, mitigation line management (see [Biodiversity Report 2020-2022](#)), allows EDP to anticipate and avoid potential impacts; minimise, when it is not possible to avoid them entirely; restore, when impacts occur; and offset, when residual impacts remain. It is a gradual and cumulative process with the main objective of progressively reducing impact until there are no adverse effects on biodiversity and achieving the Net Gain biodiversity conservation objectives.

In 2022, in an action underlying the line management of mitigation, EDP developed the Space4Nature (making space for nature) initiative, an initiative promoting Nature-based Solutions (NbS) as a simultaneous response to business and societal problems and challenges. This is a kick-start to the ambition of a positive business for nature (see [Biodiversity Report](#)).

Also in a commitment to positive business for nature, EDP follows the evolution of metrics and indicators based on science that are being worked on internationally and which are expected

to stabilise from the second half of 2023 onwards (TNFD, SBTN, GRI, for example) to integrate the biodiversity and natural capital theme in:

- identification and assessment of impacts and dependencies, extending to key supply chains. However, in the matter of suppliers and subcontractors, EDP's procurement policy, whenever possible, is already considered a reference to the implementation of policies consistent with those established by society, in particular in the environmental and biodiversity dimension
- monitoring the evolution of related risks in different time horizons and integrating this information in strategic and operational planning where applicable.

EDP's power generation (hydroelectric, thermoelectric, wind and solar) and electricity transmission and distribution activities have the greatest impact on biodiversity, through disturbances caused by the alteration/conversion of land use that result in the fragmentation, alteration and destruction of habitats with a direct or indirect impact on species. However, habitats and potentially-impacted species are the target of the conservation measures and impact mitigation described in three aspects: protection of bird fauna, ecological flows and natural capital. In 2022 the following stand out:

<b>Bird protection</b>	Portugal	<p>In 2022, the Avifauna IX protocol began and actions continued to be developed under the Avifauna VIII Protocol, the LIFE Projects and the National Specific Program for Wild Birds (PENAS).</p> <p>The actions provided for in the Protocol continued the work of surveying the land around certain power lines, and the compilation and validation of information on risk charts of endangered species.</p> <p>The corrections of medium and high voltage overhead power lines (MT/AT) were performed with the use of mitigating technical solutions, such as the rotating "firefly" type to minimise collision, and the change from horizontal to vertical disconnectors and a combined solution to electrocution, at around 15 km.</p> <p>From the beginning of the avifauna protocols (2003) to the end of 2022, there have been about 1,371.7 km (accumulated value) of existing electricity distribution lines corrected with measures to protect avifauna, inside and outside Classified Areas, both in the licensing of electric lines and in the context of voluntary correction.</p>
------------------------	----------	---

<b>Ecological flows</b>	Spain	<p>Environmental impact studies have been carried out for EDP Spain network installation projects which, due to their delineation throughout the protected areas, are subject to an environmental assessment by the competent body. Studies that ensure the identification of technical solutions with the lowest environmental impact, and compliance with the minimisation measures contained in the corresponding environmental impact statements (DIA), allow the avoidance of liquid damage to biodiversity.</p>
	Portugal	<p>Of the 16 hydroelectric uses identified for the construction of ecological flow schemes (CERs), 15 have already had their CERs implemented, and their monitoring programmes are underway to assess effectiveness as defined in the Concession Contracts.</p> <p>Only in the case of the Upper Cávado, given the poor quality of the water in the reservoir water and the good quality of the water present in the downstream section of the reservoir, it was decided not to launch an Ecological Flow (EC) given the possible negative effects on the body of water. However, this section of the river downstream of the dam is being monitored.</p>
<b>Natural capital</b>	Spain	<p>Compliance with the Hydrological Plan for the Hydrographic Demarcation of Western Cantabria 2015-2021, certified in 2019 for the implementation of the ecological flow regime in EDP Spain hydroelectric power plants, is at a very advanced stage, pending completion in Valdemurio, Tanes, Furacón and Priañes, once the execution of projects for the adaptation of the dam drainage bodies has been completed.</p>
	Spain	<p>As part of the Working group on Natural Capital in the energy sector created in 2019, contributed to the environmental impact rapid assessment tool developed for electricity distribution lines in ecosystem habitats, species and services; and assisted in decision-making when drawing sections of new lines (completed in 2021). In 2022 it took the opportunity to activate all the experience and knowledge shared in this group to prepare a guide document (which awaits completion) with conclusions for all the activities of the electricity sector that will serve as a basis for future work on the reclamation of natural capital in the environment of our facilities.</p>

In addition, in 2022, EDP continued to strengthen its public commitments in this area by:

- implementing the commitments made under [Act4Nature-Portugal](#), whose 2021 and 2022 results can be analysed in the biodiversity brochure 2020-2022. Act4Nature is an initiative led by the BCSD-Portugal and fostered by the biodiversity working group since 2020, where EDP is part of the Steering Committee and the Advisory Board
- in 2022, this working group organised and presented the "[Natural Capital Conference](#)", which took place in Lisbon on 23/11/2022
- implementation of the commitments made under the Brazilian Business Commitment for Biodiversity [The Commitment - IBNBIO](#), whose results can be analysed in the [Biodiversity Report 2020-2022](#)
- membership in the Act4Nature-Portugal initiative, and subscribed to the ten common commitments and 12 individual commitments by 2030. By 2021, of the 12 individual commitments, ten have been reached or are underway, and two are yet to begin.

From the EDP biodiversity agenda, the following initiatives stand out in 2022:

In Brazil, another phase of project "Capibaxa Sweet Springs", a partnership initiative with the Earth Institute, recovering 10 tributary springs in the municipality of Baixo Guando in Espírito Santo. The aim is to promote the recovery and conservation of water resources through the forest restoration of springs and the installation of five mini sewage treatment plants in rural properties.

In Portugal, in the activity of electricity distribution, E-Redes celebrated the 20th anniversary of the Protection of Avifauna in the Distribution Network, a partnership that joins E-REDES and the Institute for Conservation of Nature and Forests (ICNF), Quercus, the Portuguese Society for the Study of Birds (SPEA) and the League for the Protection of Nature (LPN). Event that took place on 10 October 2022, when we looked back on this partnership and pondered the "New ideas in Distribution" in the challenges and opportunities brought about by the compatibility of the economy's electrification needs and the safeguarding of natural values (see more information in the [Biodiversity Report](#)).

Also in the electricity distribution activity, partnerships with several bodies are highlighted through the LIFE program (European Union financial instrument for the Environment and

Climate Action), focused on minimising the impact of existing high and medium voltage overhead power lines:

- the LIFE LxAquila project was continued, focusing on the Bonelli eagle species, where 47 medium voltage network supports were corrected with combined solution, inversion from horizontal to vertical sectioners and also nesting deterrents
- two projects were approved: **LIFE PowerLines4Birds**, focused on seven threatened target species (black vulture, Egyptian vulture, Iberian imperial eagle, great bustard, little bustard, golden eagle and roller), in 23 Special Protection Zones (Natura 2000 Network) in the Iberian Peninsula (14 in Portugal and nine in Spain), and **LIFE SafeLines4Birds**, directed at the White Stork in Portugal, and 12 other endangered species, both of which count on the participation of several partners in: Belgium, France, Germany, the USA and Portugal, in partnership with other utilities Operators of Similar Distribution Network and Electricity Transport.

In 2022, work was developed to improve the existing fish transposition systems during hydropower production activities, and monitoring systems were implemented. (see more information in the [Biodiversity Report](#)).

#### Prevention of pollution

EDP assesses the potential effects on biodiversity of its main construction, operation & maintenance activities, where aspects related to soil, water, air and noise pollution are considered. This analysis ensures that they are covered by the environmental management systems put in place and makes it possible to systematise and optimise best management practice for mitigating impact on biodiversity across the group. (see more information in the [Biodiversity Report](#)). The following preventive operational actions regarding pollution in the context of biodiversity protection in electricity production and distribution activities stand out, namely:

- programme of screening and elimination of oils with PCB
- prevention of the production of waste and its hazards Sorting, storage and assurance of adequate final destination of waste produced

In Portugal, EDP has cumulatively achieved the extension of

# 1,371.7 km

correction of critical distribution lines for existing birdlife in protected areas and the Natura 2000 Network

- replacement of transformers' mineral oil, which causes hazardous waste, with vegetable oil
- analysis of the cause of occurrences having environmental impact and identification of measures for rapid action in correction and prevention
- implementation of noise minimisation measures
- contractual environmental requirements from external service providers, with penalties applied if these requirements are not met, and
- environmental training to employees with activities that impact the environment.

### 3.6.3.2.2. Circular economy

EDP's strategic vision for the circular economy is based on three fundamental pillars: Reduction, Reclamation and Optimisation as a way to promote the increase of circularity in the business, implemented through seven priority axes of action (see figure to the side).

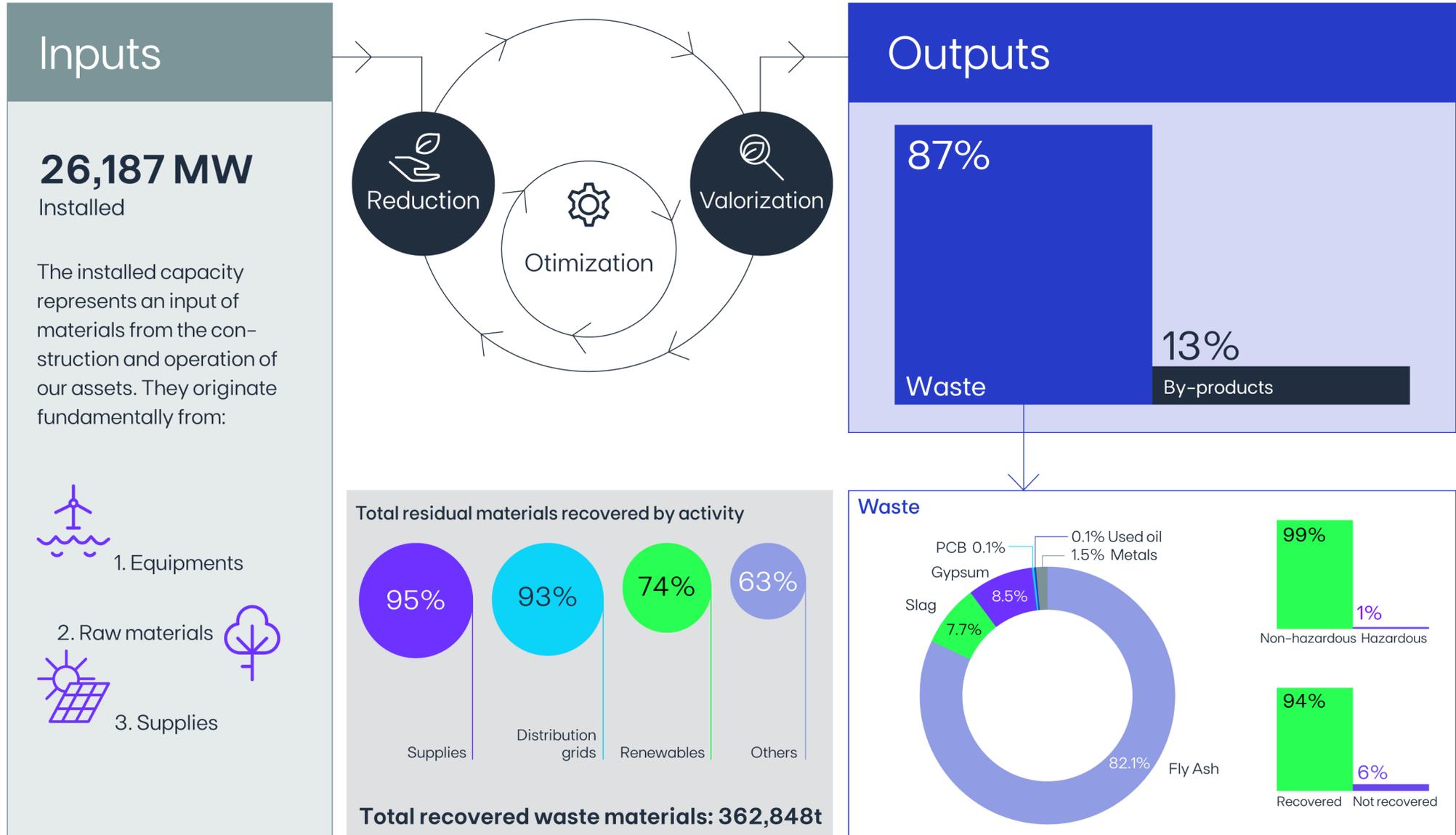
EDP has set out four ambitious circular economy targets for 2025, contributing to its commitment to SDGs 8 and 12, promoting decent work and economic growth, and sustainable production and consumption (see table on the following page). To achieve these objectives, a corporate roadmap was determined, to which projects and initiatives developed by the different Business Units of the group contribute. In 2022, there are several best practices for circular economy, for each of the priority axes of action, which are detailed in the following table.

KPI 2022	TARGET 2025
Promoting the Circular Economy	
<b>74%</b> Accelerating circularity in renewables in terms of operational waste and decommissioning	<b>&gt;80%</b>
<b>-66%</b> Reduction of operational waste	<b>-82%</b>
<b>52%</b> Increased rate of recyclability in the operation	<b>85%</b>
<b>-77%</b> Reduction of water consumption	<b>-78%</b>

The Circular Economy is one of the axes of the EDP group's sustainability strategy, constituting an important pillar of its Environment Policy. For EDP, the Circular Economy is based on the efficient use of natural resources from a life-cycle analysis perspective, with the objectives of:

- Minimise the use of natural resources necessary for the proper execution of its activities
- Efficiently optimise and manage internal products and services capable of leveraging the circular economy in its customers
- Maximise the recovery of waste and its reintroduction into the economy as by-product.

**MATERIALS INPUTS AND OUTPUTS**



Axis of action	Initiative	Description	Business Unit
<b>Efficient use of resources and materials</b>	Alqueva floating Solar Power Plant	Integration of cork in the floats of floating photovoltaic panels. The introduction of cork instead of conventional float materials, such as plastic, allows the replacement of a non-renewable material with a renewable material, neutral in GHG emissions in production and more favourable to biodiversity. Within the scope of the project, a life cycle analysis (LCA) was performed specifically to evaluate the impact of this type of floating photovoltaic project versus projects that use conventional floats.	EDP Produção – Portugal
	Application of the Ecodesign Directive in the purchase of transformers in Distribution	In accordance with the European Commission's Ecodesign Directive, tier 1 transformers have not been purchased since 1 July 2021. Its replacement by Tier 2 transformers will reduce energy waste by 10% compared to Tier 1.	E-REDES – Portugal
	Energy storage system with batteries at solar farms	Installation of batteries for energy storage in solar farms with the aim of improving the flexibility of electrical systems, thus incorporating greater renewable capacity.	EDP Renováveis – Europe and Brazil
<b>Durability</b>	Reuse of buildings and infrastructure at the Sines plant under the GreenH2Atlantic hydrogen project	Reuse of buildings and infrastructure so as to increase their durability and prevent the production of waste. In particular through: reuse of the water outlet; electro chlorination building; group 4 adduction water duct; group 3 and 4 rejection channels; breakwaters; water treatment system building; demineralised water tanks; cable track tunnel between the plant and the water outlet; buried nets; accesses, etc.	EDP Produção – Portugal
<b>Digitalisation</b>	Transformers overhaul	Reconditioning of transformers and the use of predictive analysis and remote monitoring of this equipment in real time, which allows an increase in the responsiveness and quality of service, and simultaneously increases the useful life of resources through dematerialisation processes.	E-REDES – Portugal
	LIDAR system on power lines	Use of LIDAR flights for maintenance and monitoring of lines, avoiding travel and saving resources.	EDP Spain – Spain
<b>Resources enhancement</b>	Reclamation of wood resulting from the clearance of vegetation	Reclamation of cut vegetation in between the lines subject to Secondary Network Fuel Management Strips, focusing on supporting the protection and preservation of biodiversity and carbon sequestration.	E-REDES – Portugal
	Demolition waste reclamation	Deactivations have a minimum reclamation rate of 90%. Waste recovery with clear resource savings in other industries (e.g., steel and iron) and filling materials (if we reuse uncontaminated construction and demolition waste in the environmental reconversion of decommissioning).	EDP Produção – Portugal

Axis of action	Initiative	Description	Business Unit
<b>New business models</b>  <b>Capacity building and raising awareness</b>	Solar energy sales as a service	Development of a business model as a service for solar, in which the management of panels made by EDP contributes to their better maintenance and, therefore, to an extension of their useful life, in addition to the fact that when the customer no longer needs them, they can be reused by other customers.	EDP COMERCIAL and EDP Spain - Iberia
	(Environmental Accreditation -	The Environmental Management System carried out and certified in all operational facilities in Europe and Brazil, which allows the promotion of circular economy guidelines that increase innovation and overall process efficiency, along with awareness of the theme among employees and suppliers.	EDP Renováveis - Europe and Brazil
	Training: Circulating at EDP	Initiative that aims to internalise the concept of the circular economy in EDP through the training of employees, with a focus on the development of mindset and competencies. It includes three axes: (1) Introduction to the circular economy, for all employees, with the objective of internalising the concept; (2) Short immersion courses on specific circular economy topics; (3) Circular Economy Days, developing mentoring aimed at developing examples of circularity in the company's business.	EDP Brasil - Brazil

EDP gathers efforts to develop solutions so that its main waste materials can be used as by-products and raw materials for another industry, namely fly ash and coal slag which made up around 96% of the total waste materials recovered (362,848 tonnes).

With regard to construction, operational activities and the maintenance of facilities, reuse is prioritised so that, when discarding, recycling is always considered as the first solution.

In this way, contracts are established with licensed operators who transport the waste to the appropriate destination for recovery. Efficient waste management goes beyond the suitable disposal of waste and its incorporation into the economic circuit, by promoting its reintegration whenever possible. This management starts upstream, in design and in the choice of materials necessary for the functioning of operations.

### Water management

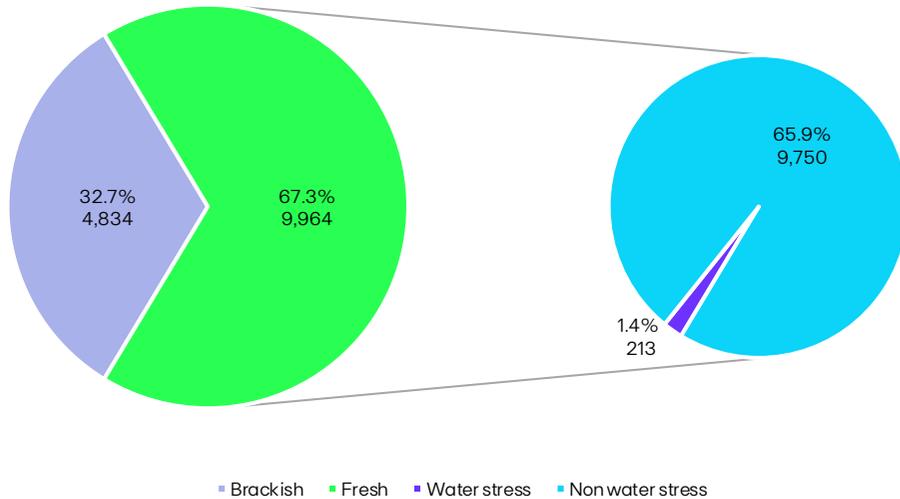
EDP recognises access to drinking water and sanitation as a universal Human Right and assumes its responsibility in the pursuit of SDGs, in particular SDG 15, contributing to the sustainable use of freshwater ecosystem services, and SDG 7, seeking to ensure the supply of clean and affordable energy for all.

Under its [Environmental Policy](#), EDP is committed to mitigating its impacts, managing risks and promoting the ongoing improvement of processes, practices and performance through a collaborative approach with stakeholders for the sustainable management and efficient use of water.

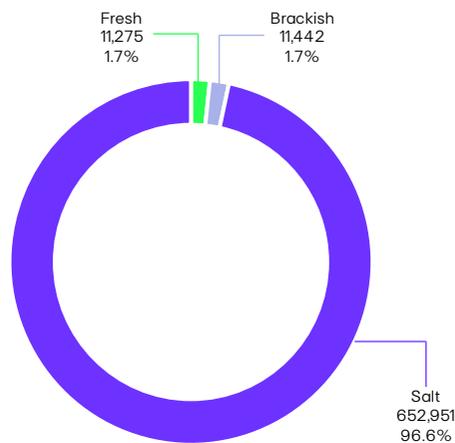
Water is a vital resource for electricity generation, particularly hydroelectric power, which is an important part of EDP's renewable generation portfolio and is crucial to its strategy of reducing CO<sub>2</sub> emissions and mitigating climate change.

Although, and contrary to the other activities of the organization, the use of water in hydroelectric production is not considered consumption, EDP monitors the volume of water managed in these assets, which has reached 112 million cubic metres, -44% compared to 2021. This indicator depends heavily on the hydropower productivity index in Portugal, in which the water portfolio is more relevant, being the same 0.63 (vs. 0.93 in 2021), 37 p.p. below the average hydrological year.

**WATER CONSUMPTION (% , THOUSAND m³)**



**WATER WITHDRAWAL (% , THOUSAND m³)**



The specific consumption of fresh water changed in 2022 (-25% compared to 2021), with the decrease in the EDP group's coal-fired electricity generation (10% vs. 2021), which is justified by the fact that the Pecém thermoelectric power station in Brazil has been shut down.

EDP monitors potential shortages, water quality and sediments, as well as the impact of the management of this resource on biodiversity, for which it undertakes mitigation activities such as the release of ecological flows, the

transfer and transport of fish, and support for scientific research on these topics.

It is important to mention the fact that the Pecém thermoelectric power station in Brazil is located in a water stress zone, so EDP uses the World Resources Institute's *Aqueduct* tool to assess its exposure to water risk at the hydrographic basin scale, then a local analysis is conducted considering quantitative information from national institutions and the experience of internal operational teams.

Since 2010, EDP has responded to the CDP Water Security, where it provides a detailed description of its ongoing initiatives. In 2022, EDP achieved the highest performance level of this index (leadership) with a rating of A.

**In 2022, EDP attained the level of higher performance (leadership) with the rating**

**A**

CDP Climate Change  
CDP Water Security

**3.6.3.2.3. Climate change**

Prominently positioned at the forefront of energy transition, EDP recognises the importance of the electricity sector, and of its contribution to a low-carbon economy, as a solution for tackling climate change.

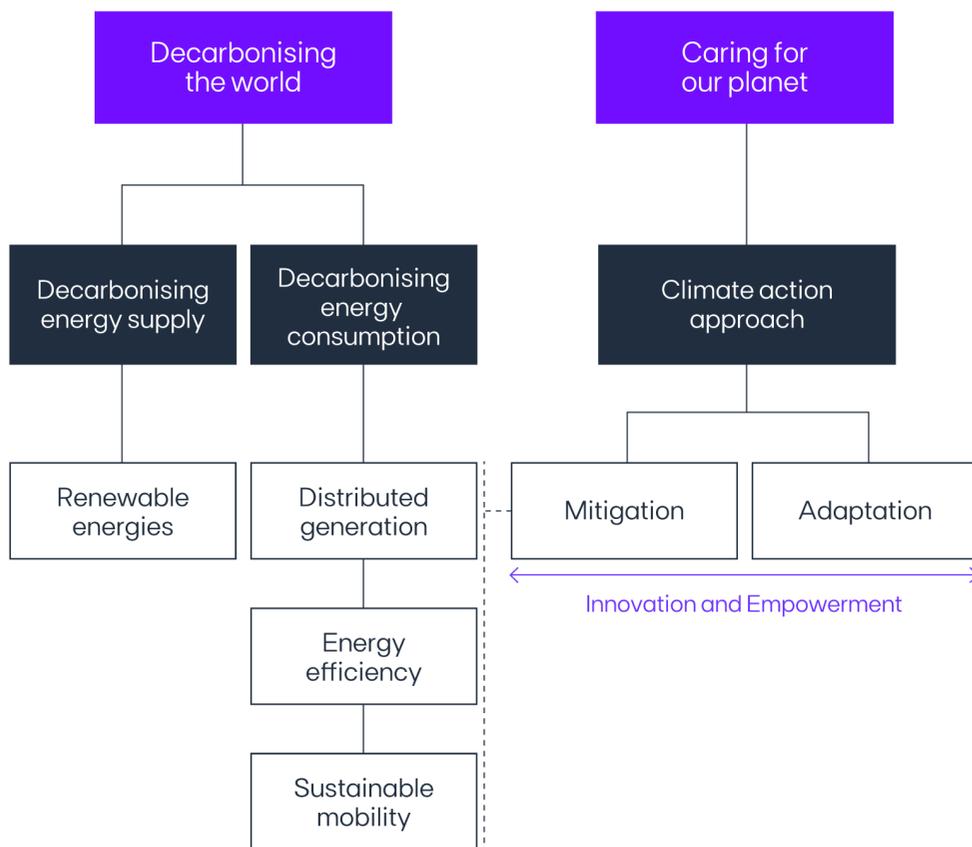
Given the current context of climate emergency, as well as compliance with the global commitment established by the Paris Agreement and reinforced by the Glasgow Pact to limit the increase in global average temperature to 1.5°C, EDP's contribution to combating climate change is realised through its Climate Action approach, embodied in the [Climate Transition Plan](#) (published in an autonomous document).

EDP's Climate Action approach focuses on mitigation actions - with the aim of reducing greenhouse gas (GHG) emissions and adopting climate change adaptation plans in all regions and business units exposed to significant climate risks. These actions are supported across the board by innovation - which aims to promote the development of carbon-neutral technologies and increase energy efficiency; and by capacity building, increasing awareness and transparency on climate change, both within and outside EDP.

This approach is the responsibility of corporate governance, which assumes a strategic role in the appropriate management of climate responsibilities and action plans, where it includes

the identification, analysis and management of climate-related risks and opportunities (more details in [Climate Transition Plan](#)).

EDP has publicly assumed a set of short, medium and long-term objectives and targets that support its decarbonisation strategy, approved by the Science Based Target initiative (SBTi) as being aligned with a decarbonisation trajectory of 1.5°C. It has also committed to achieving carbon neutrality by 2030 for its scope 1 and 2 emissions. Despite ongoing efforts to reduce GHG emissions, there are residual emissions that cannot be eliminated. For these, EDP will offset them through the use of carbon credits.



The following emission reduction targets are being validated by SBTi:

SCOPE	2030	2040
S1+S2 [intensity]	-95%	-96%
S3 [absolute]	-45%	-90%
S1+S3C3 [intensity]	-80%	-
S3C11 [absolute]	-45%	-90%
S1+S2+S3 [absolute]	-	-90%

EDP follows the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures), disclosing information on governance, strategy, risk and opportunity analysis, metrics and objectives and financial impact of climate change on the company ([Annex "EDP's Alignment with TCFD Recommendations"](#)).

The EDP group publicly discloses its response to the CDP Climate Change questionnaire, in which it details its strategy and performance in the fight against climate change in line with the TCFD ([CDP Climate Change EDP 2022](#)).

In 2022, EDP achieved the highest level of this index (Leadership A) in both the CDP Climate Change and CDP Water Security.

### Climate action mitigation

Mitigation is directly linked to EDP's Business Plans, both on the supply side and on the demand side, with the aim of reducing global GHG emissions by implementing solutions based on four main pillars:

**1.** Continued reduction of production from coal-fired power plants (by 2025) and natural gas (by 2030).

**2.** Increase in renewable power, with the public objective assumed by EDP of reaching 100% in 2030.

**3.** Strengthening electrification and promoting energy efficiency, favouring the supply and demand of renewable energies and sustainable mobility solutions.

**4.** Promoting innovation aimed at mitigating the effect of climate change, contributing to the energy transition to a low carbon economy.

In 2022, the first pillar was strongly influenced by the global energy crisis caused by the Russia-Ukraine war, which translated into an escalation of the price of natural gas on the international markets and conditioning the entire energy sector in Europe. In comparison with 2021 EDP observed:

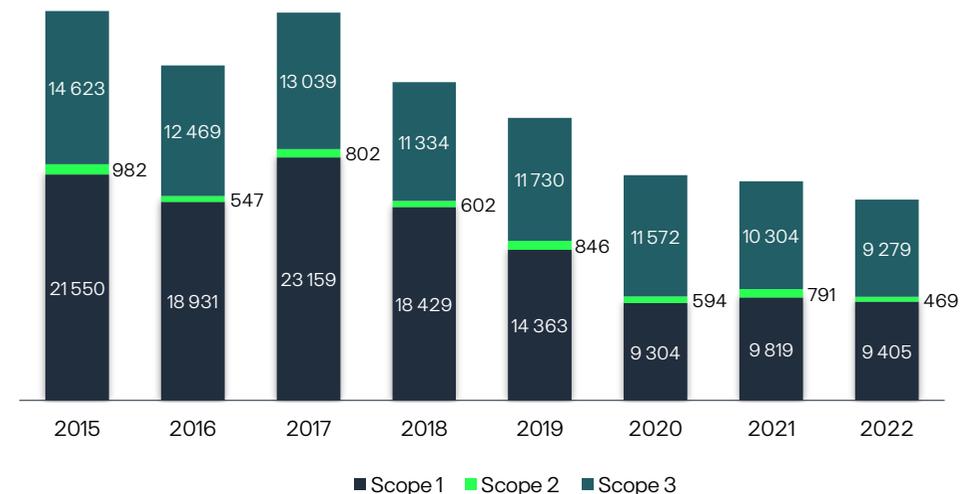
- a significant increase in electricity generation from coal-fired thermoelectric power plants in Spain (+ 64%)
- the closure of coal-fired power plants in Portugal, together with the severe drought experienced until November - the Hydroelectric Capability Index (HPI) was below 0.7, led to a considerable increase in electricity generation in CCGT (+ 35%)
- the net increase in renewable capacity (wind and solar) was only 1,320 MW.

As a result of these extraordinary operating conditions, there was an increase both in primary energy consumption (+ 4% than in 2021), although emissions associated with electricity generation fell by 4% largely due to the shutdown of the Pecém coal-fired power station in Brazil.

EDP reports its GHG emissions in accordance with the GHG Protocol Corporate Accounting and Reporting Standard (categories detailed in [annex table](#)). In summary:

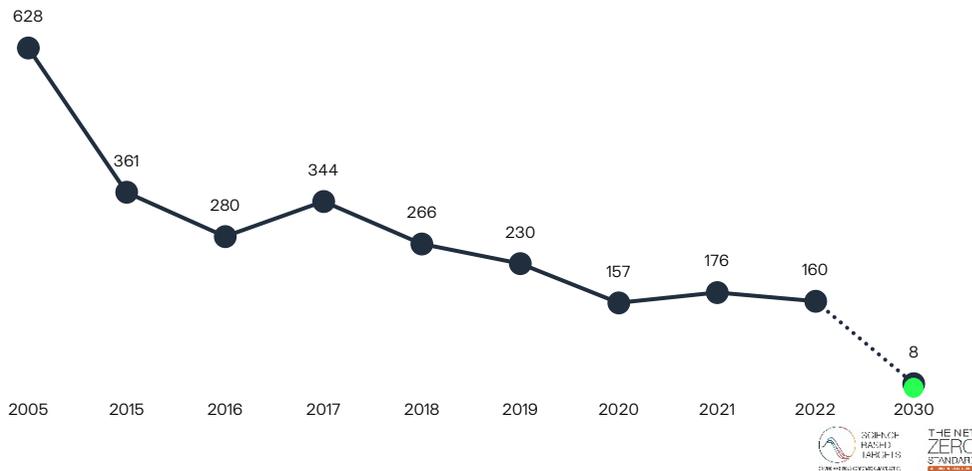
- **scope 1 emissions:** includes stationary emissions from thermoelectric power plants, which represent 99.7% of the total, as well as emissions from the vehicle fleet, fugitive emissions (SF<sub>6</sub>) and those corresponding to natural gas consumption in buildings. In 2022, they totalled 9.4 MtCO<sub>2e</sub>, 4% less than in 2021
- **scope 2 emissions:** refer to electricity consumption, including losses in transport and distribution networks (the part produced by third parties), internal consumptions in power plants and consumption in administrative buildings supplied by third parties. In 2022, they totalled around 0.47 MtCO<sub>2e</sub>, 41% less than in 2021, largely due to the significant reduction in emission factors in Portugal and Brazil, affecting the contribution of losses in the distribution networks
- **scope 3 emissions:** comprise all remaining indirect emissions upstream and downstream of the value chain, not accounted for in the other scopes. They essentially include emissions associated with purchased goods and services, energy and fuel-related activities and the sale of gas to end customers. The total value of scope 3 emissions reached 9.3 MtCO<sub>2e</sub>, 10% less than in 2021, essentially due to the reduction in the categories of sale of gas to end customers and energy and fuel related activities.

### SCOPE1, 2 AND 3 EMISSIONS (ktCO<sub>2e</sub>)



The 7% reduction in Scope 1 and 2 emissions, combined with the slight increase in electricity produced (+ 2.6%), meant that specific Scope 1 and 2 emissions decreased by around 9% compared to 2021, settling at 160 gCO<sub>2</sub>/kWh.

### SCOPE 1 AND 2 SPECIFIC EMISSIONS (gCO<sub>2</sub>/kWh)



The production of electricity at renewable energy power plants by replacing fossil-based thermoelectric production in the country where they operate avoids the emission of greenhouse gases in an amount corresponding to that which would be emitted by a mix of the existing thermoelectric portfolio in that country, producing the same electricity. In 2022, avoided emissions amounted to 22.7 Mt CO<sub>2</sub>e, 4% less than in 2021.

The decarbonisation strategy also has an impact on improving energy efficiency along the value chain, contributing to the reduction of upstream primary energy consumption and, on the other hand, to greater efficiency in the end use of energy (third pillar), avoiding GHG emissions. In the car fleet, the percentage of electric light vehicles rose from 13% to 15% in 2022. It should be noted that EDP has assumed a commitment to electrify more than 40% of the light vehicle fleet in 2025 and 100% in 2030.

The fourth pillar regarding innovation is developed in [chapter 3.6.2.3.2](#).

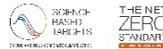
### Climate action adoption

Ensuring the resilience of its electricity generation and distribution infrastructures is one of the priorities of EDP's climate action. EDP has set a goal to have Adaptation Plans in place in its Business Units by 2022 which ensure the resilience of infrastructures that may be exposed to extreme events of greater intensity and frequency, given the reality we know today.

By the end of 2025, the global commitment is to achieve 100% implementation of these adaptation plans. To this end, the common corporate methodology supports the Business Unit plans already in place and the evaluation and quantification of physical risks are consolidated at corporate level in accordance with EDP's risk taxonomy, aligned with TCFD Recommendations.

The level of exposure of EDP's infrastructures to physical climate risks is assessed considering the relevant climate variables, the short, medium and long-term IPCC scenarios and level of regionalisation. In addition to supporting the sensitivity analyses of the group's business units in the implementation of climate change adaptation plans, the physical risk analysis serves to support the decision for new investments.

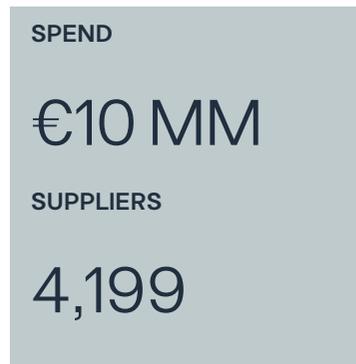
Further information can be found at [www.edp.com](http://www.edp.com).



### 3.6.3.3. Supplier Management

Alignment with the SDGs	Objectives	KPIs 2021*	Target 2025
 	Volume of Purchases to Suppliers with Decarbonization Objectives	40%	75%
	Volume of Purchases to Suppliers with Gender Equality Objectives	15%	75%
	Volume of Purchases to Suppliers with Sustainability Reports	50%	75%

\*2022 data in clearance



#### 3.6.3.3.1. Scope 3 of everything

Recent years have seen a profound evolution in the regulatory framework and societal expectations regarding supply chains, with companies now assuming responsibility beyond their direct suppliers and subcontractors and into human and labour rights, integrity, cybersecurity and circularity. Companies should manage their scope 3 emissions with respect to everything, not just CO<sub>2</sub>. The renewable sector is particularly exposed to this

demand because of the hopes for decarbonisation and access to electricity placed in it, and because its supply chain is based on cutting-edge technology, consuming energy and natural resources in a global market that is too concentrated, with numerous supplier layers, and lacking the required transparency. In particular, the photovoltaic and semiconductor sector is one of the most exposed to these demands.

#### Another challenging year

2022 was marked by Russia's invasion of Ukraine, with economic and humanitarian consequences including rising energy and food costs, and an ever-present climate crisis whose effective mitigation will require global transition to a low-carbon economy. Inflation accelerated in many countries as a result of pandemic-related disruptions combined with consumer demand and higher commodity prices. As a result, economic recovery plans focused on re-industrialisation are emerging simultaneously in the US and the EU, accompanied by increasingly demanding legislative packages for the environment and human rights.

This whole context is increasingly defined by the interaction of complex disruptions with disparate origins and long-term consequences for which organisations in general are not fully prepared, forcing an adaptation of the way risk is managed in this new environment.

In this sense, the concept of resilience, particularly in supply chains, gains relevance, as it is seen as the ability of organisations to cope with adversity, adapt and continuously accelerate as disruptions and crises arise over time.

For an organisation like EDP, present in multiple markets and business areas, supply chains hide interdependencies, potentially leading to crises, where hidden interruptions may arise, unexpectedly impacting the company's business plan.

However, the changes introduced during the COVID-19 pandemic, and more recently with the war in Ukraine, have also represented a new impetus for accelerated growth: the shift to digitalisation, new hybrid working models, rethinking supply chains and accelerating climate change investments. 2022 is therefore representative of the capacity to reinvent and innovate in the face of disruption.

### Direct Challenges faced by EDP Procurement

In 2022, procurement faced market shortages and sharply rising fossil fuel costs and confronted the difficulties of timely supply of photovoltaic panels, electrical and IT equipment, ensuring with its partners the proper accreditation of entry into each country and managing customs blockages in the US.

At the same time, procurement met the growing number of EDP investment projects, portfolio realignment and geographical expansion, which required structural organisational measures. Likewise, regulatory changes have required measures to update processes and procedures.

EDP worked with 4,199 suppliers and bought over 10 billion euros, registering occasional, unforeseeable, and contained negative occurrences arising from established contractual relationships. The level of occupational accidents in the subcontracting of construction, installation and maintenance of equipment persists as one of the top priorities.

### Supply chain – hot topics

**Reporting Directive:** the EU has approved new transparency and reporting rules for large companies. The measure will boost comparability between companies and favour procurement processes through the standardisation of indicators.

**Due Diligence:** in anticipation of the European Due Diligence Directive, companies are already embracing the substance of the law internally, cooperating to define sector standards and audits.

**DNSH and minimum safeguards:** the concepts of Do No Significant Harm and minimum safeguards have become the letter of the law with the European taxonomy. The funder must assess the negative effects of the projects it is financing on human rights, climate, biodiversity, water and material consumption. Direct and indirect Effects.

**Scope 3:** the SBTi initiative has become the benchmark for assessing decarbonisation trajectory and Scope 3 emissions must be calculated by all companies

**War and monopolies:** The invasion of Ukraine and the US–China geopolitical tension have shown the energy imbalance between the powers. The West has decided to accelerate renewable energy and reindustrialisation.

**Forced labour:** The complicity or alienation of companies in relation to forced and/or unprotected, poorly paid, segregated, repressive labour has become a frequent reason for scrutiny in dialogue between companies and suppliers.

**Material scarcity and innovation:** Uncertainty about timing, quantities, prices and continuity of access to suppliers is being accompanied by a high level of innovation and diversification in the electricity sector.

### Due Diligence to Suppliers

EDP started implementing ESG Due Diligence in 2017, in accordance with the United Nations Ruggie methodology. As of 2020, with the approval of amendments to the Human Rights Policy and the ESG Protocol for Suppliers, the Due Diligence process was extended to all business units.

### 3.6.3.3.2. Identification and mitigation of Procurement Risks

Through criticality analysis, the EDP group identifies and segments the potential risks associated with each type of specification. The analysis is carried out using the Sustainability Matrix (EDP Sustainability Protocol), which combines the relevant risks of the activity, identified by consulting stakeholders and attributable to the sector, with the characteristics of the specifications. Based on this criterion, the following was analysed: financial, business relevance and continuity; dependence and autonomy; access to data; facilities; customers; local communities; cybersecurity; emissions potential; waste; environmental accidents; accidents at work; integrity and compliance; human and labour rights. Once the risks of each type of purchase have been identified, non-negotiable clauses are included in the specifications that establish the minimum qualifications that suppliers must meet, as well as the rules for monitoring execution of the contract. Suppliers that submit proposals only enter the negotiation phase after due diligence of integrity, legal and ethical, financial, technical, social and environmental compliance is carried out.

Through the application of Go/No-go rules in the selection of suppliers and contractual clauses that include monitoring, audits and performance assessment, EDP ensures that it works with low-risk suppliers with skills appropriate to each activity's inherent risks.

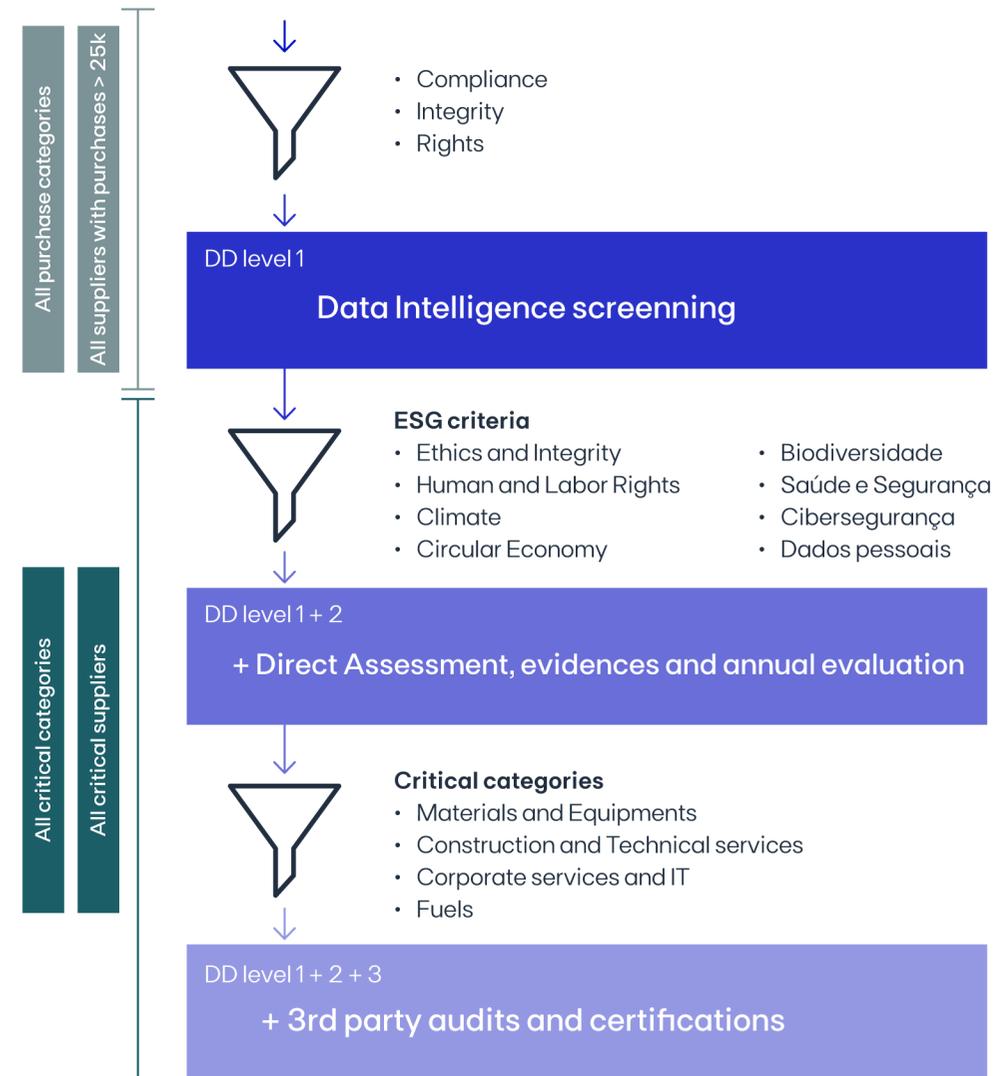
**ESG CRITICALITY MATRIX**

- 1 Supply category (value chain country/sector/activity level risks)
- 2 Purchase amount (EUR)
- 3 Duration of the contract and frequency of supplies
- 4 Importance for operation, innovation and investment
- 5 Consequence of sudden supply interruption
- 6 Irreplaceability of suppliers
- 7 Supplier access to equipment/facilities
- 8 Supplier access to customers
- 9 Supplier access to protected personal data
- 10 Supplier access to reserved data and Cybersecurity
- 11 Risks of occupational accidents from the contracted activity
- 12 Environmental risks from the contracted activity
- 13 Ethical, human and labour rights of the contracted activity

**Indirect risks and traceability**

Through qualification and rules for direct suppliers (scope 1) and subcontractors (scope 2), EDP also leverages the mitigation of indirect risks (scope 3), mainly attributable to upstream activities in the supply chain. However, in the equipment and technology chain the identification of specific indirect suppliers is unfeasible until an international standard for traceability and origin of materials can be established (see [Action Plan](#)).

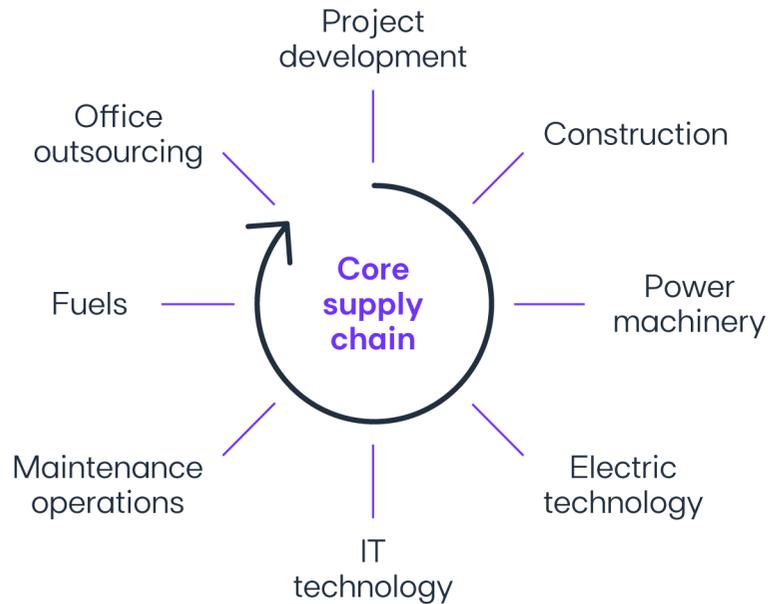
**ESG DUE DILIGENCE LAYERS**



See chapter "[Promote and respect Human Rights](#)".

### EDP's core supply chain

There are four ESG risk segments in the supply chain that correspond to the purchasing categories of the value chain.



PURCHASES RISKS AND SEGMENTATION	2022	2021	2020
<b>Electrical/Industrial technology</b> ESG upstream footprint	13%	22%	24%
<b>Technical Services and Construction</b> Waste, Safety, Subcontracting, local impact, ESG upstream footprint	41%	40%	53%
<b>Corporate Services and IT</b> Data Privacy, Cybersecurity, Integrity	16%	18%	14%
<b>Fuels</b> CO <sub>2</sub> emissions and pollutants, waste, safety, working conditions, upstream ESG footprint	30%	20%	9%

### Management tools

- Sustainable Purchasing Policy
- Supplier's Code of Conduct
- Sustainability in Purchasing Protocol:
  - Due Diligence
  - Risk analysis
  - Assessments, audits, and annual appraisal
  - Contractual clauses
- Human and Employment Rights Policy
- Climate and Environment Policy
- Prevention and Safety Policy
- Code of Ethics for contractors
- Integrity Policy
- Ethics and Speak Up Channels
- Sustainable Purchasing Committee
- Objectives and KPI policy

### Sectoral tools

- SEIA - Traceability Protocol
- SPE - Solar Stewardship Initiative
- Bettercoal - Code
- ISO 20400

In 2022 there was a very significant increase in the volume of purchases, which rose from EUR 5.7 billion to EUR 10.1 billion. The increase in fuel prices explains 50% of the growth and the decarbonisation investments arising from the Business Plan justify the rest

### 3.6.3.3.3. Supply Chain ESG Goals

In 2020, EDP expanded the sustainable procurement targets to define the obligation of strategic alignment of suppliers with EDP's objectives. In fact, pursuing goals of carbon neutrality, circularity, biodiversity gains, respect and promotion of human rights, EDP needs its supply chain to commit to the same practices and contribute to transparency, traceability, verification of impacts and the reduction of the negative ESG footprint. In this way,

maintaining the previous objectives of minimum ESG requirements, due diligence and performance monitoring, EDP introduced alignment metrics in the objectives.

Segment	Profile	ESG Level	Target
All suppliers	All suppliers under procurement	ESG Due Diligence - screening	Annual – 100%
		Volume of purchases from suppliers with objectives aligned with EDP goals	2030 – 75%
Critical suppliers	Suppliers exposed to activity risks	ESG Due Diligence - Verification of Evidence, Certifications and Audits	Annual – 100%

**Critical Suppliers:** Critical suppliers include all key suppliers for the success of the business plan, as well as suppliers that perform activities that may expose them to ESG risks: occupational accidents, waste, informal subcontracting, access to personal data and customers, cybersecurity, integrity, size of the ESG footprint upstream in the value chain, in particular CO<sub>2</sub> emissions and human rights.

**Suppliers:** suppliers for purchases over 25 thousand euros, including all critics.

### 3.6.3.3.4. Action plan 2023

<b>Align</b> suppliers with EDP's goals	<ul style="list-style-type: none"> <li>• Hold the international EDPartners event to promote suppliers' commitments to the renewable and sustainable energy strategy.</li> <li>• Share knowledge through the EDPartners community</li> </ul>
<b>Guarantee</b> Human and Labour Rights	<ul style="list-style-type: none"> <li>• Collaborate and support the implementation of certification in Human and Labour Rights</li> <li>• Extend human rights training to meet new legal requirements</li> <li>• Collaborate with suppliers in the creation of risk maps</li> </ul>
<b>Promote</b> Transparency and Reporting	<ul style="list-style-type: none"> <li>• Support the publication of sustainability reports, the provision of SpeakUp channels through contractual measures and sharing of experience</li> </ul>
<b>Decarbonise</b> the supply chain	<ul style="list-style-type: none"> <li>• Adapt the procurement categories to European taxonomy</li> <li>• Interconnect databases with information on companies' CO<sub>2</sub> emissions, strategies and certificates.</li> <li>• Establish comparability criteria for carbon intensity at the product or service level.</li> <li>• Support the suppliers' decarbonisation journey</li> </ul>
<b>Ensure</b> integrity and compliance with the law	<ul style="list-style-type: none"> <li>• Adapt Due Diligence procedures to the specific requirements of the new legislation and to the rules that will be adopted by the business sectors.</li> <li>• Develop and build the capacity of assessments and independent auditors</li> </ul>
<b>Promote</b> the circular economy	<ul style="list-style-type: none"> <li>• Promote Environmental Product Declaration (EPD) after life cycle assessment (LCA) following applicable product category rules (PCRs) and ISO 14025 standard.</li> <li>• Collaborate in initiatives that develop product passports dedicated to electrical and electronic equipment</li> </ul>
<b>Develop</b> strategic ESG partnerships	<ul style="list-style-type: none"> <li>• Fund and collaborate in Europe's Solar Stewardship Initiative (SSI) project, which aims to set the ESG standard for policy, due diligence and traceability in the photovoltaic sector</li> <li>• Continue to fund and collaborate on the Bettercoal project, which ensures ESG qualification of coal mines</li> <li>• Collaborate with non-governmental organisations and participate in the working groups of corporate associations that promote sustainability in supply chains</li> </ul>

## Javier Rodríguez Diez

### Chief Sales Officer of Vestas Wind Systems

“Our partnership with EDPR goes beyond a pure commercial relationship: for the last 15 years, we have worked together to contribute to the deployment of wind energy across the globe. We have successfully executed very complex projects across different geographies and that is only possible when two leaders work passionately towards the same goal.

Our commitment to accelerate the energy transition to help tackle climate change, our shared values and a historical partnership built on trust allow us to continuously innovate and reinforce best practices together.

We also support one another to find optimal solutions for any challenge that may arise, to maximise the quality of our products, minimise risks, decarbonise our operations across our entire value chain, and of course, to have a positive impact on the communities where we operate. Our collaboration through the initiative Keep It Local to train people living in rural areas to become service technicians is a testament to our willingness to maximise the value we offer to society through job creation.

I know we still have a long way to go, and I feel proud to have been myself part of this exciting journey along with EDPR. We are grateful for their trust in our people and in our solutions.”



### 3.6.3.4. Respect and advocate for human rights

Alignment with the SDGs	Objectives	KPIs 2022	Targets 2025
	Protect Human Rights in the supply chain, according to the Ruggie methodology through Due Diligence, audits and performance assessment	100%	100%
	Carry out human rights impact assessments on the development of infrastructure projects, following the Ruggie methodology	100%	100%

#### Management approach

EDP pursues a policy of full respect for human and labour rights and, at the same time actively promotes universal human values. The commitments are set out in the Human and Labour Rights Policy that was updated in 2021, in conjunction with the [Code of Ethics](#), the [Stakeholder Relations Policy](#) and the [Supplier Code of Conduct](#). In addition, the EDP group also has Diversity and Voluntary Investment in Community policies.

The [Human Rights Policy](#) covers the entire EDP group, has been approved by the Board of Directors and has a dedicated Committee. The Policy is prescriptive in nature, identifies the references, standards and international conventions to which it is subject, establishes the strategic principles, specifies the principles for action, assigns responsibilities, determines obligations and management bodies. The Policy details operational commitments, its workings, complaint and communication channels, reporting and training obligations and extends obligations to suppliers. In particular, the Policy sets out Due Diligence procedures, implementing the Ruggie and OECD methodology, and anticipating the EU Due Diligence directive.

The report on [Human and Labour Rights](#) is carried out in an integrated manner through a specific annual report. In this report, the subject of human rights is separated into several sections and should be read in conjunction with the Ethics and Integrity, Suppliers, People and Prevention and Safety reports. The annual Human and Labour Rights report aggregates all the themes, publishes the country and risk maps, as well as the specific risks of each stakeholder group.

#### Identification of risks

The analysis of the risks related to the respect for human and labour rights is carried out by assessing the country risk, the local risk and the specific risk of each activity according to the nature of the project, informed by the sector's risk map. Depending on whether we are considering new investments, the creation or modification of infrastructures, contracting suppliers and other counterparties, or operations with customers and employee management, specific risk control and mitigation measures are implemented.

The EDP group's activity is exposed to four main risks for negative impact on human rights.

Stakeholders	Risk
Indirect suppliers to the electricity sector	Failure to follow ILO Conventions
Service providers (contractors)	Accidents at work
Local communities of coal-fired plants to be closed	Unemployment
Vulnerable local and indigenous communities	Negative impact on the land

#### Failure to follow ILO conventions

Fundamental labour rights are enshrined in eight International Labour Organisation conventions: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and the elimination of discrimination in respect of employment and occupation.

EDP faces indirect risks of failure to respect fundamental labour rights relating to the extraction and production of the materials necessary for the value chain of manufacturers of electrical technologies. These risks occur several levels upstream of the direct suppliers and focus on internationally identified regions.

#### Accidents at work

The risks of accidents at work are manifested in operations and construction work, and in the installation and maintenance of equipment, carried out mainly in outdoor spaces. When contracting suppliers, the EDP group always ensures full prior verification of compliance with the fundamental conventions of the International Labour Organisation, as well as requiring proof of satisfaction of remuneration conditions, and monitors compliance with the Supplier Code of Conduct throughout the contract, as detailed in the chapter on Supplier Management in this report.

### Unemployment

In the field of new investments and infrastructures, the main risks are related to guaranteeing the rights of local communities, namely property rights, which are typically rights of use that are not embodied in full ownership, such as the situation of indigenous territories, fishing or hunting areas, protected landscapes and land use rights. In these cases, the construction right authorised by the public authorities can be substantially challenged by the communities.

### Negative impact on communities

Likewise, the installation or modification of an infrastructure may have effects on local social dynamics or ecosystems. For these reasons, the EDP group normally conducts social and environmental impact studies and opens communication channels in order to ensure proper management of projects, including full consultation with stakeholders, as established in its policies.

### **Negative Occurrences**

The procedures established ensured that, throughout 2022, as in previous years, the EDP group was not subject to accusations or suspicions of violations of fundamental human and labour rights. However, occasional occurrences were registered and dealt with, being neither structural nor recurrent and often related to individual behaviours or situations leading to complaints that were solved within the ethical process and, when justified, gave rise to corrective measures, penalties or reinforcement of established procedures.

Among the dozens of EDP projects, there are investments with a significant community impact, such as the São Manoel hydroelectric plant in Amazonia, the transmission network in Brazil and the wind project in Colombia.

### **Objectives and action programmes**

OBJECTIVE	2020	2021	2022	TARGET 2025
Protect Human Rights in the supply chain, through due diligence, audits and performance assessment	100%	100%	100%	100%
Assessing human rights impacts in the development of infrastructure projects, according to the Ruggie/OECD methodology	100%	100%	100%	100%

In addition to the management system that guarantees and implements objectives, EDP has action programmes directed at the most salient risks.

Risk	Action Programme
Failure to follow ILO Conventions	Extension of Due Diligence to Indirect Suppliers
	<a href="#">Solar Stewardship Initiative</a> - due diligence standard for the solar sector <a href="#">Bettercoal</a> - due diligence standard for the mining sector
Accidents at work	Global PlayItSafe Programme
Unemployment	Just Transition Local Reinvestment Plans
Negative impact on the land	Local Community Development Programme

### Supply Chain Traceability and Due Diligence Programme

EDP systematically scrutinises any evidence of human rights violations that may be related to any counterparty, and especially to the electricity sector and decarbonisation, through a due diligence process on legal compliance, integrity, human and labour rights to counterparties with deals above €25,000. This process covers 99% of the purchasing volume and results in the exclusion of those who do not guarantee compliance with national and international standards. Additionally, for the suppliers of the electricity sector's value chain, and according to specific risk maps, there is scrutiny on climatic and environmental issues, on skills and sustainability management practices, financial risks and business continuity, cybersecurity, prevention and safety management, and quality, among others. Once the contractual relationship has been established, where the ESG requirements are converted into contractual clauses, EDP monitors, audits and evaluates the performance of its critical suppliers.

However, the Due Diligence process has been directed at contracted or yet-to-be contracted suppliers. Currently, regarding the relevant sectors for the value chain of the electricity sector, EDP aims to extend Due Diligence for indirect suppliers. Conducting audits of the suppliers of

suppliers is an emerging issue on the international agenda – it requires time, a change in mentality, and collaborative work from companies. EDP is currently working on this issue, discussing with its suppliers exposed to risks, modifying contractual clauses, requesting equivalent commitments and the principle of independent auditing.

In this area, the photovoltaic panels sector is a priority, insofar as it is a strategic technology in EDP's business plan and is exposed to geopolitical conflict, is affected by accusations of forced labour, customs controls, price rises and logistical disruptions, generating significant medium/long term uncertainty.

Believing that extending the practice of due diligence to indirect suppliers depends on companies from each industry sector working together, EDP is a co-founder of the Solar Stewardship Initiative, a Solar Power Europe programme, which has established a code of conduct and auditing principles specific to the solar sector. Auditing of companies, especially those exposed to charges of colluding with forced labour, is the action plan for 2023.

#### PlayitSafe

The persistence of serious occupational accidents of people working for companies subcontracted for electricity infrastructure construction and maintenance services is also at the top of EDP's priorities. The programme is detailed in the chapter on Prevention and Safety.

#### **Respect for local and indigenous communities**

The implementing of new technologies on the Energy Transition requires the approach of new territories, often sparking issues of distrust and fear with the building of new facilities for renewable energy generation. In the United States a most recent lawsuit was filed in December '22 against Wildcat Creek and EDPR NA and reported at RepRisk, although the operation is functional, and no community complaints were registered at the regular auscultations or grievance line activation. Differently from the opposition groups active in Rolling Uplands Wind Farm, still at Project phase, where all assessments required were published and no risks identified. Still, the community is worried about viewshed impacts and EDP works its way through ongoing dialogue with project stakeholders, local authorities and attendance at public meetings. The same mistrust of the newcomers led Village of Misenheimer officials (where the Misenheimer Solar Park is being built) to delay issuing a permit on clearing trees, while waiting to become familiar with the project, and ensure EDP was abiding by environmental agency requirements. Throughout, the dialogue with the Village is ongoing, with public events hosted in the community.

### Judy Waligory

#### Landowner

When the Maple Ridge Wind Farm came to New York state, landowners like Judy Waligory worked with EDPR NA to host turbines on their land and bring new opportunities to their rural community.

“My husband’s family farmed this land, and we now have eight wind turbines on our property. EDPR’s wind turbines have helped us stabilize our family’s income. We use the income from the turbines for living expenses and planning for the future. I have two children and five grandchildren, so this will help make their lives a little bit better.

The income that families, towns, school districts, and municipalities get from the wind farm really benefits everybody. It's not just the landowners—it's the entire community. Many of the EDPR employees have lived here for a long time, so this is their neighbourhood. They want to see the whole community be a success. We're able to provide more services for children in this school and better services for taxpayers. It feels good to contribute to green energy to help not only our own community and our country, but also the entire world. It's just a small part of the picture, but it's our part.”



Judy Waligory  
Landowner

Other countries are going through the same fear of the new, such as Colombia where the operation is at the building phase and the indigenous region of the Wayúus has faced group protests: EDP is committed to develop long-term programmes for the territorial and socio-economic enhancement of these communities, in full compliance with the obligations arising from the socio-environmental licensing and acting with full respect for the legislation and indigenous rights protection standards.

The implementing of the programs, projects and assumed commitments will be due with the assumed proactiveness, dialogue and commitments to the people and local authorities. Collaboration with local associations and institutions has been reinforced, to understand local people needs and decide according to their priorities. The communication channels are operational and a total of \$ 9,276,000 COP on food and essential commodities was donated to the “Shoshinchon community”, affected by weather issues.

In Brazil the São Manoel Hydroelectric Power Station has been exposing EDP to impacts arising from interference in the territories historically used by the Kayabi, Munduruku and Apiaká ethnic groups, made up of around 1,400 people living in 19 villages on the banks of the Teles Pires River. As mitigation measures and environmental compensation for the benefit of these peoples, the Indigenous Components of the Basic Environmental Plan of UHE São Manoel (PBAIs), were prepared respecting the specificities/particularities of each indigenous people, being constituted in a long participatory process of dialogue that was monitored and approved by FUNAI at all stages of development. Each PBAI is contemplated with the execution of 17 programs that aim to improve the quality of life of these peoples. For the implementation and monitoring of the programs, Management Councils were created with representatives from the Company, FUNAI and each of the indigenous communities involved.

The execution is prioritized around the execution of actions linked to subsistence activities, such as: Program for Strengthening Indigenous Organizations, Program for Identification and Management of New Sources of Non-timber Forest Products, Environmental Project for Management and Conservation of Tracajá, Program for Monitoring Chelonians and their Reproductive Habitats, between others.

The construction of one school, two flour houses, a health support housing facility and Basic Indigenous Health Units in the Papagaio and Bom Futuro villages of the Munduruku people as well as in Aldeia Três Maria I and III Povo Apiaká resumed.

2022 continued implementing the granting of higher and technical scholarships, within the scope of the Program for Strengthening Indigenous Organizations. 38 scholarships have

already been awarded. Art and handicrafts are being promoted through generation teaching: The pieces produced are being marketed in partnership between the artisans and the Indigenous Associations. An Integrity Management Support Program was implemented throughout 4 million hectares identifying the pressure vectors, such as prospecting activities and agricultural expansion that act with actions direct impact, mainly on deforestation. The development of the Community and Nature Integration Project, inserted within the Environmental Education Program at UHE São Manoel, was constituted from the realization of the Participatory Evaluative Diagnosis that prioritized the involvement of the local population.

Facing the identified risk of dam breaking, new training was promoted through the workforce and inhabitants, as well as alarm systems and personal equipment reinforced.

This same risk was identified at UHE Cachoeira (Amapá) Human Rights and Labour Assessments, and again an alert system was created through sirens. Cachoeira Caldeirão has developed social projects in partnership with Instituto EDP all year long. In general, projects were carried out to meet the social needs of people in situations of vulnerability, especially those most affected by the pandemic.

Work accidents with employees or third parties were identified at Gielly Nayara Euzebio Arreco / Valeria Lopes Pereira / Kassio De Souza Kuster (EDP Espirito Santo) and Rafael do Prado grids: there were no complaints through grievance or auscultation, but group protests arose when facing difficulties as problems with invoices, Charge for irregularity, Reading mistakes, Deadlines, Consumption Variation, etc. EDP is providing specific education as a new path to fight these vulnerabilities, and reinforcing social projects around health, entrepreneurship, sports and culture throughout the year, bonding the communities with the operation.

#### Negative events

The established procedures ensured that, throughout 2021, as in previous years, the EDP group was not subject to accusations or suspicions of violations of fundamental human and labour rights. However, occasional occurrences, which were neither structural nor recurrent, were recorded and dealt with, often related to individual behaviours, and translated into individual complaints that were endorsed and solved within the framework of the ethical process and, when justified, gave rise to corrective measures, penalties or reinforcement of procedures.

## Just transition

The closure of power plants will always be both a sign of Energy Transition on the path to NetZero emissions, as it will always leave the trail of unemployment, economy depression and social challenging times to local communities. That's why Just Transition must be the motto for this commuting: ensure decarbonization while mitigating all the outcomes of the coal shutdown.

EDP is a world leader on energy transition, assuming its responsibilities towards the communities where it acts. Communities are engaged from a close and human perspective, promoting local development as a tool for the implementation of Human Rights. Our commitment is to fight Climate change, striving for NetZero leaving no one behind.

EDP worked closely with the European Union institutions in to fasten the policy making, the funds and the acts protecting the energy transition.

Several steps were taken at stakeholder engagement level by the EDP group towards the policy makers of the European Union:

- July 2022: Joint letter with ENEL and Iberdrola, pushing for a rapid adoption of H2 Delegated Act. [EDP on LinkedIn: Delegated Act – Joint Letter](#)
- letter to the EC with EDP Positioning on RePowerEU: supporting RePowerEU strategy and calling for a rapid adoption of H2 Delegated Act
- response to Commissioner of Energy Kadri Simson's response to EDP letter
- June 2022: EBD member meeting with Commissioner for Innovation and Research Mariya Gabriel
- October 2022: Letter with environment groups and civil society calling the EC to publish [h2 delegated act](#)
- November 2022: [Business Letter](#) Urging the Commission to Issue a Strong RFNBO Delegated Act promoted by Google and other partners

*In this letter, EDP claimed an hourly correlation of consumption with renewable electricity generation for electrolytic hydrogen to justifiably be named renewable, geographic correlation in terms that hydrogen and renewable electricity production should occur within the same geography and the introduction of the principle of additionality.*

- meeting with the cabinet of VP for the EC, Frans Timmermans, on the H2 delegated act.

In Sines (Portugal) the power plant began its closing process in January 2021, and a social programme "Futuro Ativo Sines" was put together, designed as a Fair Transition tool for the southern Portuguese region.

The numbers evolved in 2022 showing the success of its implementation: [EDP website](#) public info on the Programme also disclosed at [Sines Municipality site on EDP social Programme](#).

A support office was put together with the Municipality and the National Institute for Skilling and Employment (IEFP): 111 registrations were held there, from 128 ex-workers that were registered at the IEFP.

67% are now working; 4% still under support from the Institute; 9% retired or are under health leave, and 20% undertook reskilling programs.

19 social entities received material from the dismantled plant; and 11 local ONG received from the Fund created to support the region, EDP Solidária Sines, a total of 141,000€. A reskilling program was created and an entrepreneurship scholarship created: [EDP website on the entrepreneurship skilling](#) also public at [Sines Public Technological school site](#), on the entrepreneurship skilling.

The case study of Sines inspired and fed the [World Economic Forum toolkit for the Coal to Renewables engagement](#). Presented at the Davos meeting in 2022, the [Programme won the Community Involvement Program of the Year at Environmental Finance's Sustainable Company Awards 2022](#).

Throughout 2022, EDP Spain engaged in its path to a Just Transition:

- at Aboño, the H2 "fase 150MW" proceeds with the Basic Project and has started the environmental processes ESIA and MS AAI. The Natural Gas exchange is building its Basic Project, and already started the environmental procedures ESIA and MNS AAI. There's a Synchronous Compensator being studied for implementation after Aboño 1 is definitely closed. Side-by-side with the technical transition, the social process was engaged to focus on communities: The municipalities of Carreño, Gozón, Corvera de Asturias, Llanera y Villaviciosa had an entrepreneur program called ENTAMA, previous to EDP Spain but now focused on the JT regions; the recovery of rural paths and ecosystem services was established by the Mi Entorno program (Mi Entorno program)
- at Soto de Ribera, the H2 "fase 5 MW" has its Basic Project being completed and has started the environmental procedures ESIA and MS AAI. The synchronous compensator

is being studied and will only apply after the closing of Soto 3. Storage: several distinct long term technology approaches are being studied. Socially, over 18,000€ were invested in upskilling (EDP + Joven) through technological scholarships to 75 young men also on the municipalities of Ribera de Arriba, Morcín, Riosa, Quirós, Teverga, Mieres, Aller y Lena, along with other programs recovering the Nalón River or the planting of trees

- in Los Barrios and Puente Nuevo, those programs (EDP + cerca; ENTAMA; mi entorno) were also applied, in order to reinforce the social network and the communities affected by the energy transition. Scholarships for electrical skills were very much appreciated by young people in those areas.

#### **Championing Human Rights programme**

The active promotion of human and labour rights is an integral part of EDP's strategy. The approach and programmes to promote human and labour rights are dealt with in depth in the People chapter and the Social Investment chapter.

Through the Social Investment Policy, according to the B4SI methodology, in alignment with the global priorities of the United Nations expressed in the Sustainable Development Goals, EDP gives priority to social inclusion programmes, in particular directed at vulnerable communities, for the development of skills, and for energy inclusion, either through measures to combat energy poverty or through energy access programmes for populations not connected to electricity grids.

### 3.6.3.5. Voluntary investment in the community

#### 3.6.3.5.1. EDP group's social investment – strategic vision

The EDP group actively contributes to the sustainable development of the communities in which it operates worldwide, through its own social investment and collaborative initiatives, donations and volunteering. As social impact is a strategic pillar of the EDP group, these initiatives aim to meet social needs in line with the group's core themes, namely investment in **fair energy transition** projects which should represent around **45% of investment by 2025**.

The **Fair Energy Transition** projects include support for energy access, energy inclusion and communities impacted by the closure of thermal power plants, projects aimed at protecting natural heritage and biodiversity and also projects promoting energy efficiency and renewable energies, contributing to decarbonisation and combating climate change.

On the other hand, the group's social investment strategy is also based on **Culture**, with the mission of promoting access to culture, stimulating art and protecting cultural heritage. Cultural projects are projected to represent around **30% of investment by 2025**. In parallel and recognising the need to continue to support projects that respond to other social needs in the communities where EDP is present, part of the annual budget is earmarked for investment in various areas, such as training, health, social inclusion and response to emergency situations, among others.

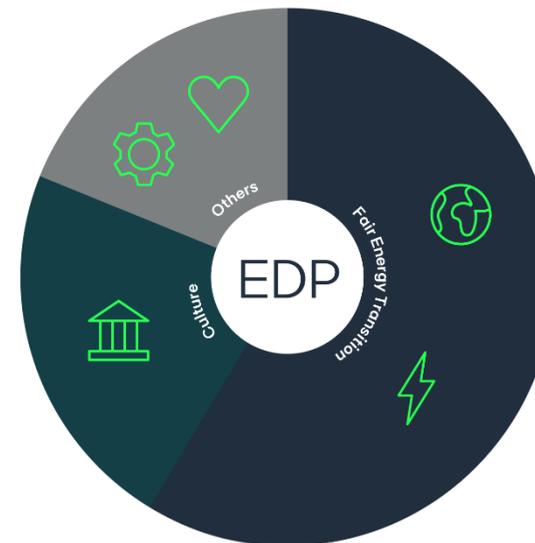
These Pillars are aligned with the [Social Investment Policy](#) at [edp.com/yes](http://edp.com/yes)

THEMATIC FOCUSES OF SOCIAL INVESTMENT	GLOBAL INVESTMENT 2022 (M€)	%	TARGET 2025 (%)
Fair Energy Transition	6.2	24	45
Culture	11.1	42	30
Other projects	8.9	34	25
<b>TOTAL</b>	<b>26.2</b>	<b>100</b>	<b>100</b>
Management costs	5.4		
<b>TOTAL WITH MANAGEMENT COSTS</b>	<b>31.6</b>		

In 2022, the **EDP Y.E.S – You Empower Society** brand was created, whose main objective is to communicate to the various stakeholders of the EDP group the social investment projects developed in the countries where EDP is present. The projects are classified into **five main**

**Pillars: Energy, Planet, Skills, Culture and Community**, which are framed within the thematic focuses of EDP's social investment strategy. For more information on the social investment projects that are part of each EDP Y.E.S pillar and the respective social investment focused, please see the [EDP group Social Investment Report](#).

#### THE FRAMEWORK OF THE EDP YES PILLARS IN THE SOCIAL INVESTMENT THEMATIC FOCUSES



#### 3.6.3.5.2. Voluntary contributions – application of the B4SI methodology

EDP uses the international methodology [B4SI – Business for Societal Impact](#) to characterise and assess its **voluntary investment in the community**, which accounts for most of the investment made in this area (98%). This model promotes alignment between the purpose of companies and social needs, facilitating the structuring of priorities and reflecting on their results and benefits for the communities.

In 2022, from a B4SI perspective, voluntary investment in the EDP group's communities was **31.2 million**, supporting the projects of **634 entities**, resulting in **3.2 million direct beneficiaries**. Of this amount, **94%** was classified as **strategic**, **3%** as **not strategic** and **3%** as **commercial initiatives**. **Monetary** contributions were the main form of contribution (**90%**), followed by **in-kind** contributions (**9%**) and **time** contributions (**1%**). **Time**

**contributions**, equivalent to **€ 261 thousand**, correspond to **EDP volunteer work initiatives** carried out during **working hours**.

Investment in **Education** was primarily directed at skills development projects, access to education for disadvantaged people, support for entrepreneurship and job creation. The investment in **Health** was directed at supporting health institutions and health professionals (equipment, support for health research, among others) and the investment in **Emergency Response** was made in projects that required a rapid and coordinated response (for example, support for the Ukrainian population, alleviating the consequences of the military conflict with Russia). Investment in **Economic Development** gave priority to energy access projects for communities without access to the electricity grid, with the A2E Fund standing out. Projects for social inclusion and the fight against energy poverty contributed to the investment in **Social Welfare**. Voluntary investment in the **environment** was carried out through projects to promote biodiversity, decarbonisation and climate change awareness-raising. In turn, the investment in **Art and Culture** gave priority to projects providing access to art and culture, and those preserving and promoting cultural heritage.

NATURE OF THE CONTRIBUTION (B4SI)	VOLUNTARY CONTRIBUTIONS (k€)	%
Education	2,478	12
Health	107	1
Economic development	1,033	5
Environment	2,414	12
Art and culture	5,625	28
Social welfare	6,104	31
Emergency response	787	4
Other	1,310	7
<b>TOTAL</b>	<b>19,857</b>	<b>100</b>
Management costs	11,376	-
<b>TOTAL WITH MANAGEMENT COSTS</b>	<b>31,233</b>	<b>-</b>

### 3.6.3.5.3. Mandatory contributions

In addition to voluntary contributions, EDP also invests in the communities in which it operates through **mandatory contributions**. These types of contributions correspond to support for projects arising from offsets, commercial/legal levies or compensatory measures. In 2022, the compulsory investment in the communities of the EDP group was **€ 397 million** (1.3% of total investment in the community) supporting **4 entities**.

Although with less weight than voluntary contributions and not recognised by the B4SI methodology as social investment, these contributions promote the sustainable development of the communities where EDP operates and, at the same time, are an important instrument to obtain the social license to operate in territories where new EDP infrastructure is to be built or new markets are to be entered.

### 3.6.3.5.4. Contribution to the SDGs

In addition to contributions through its operations/business, the EDP group also contributes to the **Sustainable Development Goals (SDGs)** through its social investment programmes, prioritising goals **5, 7, 8, 9, 11, 12, 13, 15** and **17**, in accordance with the Social Investment Policy. EDP reports its contribution to the SDGs not only at the level of the SDG objectives and targets, but also at the level of the **indicators** set by the United Nations.

In 2022, of all the voluntary contributions recognised by the B4SI methodology, EDP supported projects that contributed to the SDGs with an investment of **€ 15 million** (48% of total voluntary contributions) supporting projects of **512 entities**, resulting in **1.7 million direct beneficiaries**. In turn, through mandatory contributions, EDP supported projects that contributed to SDGswith an investment of **€ 346 million** (87% of total mandatory contributions).

For more information on the voluntary and mandatory social investment projects developed and supported by the EDP group, as well as the methodology used by EDP for their compliance with the SDGs, see the [EDP group Social Investment Report](#).

CONTRIBUTION OF SOCIAL INVESTMENT TO THE SDGS	VOLUNTARY CONTRIBUTIONS (k€)	%	OBLIGATORY CONTRIBUTIONS (k€)	%
SDG 5: Gender equality	130	0.4	-	-
SDG7: Renewable and affordable energy	1,429	4.6	-	-
SDG 8: Decent work and economic growth	2,181	6.9	-	-
SDG 9: Industry, innovation and infrastructure	616	1.9	-	-
SDG 11: Sustainable cities and communities	6,933	22.2	346	87
SDG 12: Sustainable production and consumption	195	0.6	-	-
SDG 13: Climate Action	369	1.2	-	-
SDG 15: Protecting terrestrial life	308	1.0	-	-
SDG 17: Partnerships for the implementation of the objectives	246	0.8	-	-
SDG 4 <sup>1</sup> : Quality education	852	2.7	-	-
SDG 10 <sup>1</sup> : Reducing inequality	1,753	5.6	-	-
<b>TOTAL SDG</b>	<b>15,013</b>	<b>48</b>	<b>346</b>	<b>87</b>
<b>TOTAL SOCIAL INVESTMENT</b>	<b>31,233</b>	<b>100</b>	<b>397</b>	<b>100</b>

<sup>1</sup>nonpriority SDGs for EDP

### 3.6.3.5.5. Volunteer work strategy

EDP Volunteer Work is a fundamental pillar of the company's relationship with communities and, at the same time, contributes to the development of employees, expanding the purpose and meaning of their activity. The Volunteering Programme's areas of intervention are aligned with the EDP group's Social Investment Policy and focus on social inclusion, empowerment, energy inclusion, biodiversity and climate action. Over the years, the Volunteer Programme has attracted a growing number of participants, in particular because it allows the allocation of hours to the various initiatives to be reconciled with working hours, reinforcing the important role of volunteering for the EDP group. The aim is to achieve a 30% share of the EDP group's Headcount (HC) by 2023.

In all the different actions and projects promoted throughout 2022, **3,626 volunteer employees participated (27% of the company's HC)**, contributing **10,551 hours during working hours and 2,699 hours outside working hours**. Given the inclusive nature of the

Volunteering Programme, **283 EDP Friend volunteers** (company retirees, friends, family and partners) were also involved, contributing **618 volunteer hours**. In total, in 2022, the EDP group Volunteering Work Programme involved **3,909 volunteers**, making a total of **13,868 volunteer hours**.

In 2022, the main focus of the Volunteering Programme was to provide an effective response to the main challenges identified in the volunteering strategy defined for 2022–2025, in particular communication, awareness raising and the involvement of leaderships on the subject of volunteering, as well as working on new ways to recognise and involve more volunteers in its mission.

Additionally, in 2022, the Programme sought to stimulate more volunteering actions for skills related to energy, given the relevance of this type of volunteering that places the individual talents and skills of employees at the service of the community, having the potential to produce greater and longer-lasting social impact. There has been a clear commitment to this type of volunteering, and in 2023 it is intended to strengthen this component further, particularly with projects that contribute to fair energy transition. In 2022, worthy of mention was the **2,556 hours in skills-based volunteering projects** (19% of total volunteer hours) carried out by EDP employees, of which **2,439 hours took place during working hours**.

Over the last few years, the EDP group has also sought to provide an integrated and expeditious response to emergency situations that ravage the world we live in and affect people and communities, acting in partnership with organisations on the ground. In light of the armed conflict in Ukraine, which began in 2022, the EDP group sought to provide a rapid response, but always in alignment with local partners, which allowed real needs to be identified, promoting various initiatives on a global level that include the involvement of volunteers, who play a fundamental role in this response.

VOLUNTEERING	UN	2022	2021	2020	2019
Unique EDP volunteers	#	3,626	3,681	2,482	2,833
Employees involved in voluntary actions	%	27	30	19	24
EDP volunteer work hours – working hours	h	10,551	11,307	14,457	23,258
Hours of skills based volunteering – working hours	h	2,556	3,316	9,133	8,907

### 3.6.3.5.6. EDP Y.E.S

In 2022, the **EDP Y.E.S – You Empower Society** – brand was created in order to make the general public aware of the various social investment projects supported by EDP in the countries where it operates, ensuring an integrated narrative for the EDP group's social investment. According to the nature of the projects, they are classified into five main pillars:

	<p><b>YES to ENERGY</b> – projects in the field of access to energy and energy saving, contributing to improving the living conditions of people and communities in situations of energy exclusion or with difficulties in maintaining thermal comfort in their homes. Support for projects that promote knowledge about energy saving, security with electricity grids and innovation in the field of renewable energies</p>
	<p><b>YES to PLANET</b> – awareness/education projects within the scope of biodiversity and the circular economy, projects for the recovery and enhancement of species and ecosystems or projects promoting knowledge about the consequences of climate change and the role of renewable energies in its mitigation</p>
	<p><b>YES to CULTURE</b> – projects promoting access to art and culture, through their own productions or institutional partnerships – support for cultural projects, exhibitions, music, dance, publications, museums. Also noteworthy are the projects that contribute to the preservation of the material and immaterial cultural heritage of the communities, valuing their cultural identity;</p>
	<p><b>YES to SKILLS</b> – projects to develop professional skills and train young people and adults in order to promote their employability or contribute to strengthening the management skills of third sector organisations. It also includes support for entrepreneurship initiatives that create jobs in EDP's area of influence;</p>
	<p><b>YES to COMMUNITY</b> – this pillar includes projects that promote proximity to local communities, living conditions and health, contributing to the social inclusion of people in vulnerable situations, and also responding to emergency situations;</p>

As part of this new brand, the [EDP Y.E.S. website](#) where it is possible to find information on projects supported by EDP around the world, articles related to Y.E.S pillars and also a dedicated form where entities can submit requests for EDP support for social investment projects.



## A2E Fund| Koolboks

“Man wey naked no dey put hand for pocket” is a saying in Nigerian pidgin, a Creole language based on English and spoken as a lingua franca throughout Nigeria. Loosely translated, the expression means something like “You can’t do anything without certain conditions.” The motto for the launch of *Fundo A2E* (A2E Fund) as financial support for one of the projects selected in the third edition, *Koolboks*, a sustainable model for the financing of off-grid solar refrigerators for women fish traders.

The typical fish trader at the market in Ijora, Nigeria, loses 30% of their merchandise every day due to the lack of reliable and affordable refrigeration. Because the power grid is unreliable, traders complement it with diesel generators, which are environmentally harmful and expensive, and they need to spend around \$4 on fuel every two days to run the generator. Solar refrigeration is a potential solution which would guarantee the fish traders access to continuous refrigeration; however, initial costs are prohibitive. *Koolboks* technology creates ice compartments in the refrigerator cabinets so that during the day, when the sun is out, ice is made in the compartments. At night, the energy inside transfers to the ice, maintaining the temperature within the cabinet until the next day, when the sun comes out again. Thanks to this technology, the cost of having a solar refrigerator off the grid has dropped by about 40%. This solution is capable of generating continuous cooling for up to four days, even in the absence of power and with limited sunlight. Alhaja Boluwatife is a 53-year-old woman owner of a restaurant business inherited from her mother. With 20 years of experience, she was initially sceptical about the efficiency of a solar refrigerator: “Let me see how it works with my friend, Alhaja Aderinoye. I just bought a Honda

generator for 550,000 nairas, but the fuel consumption is 5,000 nairas a day. This lasted from 6am until 3pm”. Two weeks later, with a positive review from her friend, Alhaja Boluwatife bought a 538 Litre Out. In addition to conserving fresh fish and selling cold drinks, the trader could now also sell ice, getting an extra income.

In 2022, *Fundo A2E* supported the setting up of this project with 66.000 euros to supply solar refrigerators with 15 kWp of installed power, which impacted 144 direct beneficiaries, 150 indirect, and created 22 new jobs. It was also put to bet the recruitment and training of sales agents to support new business as well as capacity-building, training for equipment maintenance, certification and partnership with more than 60 direct sales agents and installers.

# Our drive



# Our Indicators

Operational and ESG indicators	163
GRI indicators	189



## 4.1. Operational and ESG indicators

DECARBONISING THE WORLD	UN	2022	2021	2020	2019
<b>RENEWABLE ENERGIES</b>					
TOTAL INSTALLED CAPACITY	MW	26,187	24,495	23,524	26,525
<b>Renewable installed capacity</b>	%	<b>79</b>	<b>80</b>	<b>79</b>	<b>74</b>
<b>Renewable installed capacity</b>	<b>MW</b>	<b>20,739</b>	<b>19,617</b>	<b>18,626</b>	<b>19,597</b>
Wind	MW	12,136	11,845	11,155	10,667
Portugal	MW	1,156	1,138	1,224	1,160
Spain	MW	2,158	2,194	2,137	1,974
South America	MW	910	591	436	467
North America	MW	6,175	6,079	6,005	7,066
Rest of the Europe	MW	1,737	1,843	1,353	0
APAC	MW	0	0	0	0
Hydro	MW	6,872	7,070	7,069	8,728
Portugal	MW	5,019	5,019	5,019	6,702
Spain	MW	451	451	451	426
South America	MW	1,401	1,599	1,599	1,599
North America	MW	0	0	0	0
Rest of the Europe	MW	0	0	0	0
APAC	MW	0	0	0	0
Mini-hydro	MW	57	57	57	57
Portugal	MW	57	57	57	57
Spain	MW	0	0	0	0
South America	MW	0	0	0	0
North America	MW	0	0	0	0
Rest of the Europe	MW	0	0	0	0
APAC	MW	0	0	0	0
Solar	MW	1,674	645	345	145
Portugal	MW	116	5	5	5
Spain	MW	20	0	0	0
South America	MW	260	204	0	0
North America	MW	475	358	290	90
Rest of the Europe	MW	92	50	50	50
APAC	MW	711	28	0	0

DECARBONISING THE WORLD	UN	2022	2021	2020	2019
<b>Non-renewable installed capacity</b>	<b>MW</b>	<b>5,449</b>	<b>4,879</b>	<b>4,898</b>	<b>6,928</b>
CCGT	MW	2,886	2,886	2,886	3,729
Portugal	MW	2,031	2,031	2,031	2,031
Spain	MW	854	854	854	1,698
South America	MW	0	0	0	0
North America	MW	0	0	0	0
Rest of the Europe	MW	0	0	0	0
APAC	MW	0	0	0	0
Coal	MW	2,540	1,970	1,970	3,150
Portugal	MW	0	0	0	1,180
Spain	MW	1,820	1,250	1,250	1,250
South America	MW	720	720	720	720
North America	MW	0	0	0	0
Rest of the Europe	MW	0	0	0	0
APAC	MW	0	0	0	0
Cogeneration and waste	MW	23	23	42	49
Portugal	MW	17	17	17	24
Spain	MW	5	5	25	25
South America	MW	0	0	0	0
North America	MW	0	0	0	0
Rest of the Europe	MW	0	0	0	0
APAC	MW	0	0	0	0
<b>Capacity under construction</b>	<b>MW</b>	<b>3,552</b>	<b>1,824</b>	<b>2,051</b>	<b>664</b>
Portugal	MW	192	0	135	6
Spain	MW	132	141	85	18
South America	MW	504	1,084	359	0
North America	MW	2,075	320	970	509
Rest of the Europe	MW	523	280	502	130
APAC	MW	126	0	0	0
<b>Installed capacity MEP</b>	<b>MW</b>	<b>1,665</b>	<b>1,651</b>	<b>1,229</b>	<b>1,111</b>
Portugal	MW	31	31	30	0
Spain	MW	165	165	177	161
South America	MW	551	551	551	551
North America	MW	592	592	471	398
Rest of the Europe	MW	311	311	0	0
APAC	MW	15	0	0	0
<b>Capacity under construction MEP</b>	<b>MW</b>	<b>431</b>	<b>78</b>	<b>389</b>	<b>408</b>
Portugal	MW	0	0	0	14
Spain	MW	0	0	0	0
South America	MW	0	78	78	78
North America	MW	0	0	0	0
Rest of the Europe	MW	431	0	311	316
APAC	MW	0	0	0	0

DECARBONISING THE WORLD	UN	2022	2021	2020	2019
TOTAL NET GENERATION	GWh	61,351	59,784	63,122	65,446
<b>Generation from renewable sources</b>	%	<b>74</b>	<b>76</b>	<b>75</b>	<b>67</b>
<b>Generation from renewable sources</b>	<b>GWh</b>	<b>45,329</b>	<b>45,608</b>	<b>47,330</b>	<b>44,137</b>
Wind	GWh	31,772	29,592	28,272	29,768
Portugal	GWh	2,707	3,041	2,616	3,151
Spain	GWh	4,885	4,979	4,346	5,298
South America	GWh	2,189	1,843	1,093	1,757
North America	GWh	17,883	16,468	17,231	16,297
Rest of the Europe	GWh	4,107	3,262	2,987	3,264
APAC	GWh	0	0	0	0
Hydro	GWh	11,677	15,152	18,656	13,958
Portugal	GWh	5,487	8,901	12,435	8,949
Spain	GWh	459	772	677	880
South America	GWh	5,731	5,478	5,543	4,129
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0
Mini-hydro	GWh	98	131	137	138
Portugal	GWh	98	131	137	138
Spain	GWh	0	0	0	0
South America	GWh	0	0	0	0
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0
Solar	GWh	1,782	733	265	273
Portugal	GWh	91	9	8	8
Spain	GWh	5	0	0	0
South America	GWh	500	45	0	0
North America	GWh	479	589	190	195
Rest of the Europe	GWh	72	67	67	69
APAC	GWh	636	23	0	0
<b>Generation from non-renewable sources</b>	<b>GWh</b>	<b>16,021</b>	<b>14,176</b>	<b>15,792</b>	<b>21,310</b>
CCGT	GWh	9,033	6,435	9,759	10,183
Portugal	GWh	5,161	3,836	5,653	5,837
Spain	GWh	3,872	2,599	4,107	4,346
South America	GWh	0	0	0	0
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0

DECARBONISING THE WORLD	UN	2022	2021	2020	2019
<b>Coal</b>	<b>GWh</b>	<b>6,830</b>	<b>7,569</b>	<b>5,821</b>	<b>10,856</b>
Portugal	GWh	0	0	1,832	4,020
Spain	GWh	6,826	4,152	2,403	3,129
South America	GWh	4	3,417	1,586	3,707
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0
<b>Cogeneration and Waste</b>	<b>GWh</b>	<b>158</b>	<b>173</b>	<b>211</b>	<b>270</b>
Portugal	GWh	141	125	138	163
Spain	GWh	17	48	73	107
South America	GWh	0	0	0	0
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0
<b>Heat</b>	<b>GWh</b>	<b>279</b>	<b>382</b>	<b>556</b>	<b>785</b>
Portugal	GWh	247	249	254	303
Spain	GWh	33	133	302	482
South America	GWh	0	0	0	0
North America	GWh	0	0	0	0
Rest of the Europe	GWh	0	0	0	0
APAC	GWh	0	0	0	0
<b>Avoided CO<sub>2</sub> emissions<sup>1</sup></b>	<b>ktCO<sub>2</sub></b>	<b>22,749</b>	<b>23,752</b>	<b>25,167</b>	<b>24,725</b>
<b>TECHNICAL AVAILABILITY</b>					
<b>Wind and Solar</b>	<b>%</b>	<b>95</b>	<b>97</b>	<b>97</b>	<b>97</b>
Portugal	%	99	98	98	98
Spain	%	96	96	95	97
South America	%	97	98	98	97
North America	%	93	96	96	96
Rest of the Europe	%	96	98	98	98
APAC	%	n.a.	0	0	0
<b>Hydro</b>	<b>%</b>	<b>89</b>	<b>91</b>	<b>93</b>	<b>91</b>
Portugal	%	89	91	93	91
Spain	%	99	100	100	100
Brazil	%	97	98	95	98
<b>Thermal</b>	<b>%</b>	<b>74</b>	<b>81</b>	<b>95</b>	<b>94</b>
<b>Portugal</b>	<b>%</b>	<b>74</b>	<b>81</b>	<b>95</b>	<b>94</b>
CCGT	%	73	81	94	96
Coal	%	0	0	96	90
Cogeneration	%	97	91	94	100

DECARBONISING THE WORLD	UN	2022	2021	2020	2019
<b>Spain</b>	%	74	79	93	96
CCGT	%	91	89	94	96
Coal	%	64	72	91	97
Nuclear	%	90	86	91	89
Cogeneration	%	83	99	99	100
Waste	%	n.d.	n.d.	94	87
<b>Brazil</b>	%	97	94	92	97
Coal	%	97	94	92	97
<b>SUSTAINABLE MOBILITY</b>					
Fleet electrification	%	14.6	13.2	11.0	9.0
Fleet electric vehicles	#	516	501	393	283
Electric charging points	#	6,010	3,804	1,811	772
Customers with electric mobility solutions	#	76,455	43,500	18,747	10,100
<b>ENERGY EFFICIENCY</b>					
<b>Internal Energy Efficiency</b>					
<b>Thermal Efficiency</b>	%	<b>46.7</b>	<b>45.9</b>	<b>45.5</b>	<b>45.9</b>
Coal plants	%	34.8	34.1	34.5	35.6
Natural gas combined cycle plant	%	54.2	53.9	54.4	54.4
<b>Energy Intensity</b>	<b>MJ/€</b>	<b>7.0</b>	<b>9.2</b>	<b>11.4</b>	<b>13.8</b>
<b>Electricity Distribution Grid Losses</b>					
Technical losses	%	5.3	5.4	5.7	5.6
Total losses	%	8.2	8.2	9.3	8.9
Portugal <sup>2</sup>	%	8.3	8.4	9.6	9.8
Spain	%	4.8	4.4	3.7	3.5
Brazil	%	9.5	10.0	10.4	9.8
<b>External Energy Efficiency</b>					
Savings in energy efficiency services <sup>3</sup>	TWh	5.6	5.1	4.6	4.0
CO <sub>2</sub> avoided emissions in the final customer <sup>3</sup>	ktCO <sub>2</sub>	11,901	8,950	8,531	7,619
Energy consumed outside the organization <sup>4</sup>	TJ	262,414	244,462	350,433	290,331
<b>NEW ENERGY SERVICES</b>					
Energy efficiency services revenues	000€	491,013	261,415	244,573	158,376

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

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

<sup>3</sup>In 2021, the loss indicator was changed to consider the energy input in the grid, and not the output (as until 2020), according to the expectation that the regulator will incorporate this change in the next regulatory period, to align with common practice in other countries (namely Spain and Brazil).

<sup>4</sup>Reviewed and harmonized methodology for all geographies, applied since 2015. Excludes Consumption Efficiency Promotion Plan (PPEC) projects. The 2017 values have been revised for consistency with the harmonized savings calculation method.

<sup>5</sup>Consider only the category "Use of sold products" of GHG Protocol Corporate Value Chain (Scope 3).

CUSTOMER EXPERIENCE	UN	2022	2021	2020	2019
<b>CUSTOMERS</b>					
Number of electricity customers	000	8,495	8,654	8,615	9,828
<b>Regulated market</b>	<b>000</b>	<b>4,558</b>	<b>4,609</b>	<b>4,565</b>	<b>4,786</b>
Portugal	000	973	930	965	1,055
Spain	000	0	0	0	228
South America	000	3,586	3,679	3,600	3,489
<b>Liberalised market</b>	<b>000</b>	<b>3,936</b>	<b>4,045</b>	<b>4,050</b>	<b>5,042</b>
Portugal	000	3,916	4,022	4,033	4,112
Market Share EDP - Liberalised Market	%	n.d.	74	76	n.d.
Spain	000	20	22	22	930
South America	000	1	1	0	0
<b>Gas</b>	<b>000</b>	<b>631</b>	<b>686</b>	<b>691</b>	<b>1,599</b>
Regulated market	000	77	32	34	89
Portugal	000	77	32	34	38
Spain	000	0	0	0	52
Liberalised market	000	554	654	657	1,510
Portugal	000	551	650	652	659
Spain	000	4	4	6	849
Overall customers satisfaction	%	80.3	77.2	79.2	77.4
Portugal	%	85.8	81.4	79.3	78.3
Spain	%	n.a.	n.a.	n.a.	78.9
South America	%	73.7	63.8	79.6	76.3
<b>Customers by type of use</b>					
<b>Electricity customers</b>					
Domestic	%	88	86	88	87
Industrial	%	1	1	1	1
Commercial	%	9	8	8	8
Agriculture	%	1	3	3	3
Other	%	2	1	1	1
<b>Gas customers</b>					
Domestic	%	94	95	97	97
Industrial	%	0	1	0	0
Commercial	%	1	2	1	1
Agriculture	%	0	0	0	0
Other	%	4	3	1	1
Customers with social tariff	#	1,011,628	935,772	763,831	818,922
<b>Electricity</b>	<b>#</b>	<b>992,662</b>	<b>913,609</b>	<b>749,413</b>	<b>803,025</b>
Portugal	#	528,985	553,304	555,361	587,997
Spain	#	n.a.	n.a.	n.a.	51,132
South America	#	463,677	360,305	194,052	163,896
<b>Gas</b>	<b>#</b>	<b>18,966</b>	<b>22,163</b>	<b>14,418</b>	<b>15,897</b>
Portugal	#	18,966	22,163	14,418	15,897

CUSTOMER EXPERIENCE	UN	2022	2021	2020	2019
Priority customers <sup>1</sup>	#	3,865	3,022	3,711	3,077
<b>Electricity</b>	<b>#</b>	<b>3,865</b>	<b>3,022</b>	<b>3,711</b>	<b>3,077</b>
Portugal	#	2,979	2,527	3,329	3,077
Spain	#	n.a.	n.a.	n.a.	n.a.
South America	#	886	495	382	n.a.
Special needs customers <sup>2</sup>	#	1,288	772	1,049	1,040
<b>Electricity</b>	<b>#</b>	<b>1,288</b>	<b>772</b>	<b>1,049</b>	<b>1,040</b>
Portugal <sup>4</sup>	#	404	287	257	265
Spain	#	n.a.	n.a.	n.a.	n.a.
South America	#	884	485	792	775
Green tariff	#				
<b>Electricity</b>	<b>#</b>	<b>4,691</b>	<b>6,115</b>	<b>4,760</b>	<b>4,320</b>
Portugal	#	1,994	1,101	799	168
Spain	#	2,697	5,014	3,962	4,152
South America	#	n.d.	n.d.	n.d.	n.d.
Customer Ombudsperson					
<b>Ombudsman's answer orientation</b>					
Concordant	%	42	46	47	35
Discordant	%	32	29	18	27
Partial concordant	%	6	5	15	8
Resolved issues	%	20	20	20	31
E-voicing					
Portugal	%	48	47	44	39
Spain	%	77	48	21	47
South America	%	27	27	26	23
Fines paid for failure in supply and use of products and services	000€	7,912	5,365	4,113	4,466
<b>ELECTRICITY SUPPLIED</b>	<b>GWh</b>	<b>65,895</b>	<b>59,750</b>	<b>69,478</b>	<b>56,649</b>
Portugal	GWh	20,641	19,999	19,508	15,152
Last Resort	GWh	2,817	2,343	2,413	1,965
Liberalised Market	GWh	17,824	17,656	17,095	13,187
Market Share EDP – Liberalised Market	%	n.d.	43	41	n.d.
Spain	GWh	12,244	10,959	10,702	9,358
Last Resort	GWh	0	0	350	332
Liberalised Market	GWh	12,244	10,959	10,352	9,025
Market Share EDP – Liberalised Market	%	6	4	6	7
Brazil	GWh	33,010	28,792	39,269	32,140
Last Resort	GWh	13,754	13,587	13,429	19,112
Liberalized Market	GWh	19,256	15,205	25,840	13,028
Social Tariff	GWh	938	1,415	545	489
Portugal	GWh	132	150	159	199
Spain	GWh	0	0	90	80
Brazil	GWh	807	1,264	296	211

CUSTOMER EXPERIENCE	UN	2022	2021	2020	2019
Green Tariff	GWh	4,691	6,115	4,760	4,320
Portugal	GWh	1,994	1,101	799	168
Spain	GWh	2,697	5,014	3,962	4,152
Brazil	GWh	n.d.	n.d.	n.d.	n.d.
<b>GAS SUPPLIED</b>	<b>GWh</b>	<b>10,364</b>	<b>14,309</b>	<b>17,070</b>	<b>13,068</b>
Portugal	GWh	3,713	4,390	4,294	2,858
Last Resort	GWh	195	155	167	154
Liberalised Market	GWh	3,518	4,235	4,127	2,704
Market Share EDP - Liberalised Market	%	n.d.	11	11	n.d.
Spain	GWh	6,651	9,920	12,776	10,210
Last Resort	GWh	0	0	195	172
Liberalised Market	GWh	6,651	9,920	12,581	10,038
Market Share EDP - Liberalised Market	%	3	6	3	3
<b>DISTRIBUTION</b>					
Electricity distributed		85,272	84,885	76,360	79,519
Portugal	GWh	45,494	44,752	44,143	45,666
Spain	GWh	13,286	14,117	7,559	8,262
Brazil	GWh	26,491	26,016	24,658	25,591
Electricity supply points		11,583	11,427	11,274	10,470
Portugal	GWh	6,425	6,370	6,302	6,277
Spain	GWh	1,383	1,376	1,371	668
Brazil	GWh	3,775	3,680	3,601	3,524
Grid extension	Km	380,788	378,155	375,777	340,744
<b>Portugal</b>	<b>Km</b>	<b>232,089</b>	<b>230,676</b>	<b>229,168</b>	<b>226,823</b>
Overhead lines	Km	181,907	180,951	179,867	177,841
Underground lines	Km	50,182	49,725	49,301	48,981
<b>Spain</b>	<b>Km</b>	<b>52,644</b>	<b>52,493</b>	<b>52,492</b>	<b>20,766</b>
Overhead lines	Km	39,571	39,553	39,670	15,729
Underground lines	Km	13,073	12,940	12,822	5,037
<b>Brazil</b>	<b>Km</b>	<b>96,055</b>	<b>94,986</b>	<b>94,118</b>	<b>93,155</b>
Overhead lines	Km	95,771	94,708	93,850	92,899
Underground lines	Km	283	277	268	256
Service Quality					
<b>Portugal</b>					
Installed capacity equivalent interruption time <sup>3</sup>	Min	54	50	60	56
<b>Spain</b>					
Installed capacity equivalent interruption time <sup>6</sup>	Min	18	20	15	26
<b>South America</b>					
Average interruption duration per consumer					
EDP São Paulo	hours	6.07	6.35	7.18	7.06
EDP Espírito Santo	hours	6.87	7.56	7.85	8.19
Frequency of interruptions per consumer					
EDP São Paulo	#	3.27	4.13	4.62	4.53
EDP Espírito Santo	#	3.25	3.92	4.01	4.84

CUSTOMER EXPERIENCE	UN	2022	2021	2020	2019
<b>SERVICE RECONNECTION</b>					
<b>Electricity supply reconnection after payment of debt by customer</b>					
Portugal <sup>4</sup>	#	168,496	62,935	186,139	292,142
< 4h (urgent)	#	34,215	16,281	47,806	63,236
< 8h (other clients)	#	617	476	630	819
< 12h (clients NVL)	#	133,664	46,178	137,703	228,087
Spain <sup>5</sup>	#	3,308	16,674	3,533	9,209
≤ 24 hours	#	3,127	16,561	3,509	4,974
> 24 hours	#	181	113	24	4,235
South America	#	273,975	175,463	180,257	453,237
< 24h	#	244,707	114,129	157,022	404,344
< 1 week	#	28,270	37,585	21,507	43,731
> 1 week	#	998	23,749	1,728	5,162
<b>TRANSMISSION</b>					
Grid extension		2,535	1,414	1,441	1,441
Grid extension in operation	GWh	2,185	162	316	113
Grid extension under construction	GWh	350	1,252	1,125	1,328

<sup>1</sup> Customers whose survival depends on equipment or customers that provide essential health or safety services to the community (in accordance with Article 103 of the Regulation on Service Quality in the Electricity and Natural Gas sector).

<sup>2</sup> Customers with limitations in the field of vision (total blindness or hypovision), in the field of hearing (total deafness or hearing loss) and in the field of oral communication (in accordance with Article 100 of the Regulation on Service Quality in the Electric and Natural Gas sector).

<sup>3</sup> TIEPI in the MT network, excludes extraordinary events.

<sup>4</sup> The values consider service reconnections within the deadlines defined by the regulator, representing 99% of the total reestablishments.

<sup>5</sup> The time intervals considered are related to the time that elapses from the interruption of the service due to non-payment by the customer, until the restoration of the same. The values consider service reconnections within the deadlines defined by the regulator.

ETHICS AND COMPLIANCE	UN	2022	2021	2020	2019
<b>CLAIMS</b>					
Total claims <sup>1</sup>	#	427	344	464	588
Claims before the Ethics Commission <sup>2</sup>	#	321	146	147	150
Client	#	22	10	8	7
Citizen	#	15	20	22	16
Employee	#	153	33	27	25
Supplier	#	26	9	8	2
Anonymous	#	105	74	82	100
<b>Claims by category</b>					
Fairness of solutions	#	n.a.	n.a.	19	7
Neglect or disrespect	#	n.a.	n.a.	103	111
Transparency	#	n.a.	n.a.	0	10
Use of information or assets	#	n.a.	n.a.	8	10
Environment and responsibility towards society	#	n.a.	n.a.	0	1

ETHICS AND COMPLIANCE	UN	2022	2021	2020	2019
Fraud, corruption and bribery	#	n.a.	n.a.	17	11
Employee well-being	#	140	46	n.a.	n.a.
Health and Safety	#	19	6	n.a.	n.a.
Company representation	#	0	0	n.a.	n.a.
Diversity and inclusion	#	7	4	n.a.	n.a.
Harassment <sup>3</sup>	#	47	24	n.a.	n.a.
Human Rights	#	0	2	n.a.	n.a.
Relationship with shareholders	#	0	0	n.a.	n.a.
Relationship with customers	#	2	4	n.a.	n.a.
Relationship with suppliers	#	3	3	n.a.	n.a.
Relationship with communities	#	1	3	n.a.	n.a.
Competition	#	0	1	n.a.	n.a.
Environment	#	0	1	n.a.	n.a.
Energy transition	#	0	0	n.a.	n.a.
Digital revolution	#	0	0	n.a.	n.a.
Entrepreneurship and cooperation	#	0	0	n.a.	n.a.
Personal data protection and privacy <sup>3</sup>	#	5	0	n.a.	n.a.
Use of company information	#	34	18	n.a.	n.a.
Conflict of interests	#	32	17	n.a.	n.a.
Corruption and bribery	#	20	12	n.a.	n.a.
Money laundering and countering the financing of terrorism	#	0	1	n.a.	n.a.
Use of assets	#	8	4	n.a.	n.a.
Gifts and entertainment	#	0	0	n.a.	n.a.
Manipulation in financial statements and/or management reports	#	3	0	n.a.	n.a.
Other	#	1	0	n.a.	n.a.
<b>Actions deliberated/determined by the Ethics Commission</b>	<b>#</b>	<b>38</b>	<b>52</b>	<b>39</b>	<b>58</b>
Revisions/improvements of procedures	#	1	26	14	40
Compensation of damages	#	0	1	0	2
Disciplinary action	#	16	13	25	16
Training	#	0	12	0	0
Other	#	21	0	0	0

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

<sup>2</sup>The remaining complaints were dealt with expeditiously with the Business Units involved.

<sup>3</sup>One of the complaints has two inherent categories, "harassment" and "personal data protection and privacy", which justifies the fact that there is one more category (322) when compared to the total of complaints entered (321).

COMMUNICATION AND TRANSPARENCY	UN	2022	2021	2020	2019
Current tax	000€	374,432	191,433	139,751	145,858
Support from public authorities	000€	58,389	63,211	42,767	103,105

TRANSFORMING OUR BUSINESS	UN	2022	2021	2020	2019
<b>DIGITAL TRANSFORMATION</b>					
<b>Smart meters<sup>1</sup></b>					
Portugal	#	4,593,940	3,983,104	3,208,209	2,578,167
Spain	#	1,373,145	1,372,720	1,368,843	666,478
South America	#	462,261	332,980	25,745	16,000
Clients with RE:DY	#	56,974	27,350	13,143	13,097
<b>Number of meetings per videoconference</b>					
Number of meetings	#	278	287	409	409
Use of the videoconference service	h/year	7,313	7,506	17,812	123,919
<b>Robotisation<sup>1</sup></b>					
Number of robotised activities	#	1,610	1,686	1,132	845
Robotised hours/year	h/year	647,913	1,310,813	927,568	658,323
Minimum viable products	#	350	286	192	92
<b>INNOVATION AND RESEARCH</b>					
Investment in RDI	000€	186,004	102,794	110,936	162,040
Investment in RDI/Turnover	%	0.90	0.69	0.89	1.13
Number of employees in RDI	#	591	321	212	158

<sup>1</sup> Amounts presented in accumulated.

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>EMPLOYEES</b>					
	#	13,211	12,236	12,180	11,660
Female	%	27.5	26.7	25.2	25.0
Male	%	72.1	73.3	74.8	75.0
Not declared	%	0.4	n.d.	n.d.	n.d.
<b>EMPLOYEES DISTRIBUTION BY PROFESSIONAL CATEGORY</b>					
<b>EBD</b>					
	#	5	5	9	9
Female	#	2	2	2	2
Male	#	3	3	7	7
Not declared	#	0	n.d.	n.d.	n.d.
<b>Senior Management</b>					
	#	386	962	861	827
Female	#	104	265	215	199
Male	#	281	697	646	628
Not declared	#	1	n.d.	n.d.	n.d.
<b>Supervisors</b>					
	#	1,323	865	777	783
Female	#	380	218	188	199
Male	#	939	647	589	584
Not declared	#	4	n.d.	n.d.	n.d.

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
Specialists	#	6,469	5,276	4,717	4,528
Female	#	2417	2010	1773	1649
Male	#	4027	3266	2944	2879
Not declared	#	25	n.d.	n.d.	n.d.
Technicians	#	5,028	5,128	5,246	5,513
Female	#	728	767	790	876
Male	#	4277	4361	4456	4637
Not declared	#	23	n.d.	n.d.	n.d.
<b>EMPLOYEES DISTRIBUTION BY AGE GROUP</b>					
≥ 50	#	2,910	2,971	3,117	3,445
Female	#	646	649	652	683
Male	#	2,261	2,322	2,465	2,762
Not declared	#	3	n.d.	n.d.	n.d.
[30–50[	#	7,973	7,213	6,556	6,324
Female	#	2,239	1,973	1,750	1,709
Male	#	5,712	5,240	4,806	4,615
Not declared	#	22	n.d.	n.d.	n.d.
< 30	#	2,328	2,052	1,937	1,891
Female	#	746	640	566	533
Male	#	1,554	1,412	1,371	1,358
Not declared	#	28	n.d.	n.d.	n.d.
<b>PERCENTUAL DISTRIBUTION OF EMPLOYEES</b>					
<b>Age group</b>					
≥50	%	22	24	27	30
[30–50[	%	60	59	56	54
<30	%	18	17	17	16
<b>Geography</b>					
Portugal	%	43	47	50	50
Spain	%	16	17	13	15
South America	%	25	26	28	27
North America	%	8	7	7	6
Rest of the Europe	%	4	3	2	2
APAC	%	4	0	0	n.a.
Employees with special needs	%	1.45	1.46	1.20	1.40
<b>FEMALE EMPLOYEES IN MANAGEMENT POSITIONS</b>					
<b>In the total workforce</b>	%	<b>28.4</b>	<b>26.5</b>	<b>24.6</b>	<b>24.7</b>
In EBD and Senior Management positions	%	27.1	27.6	23.5	22.1
In Supervisory positions	%	28.7	25.2	24.2	25.4
In revenue-generating positions	%	16.7	15.8	14.5	16.2
In STEM positions <sup>2</sup>	%	33.3	31.1	32.7	32.2

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>ELIGIBLE EMPLOYEES FOR RETIREMENT</b>					
<b>EBD</b>					
next to 5 years	#	0	0	3	3
next to 10 years	#	0	0	5	5
<b>Senior Management</b>					
next to 5 years	#	32	85	88	104
next to 10 years	#	47	146	162	165
<b>Supervisors</b>					
next to 5 years	#	84	39	42	53
next to 10 years	#	114	90	84	91
<b>Specialists</b>					
next to 5 years	#	298	292	326	322
next to 10 years	#	478	476	518	526
<b>Technicians</b>					
next to 5 years	#	812	967	1,188	1,370
next to 10 years	#	992	1,258	1,450	1,713
<b>RATIO EDP MINIMUM WAGE/NATIONAL MINIMUM WAGE</b>					
Portugal	x	1.47	1.79	1.84	1.75
Spain	x	1.55	1.17	1.19	1.24
South America	x	1.49	1.09	1.15	1.41
North America	x	1.39	2.21	2.21	2.07
Rest of the Europe	x	1.37	0.00	0.00	n.d.
APAC	x	1.01	n.a.	n.a.	n.a.
<b>TYPES OF ENTRIES</b>					
New entries	#	2,064	1,599	1,282	1,255
<b>Gender</b>					
Male	#	1,216	1,047	885	897
Female	#	642	552	397	358
Not declared	#	206	n.d.	n.d.	n.d.
<b>Age Group</b>					
<30	#	854	749	598	636
[30-50[	#	1,069	777	633	568
≥50	#	141	73	51	51
<b>Professional category</b>					
Technicians	#	596	443	403	n.d.
Specialists	#	1,327	1,104	809	n.d.
Supervisors	#	91	18	30	n.d.
Senior Management	#	50	34	40	n.d.

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>Geography</b>					
Portugal	#	521	471	432	415
Spain	#	272	229	185	150
South America	#	595	434	366	466
North America	#	381	316	229	176
Rest of the Europe	#	161	137	84	80
APAC	#	134	12	0	0
<b>Employees with special needs (new entries)</b>	<b>#</b>	<b>18</b>	<b>25</b>	<b>0</b>	<b>3</b>
Vacancies filled by internal candidates	#	809	947	1,186	n.d.
<b>Gender</b>					
Male	#	555	690	850	n.d.
Female	#	254	257	336	n.d.
Not declared	#	0	n.d.	n.d.	n.d.
<b>Age Group</b>					
<30	#	286	130	159	n.d.
[30-50[	#	444	564	625	n.d.
≥50	#	79	253	402	n.d.
<b>Professional category</b>					
Technicians	#	123	341	413	n.d.
Specialists	#	566	381	472	n.d.
Supervisors	#	65	115	149	n.d.
Senior Management	#	55	110	152	n.d.
<b>Geography</b>					
Portugal	#	382	280	973	n.d.
Spain	#	74	329	77	n.d.
South America	#	281	168	100	n.d.
North America	#	52	168	30	n.d.
Rest of the Europe	#	6	2	6	n.d.
APAC	#	14	0	0	0
<b>Employees with special needs</b>	<b>#</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>n.d.</b>
<b>REASONS FOR LEAVING</b>					
End of fixed-term contracts	%	3	2	2	2
Terminated by mutual agreement	%	1	9	4	4
Terminated by employee	%	48	34	20	26
Dismissals	%	20	24	14	18
Early retirements	%	7	21	21	39
Age/invalidity retirement	%	8	7	5	6
Other reasons for leaving	%	14	4	35	5

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>SALARY RATIO F/M BY PROFESSIONAL CATEGORY</b>					
<b>Technicians</b>					
Portugal	x	1.29	1.29	1.25	1.23
Spain	x	0.92	0.87	0.83	0.80
South America	x	0.93	0.97	0.96	0.98
North America	x	0.88	1.00	1.04	1.08
Rest of the Europe	x	0.98	0.00	1.70	1.11
APAC	x	0.97	0.00	0.00	0.00
<b>Specialists</b>					
Portugal	x	0.89	0.93	0.92	0.94
Spain	x	0.88	0.91	0.92	0.93
South America	x	0.86	0.81	0.82	0.81
North America	x	0.96	0.97	0.93	0.92
Rest of the Europe	x	0.85	0.89	0.91	0.90
APAC	x	0.93	0.75	0.00	0.00
<b>Supervisors</b>					
Portugal	x	0.95	0.98	0.99	0.97
Spain	x	0.89	0.86	0.87	0.84
South America	x	0.97	1.05	1.05	1.03
North America	x	0.92	0.97	1.06	0.96
Rest of the Europe	x	0.92	0.88	1.26	1.03
APAC	x	0.96	0.00	0.00	0.00
<b>Senior Management</b>					
Portugal	x	1.00	0.94	0.92	0.93
Spain	x	0.91	0.82	0.85	0.83
South America	x	1.32	0.89	0.93	0.87
North America	x	1.18	0.99	0.95	1.00
Rest of the Europe	x	0.00	0.79	0.75	0.92
APAC	x	1.05	0.00	0.00	0.00
<b>EMPLOYEES SATISFACTION</b>					
Engagement	%	84	76	80	73
<b>Gender</b>					
Female	%	86	78	83	74
Male	%	83	76	79	73
Not declared	%	94	n.d.	n.d.	n.d.
<b>Age Group</b>					
<30	%	82	76	79	72
[30-50[	%	83	76	81	75
≥50	%	87	76	78	71

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>Professional category</b>					
Technicians	%	82	75	78	75
Specialists	%	84	74	79	69
Supervisors	%	88	81	86	78
Senior Management	%	92	88	90	84
<b>Geography</b>					
Portugal	%	80	73	76	67
Spain	%	81	71	78	71
South America	%	91	84	86	86
North America	%	86	79	84	74
Rest of the Europe	%	84	73	76	64
APAC	%	81	90	0	0
<b>Employees with special needs</b>	<b>%</b>	<b>n.d.</b>	<b>n.d.</b>	<b>74</b>	<b>71</b>
Empowerment <sup>2</sup>	%	72	76	80	71
<b>Gender</b>					
Female	%	73	71	75	69
Male	%	72	71	73	72
Not declared	%	87	n.d.	n.d.	n.d.
<b>TURNOVER</b>	<b>%</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>11</b>
<b>Gender</b>					
Female	%	11.97	13.15	11.29	10.57
Male	%	11.02	11.13	11.99	10.36
Not declared	%	24.53	n.d.	n.d.	n.d.
<b>Age group</b>					
< 30	%	14.40	12.72	9.86	8.46
[30-50[	%	9.80	7.85	8.76	5.55
≥ 50	%	15.31	24.10	18.19	20.75
<b>Professional category</b>					
Technicians	%	10.72	12.85	11.48	12.62
Specialists	%	12.78	12.24	11.89	9.43
Supervisors	%	7.94	5.78	10.94	6.26
Senior management	%	20.97	6.65	9.66	6.53
<b>Geography</b>					
Portugal	%	8.29	9.97	7.94	10.77
Spain	%	6.37	14.84	24.87	5.35
South America	%	14.63	14.10	8.65	10.99
North America	%	24.11	20.13	15.28	16.89
Rest of the Europe	%	10.29	9.94	36.65	16.85
APAC	%	29.57	0.00	0.00	n.a.
<b>Employees with special needs</b>	<b>%</b>	<b>9.42</b>	<b>13.97</b>	<b>24.46</b>	<b>15.34</b>

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
<b>VOLUNTARY EMPLOYEE TURNOVER</b>	%	5.69	4.13	2.27	2.70
<b>Gender</b>					
Male	%	5.57	3.94	2.70	2.40
Female	%	5.76	4.63	2.13	3.59
Not declared	%	22.64	n.d.	n.d.	n.d.
<b>Age group</b>					
< 30	%	9.79	8.58	4.34	6.03
[30-50[	%	6.21	4.34	2.58	2.94
≥ 50	%	1.00	0.54	0.35	0.46
<b>Professional category</b>					
Technicians	%	2.55	2.13	1.30	1.31
Specialists	%	8.10	6.67	3.65	4.59
Supervisors	%	4.84	2.89	1.42	2.68
Senior management	%	9.21	1.87	1.49	1.81
<b>Geography</b>					
Portugal	%	2.97	1.75	0.91	1.09
Spain	%	3.49	1.68	1.44	1.10
South America	%	5.38	5.73	2.92	3.26
North America	%	17.68	18.70	10.75	14.93
Rest of the Europe	%	8.82	4.54	4.38	11.79
APAC	%	19.40	n.d.	n.a.	n.a.
Employees with special needs	%	3.14	0.01	0.01	0.00
<b>HC ROI</b>	€	6.51	5.92	6.46	6.96
<b>TRAINING VOLUME</b>	h	309,936	337,296	273,873	400,504
Volume of mandatory training per employee	h	206,310	245,716	176,196	n.d.
<b>Gender</b>					
Male	h	167,019	201,172	133,234	n.d.
Female	h	39,292	44,544	42,962	n.d.
<b>Age group</b>					
< 30	h	44,339	47,126	n.d.	n.d.
[30-50[	h	119,604	152,358	n.d.	n.d.
≥ 50	h	42,367	46,232	n.d.	n.d.
<b>Professional category</b>					
Technicians	h	98,160	124,967	77,486	n.d.
Specialists	h	71,222	78,194	69,560	n.d.
Supervisors	h	27,229	23,556	15,417	n.d.
Senior Management	h	9,700	18,999	13,732	n.d.
<b>Geography</b>					
Portugal	h	119,264	120,518	117,444	n.d.
Spain	h	47,979	36,056	20,415	n.d.
South America	h	25,072	79,648	27,981	n.d.
North America	h	9,216	5,401	7,848	n.d.
Rest of the Europe	h	3,661	3,998	2,508	n.d.
APAC	h	1,120	95	n.a.	n.a.

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
Volume of non-mandatory training per employee	h	103,626	91,580	97,677	n.d.
<b>Gender</b>					
Male	h	74,742	64,749	73,782	n.d.
Female	h	28,884	26,831	23,896	n.d.
<b>Age group</b>					
< 30	h	14,934	10,395	n.d.	n.d.
[30-50[	h	70,996	64,642	n.d.	n.d.
≥ 50	h	17,696	16,543	n.d.	n.d.
<b>Professional category</b>					
Technicians	h	23,900	20,110	33,842	n.d.
Specialists	h	46,687	44,496	40,625	n.d.
Supervisors	h	19,318	11,314	11,383	n.d.
Senior Management	h	13,721	15,660	11,828	n.d.
<b>Geography</b>					
Portugal	h	21,645	28,064	27,386	n.d.
Spain	h	38,168	30,994	23,374	n.d.
South America	h	24,119	12,590	31,549	n.d.
North America	h	13,235	15,107	11,434	n.d.
Rest of the Europe	h	6,170	4,821	3,935	n.d.
APAC	h	288	4	n.a.	n.a.
<b>DIRECT INVESTMENT WITH TRAINING BY EMPLOYEES</b>	€/p	287	303	280	322
Investment in mandatory training per employee	€/p	1,949,792	1,635,444	1,325,491	n.d.
<b>Gender</b>					
Male	€/p	1,490,993	1,213,787	983,598	n.d.
Female	€/p	458,799	421,657	341,892	n.d.
<b>Age group</b>					
< 30	€/p	295,464	174,975	n.d.	n.d.
[30-50[	€/p	1,246,565	1,134,684	n.d.	n.d.
≥ 50	€/p	407,763	325,785	n.d.	n.d.
<b>Professional category</b>					
Technicians	€/p	585,649	308,374	275,175	n.d.
Specialists	€/p	719,732	650,960	493,354	n.d.
Supervisors	€/p	488,517	336,156	214,700	n.d.
Senior Management	€/p	155,894	339,954	342,261	n.d.
<b>Geography</b>					
Portugal	€/p	835,207	737,557	593,235	n.d.
Spain	€/p	699,026	595,895	430,401	n.d.
South America	€/p	81,110	113,752	52,692	n.d.
North America	€/p	258,554	125,667	230,805	n.d.
Rest of the Europe	€/p	36,407	62,573	18,357	n.d.
APAC	€/p	39,488	n.d.	n.d.	n.a.

PEOPLE EXPERIENCE	UN	2022	2021	2020	2019
Investment in non-mandatory training per employee	€/p	1,887,386	2,068,303	1,924,421	n.d.
<b>Gender</b>					
Male	€/p	1,289,407	1,383,758	1,340,749	n.d.
Female	€/p	597,978	684,545	583,672	n.d.
<b>Age group</b>					
< 30	€/p	275,834	231,019	n.d.	n.d.
[30-50[	€/p	1,293,843	1,519,167	n.d.	n.d.
≥ 50	€/p	317,709	318,117	n.d.	n.d.
<b>Professional category</b>					
Technicians	€/p	244,982	356,821	292,106	n.d.
Specialists	€/p	886,667	977,110	964,897	n.d.
Supervisors	€/p	453,859	359,099	295,390	n.d.
Senior Management	€/p	301,877	375,273	372,027	n.d.
<b>Geography</b>					
Portugal	€/p	413,999	593,859	709,309	n.d.
Spain	€/p	881,228	862,803	570,044	n.d.
South America	€/p	149,300	184,642	279,986	n.d.
North America	€/p	371,333	351,541	336,283	n.d.
Rest of the Europe	€/p	61,371	75,458	28,800	n.d.
APAC	€/p	10,154	n.d.	n.a.	n.a.

<sup>1</sup>STEM Positions (Science, Technology, Engineering e Mathematics).

<sup>2</sup>As part of the Organisational Climate, the Empowerment dimension was assessed in 2022 to replace the Enablement dimension previously assessed, as part of the evolution of the employee consultation model at EDP.

HEALTH & SAFETY	UN	2022	2021	2020	2019
<b>EMPLOYEES</b>					
Accidents at work <sup>1</sup>	#	28	21	17	29
Fatalities	#	0	0	0	0
Frequency rate <sup>2</sup>	Fr	1.13	0.92	0.77	1.50
Severity rate <sup>3</sup>	Sr	65	69	60	90
<b>CONTRACTORS</b>					
Accidents at work <sup>1</sup>	#	105	132	115	82
Fatalities	#	5	7	3	2
Frequency rate <sup>2</sup>	Fr	2.18	2.09	2.12	1.84
Severity rate <sup>3</sup>	Sr	144	109	100	88

<sup>1</sup>Accidents occurred at the place and working time or on a journey, with one or more days of absence and fatal accidents.

<sup>2</sup>Number of accidents at work in service with absence/fatalities, per million hours worked.

<sup>3</sup>Number of calendar days lost due to work accident per million hours worked, in the reference period.

CRISIS MANAGEMENT	UN	2022	2021	2020	2019
<b>INFORMATION SECURITY / CYBER SECURITY</b>					
Information security incidents <sup>1</sup>	#	3,172	4,043	3,397	4,631
Fines for breach of privacy and loss of customer data	#	0	0	4	3
Fines for breach of privacy and loss of customer data	000€	0	0	51	36

<sup>1</sup>The evolution is explained by the greater robustness in the detection capacity of this indicator and the larger number of cyberattacks.

SUSTAINABLE FINANCE	UN	2022	2021	2020	2019
<b>CREATION OF A LONG-TERM VALUE</b>					
Economic Value Generated	000€	22,660,644	16,479,886	13,755,853	15,437,724
Turnover	000€	20,650,764	14,982,909	12,448,205	14,333,009
Other income	000€	2,009,880	1,496,976	1,307,648	1,104,715
Economic Value Distributed	000€	20,375,387	14,344,023	11,307,190	13,213,652
Employees	000€	770,800	666,459	667,313	620,196
Suppliers	000€	15,633,382	11,036,972	8,213,006	10,013,401
Shareholders	000€	953,629	884,821	690,924	690,924
Financial sector	000€	1,753,220	875,816	897,326	1,057,592
Community	000€	31,233	22,544	21,208	25,972
State	000€	1,036,365	700,696	630,723	658,553
Other	000€	196,758	156,715	186,690	147,014
Economic Value Accumulated	000€	2,285,257	2,135,863	2,448,663	2,224,072
Gross Value Added per Employee	000€/ #	383	350	397	370
CAPEX	000€	4,558,287	3,492,673	2,909,191	2,258,386
EBITDA	000€	4,523,539	3,723,050	3,949,963	3,705,617
Net Debt/EBITDA	x	2.9	3.1	3.1	3.7
Net Profit Attributable to EDP Shareholders	000€	679,001	656,717	800,692	511,751

CARING FOR OUR PLANET	UN	2022	2021	2020	2019
<b>ISO 14001 CERTIFICATION</b>					
ISO 14001 certification <sup>1</sup>	%	87	90	94	96
<b>PREVENTION OF POLLUTION</b>					
<b>Total NO<sub>x</sub> emissions</b>		4.8	8.9	6.2	10.8
Portugal	kt	0.7	0.6	1.7	2.8
Spain	kt	4.1	3.7	3.0	3.9
Brazil	kt	0.0	4.7	1.5	4.1
<b>Total SO<sub>2</sub> emissions</b>		2.3	12.1	8.2	16.3
Portugal	kt	0.0	0.0	0.8	2.0
Spain	kt	2.3	1.6	1.5	1.5
Brazil	kt	0.0	10.5	6.0	12.8
<b>Total particulate matter emissions</b>		0.2	1.3	0.9	1.7
Portugal	kt	0.0	0.01	0.03	0.04
Spain	kt	0.2	0.15	0.08	0.10
Brazil	kt	0.0	1.10	0.81	1.52
<b>WASTE MATERIALS</b>	t	383,633	216,164	309,451	523,302
<b>Waste</b>	t	335,155	173,769	174,594	232,180
Hazard waste	t	5,019	6,728	5,810	5,094
Non-hazard waste	t	330,137	167,042	168,784	227,086
<b>Recovered waste</b>	t	314,371	136,025	150,406	210,846
<b>Hazardous waste</b>	t	3,842	4,334	3,564	n.d.
Recycled waste	t	3,002	2,099	1,443	n.d.
On site	t	0	0	n.d.	n.d.
Off site	t	3,002	2,099	n.d.	n.d.
Other	t	840	2,235	2,122	n.d.
On site	t	0	17	n.d.	n.d.
Off site	t	840	2,218	n.d.	n.d.
<b>Non-hazardous</b>	t	310,529	131,690	146,841	n.d.
Recycled waste	t	196,790	34,147	113,965	n.d.
On site	t	0	0	n.d.	n.d.
Off site	t	196,790	34,147	n.d.	n.d.
Other	t	113,694	97,543	32,876	n.d.
On site	t	0	10	n.d.	n.d.
Off site	t	113,694	97,533	n.d.	n.d.
<b>Non-recovered waste</b>	t	20,786	37,744	24,188	21,334
<b>Hazardous waste</b>	t	1,177	2,393	2,245	n.d.
Landfilling	t	172	562	398	n.d.
On site	t	0	0	n.d.	n.d.
Off site	t	172	562	n.d.	n.d.
Other disposal operations	t	1,004	1,831	1,848	n.d.
On site	t	0	0	n.d.	n.d.
Off site	t	1,004	1,831	n.d.	n.d.
Incineration	t	1	n.d.	n.d.	n.d.
On site	t	0	n.d.	n.d.	n.d.
Off site	t	1	n.d.	n.d.	n.d.

CARING FOR OUR PLANET	UN	2022	2021	2020	2019
<b>Non-hazardous</b>	<b>t</b>	<b>19,608</b>	<b>35,351</b>	<b>21,943</b>	<b>n.d.</b>
Landfilling	t	18,537	33,682	21,231	n.d.
On site	t	10,618	28,843	n.d.	n.d.
Off site	t	7,918	4,839	n.d.	n.d.
Other disposal operations	t	1,071	1,669	711	n.d.
On site	t	0	0	n.d.	n.d.
Off site	t	1,071	1,669	n.d.	n.d.
Incineration	t	0	n.d.	n.d.	n.d.
On site	t	0	n.d.	n.d.	n.d.
Off site	t	0	n.d.	n.d.	n.d.
<b>Main waste categories</b>					
Fly ash	%	82.14	87.53	82.76	82.69
Slag	%	7.70	10.11	10.34	13.21
Gypsum	%	8.54	0.28	4.45	1.81
Used oils	%	0.10	0.43	0.24	0.10
PCB	%	0.05	0.00	0.01	0.01
Metals	%	1.47	1.65	2.20	2.19
By-products	t	48,478	42,395	134,858	291,122
Gypsum	t	48,478	39,053	45,049	99,787
Fly ash	t	0	3,071	86,929	157,253
Slag	t	0	271	2,880	34,082
Specific production of waste materials	t/GWh	6.22	3.59	4.86	7.90
Recovered waste materials	%	95	83	92	96
<b>NATURAL RESOURCES</b>					
Total water withdrawal	10 <sup>3</sup> xm <sup>3</sup>	675,668	358,480	602,909	996,309
Freshwater	10 <sup>3</sup> xm <sup>3</sup>	11,275	14,527	11,944	18,315
Salt and estuarine water	10 <sup>3</sup> xm <sup>3</sup>	664,393	343,953	590,965	977,994
<b>In water-stressed regions<sup>2</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>213</b>	<b>9,042</b>	<b>6,294</b>	<b>11,774</b>
Pecém	10 <sup>3</sup> xm <sup>3</sup>	213	9,042	4,260	n.d.
Castejón	10 <sup>3</sup> xm <sup>3</sup>	0	0	2,035	n.d.
Total water discharge	10 <sup>3</sup> xm <sup>3</sup>	661,362	343,836	589,375	976,299
Discharge into inland water	10 <sup>3</sup> xm <sup>3</sup>	1,215	1,554	1,891	1,783
Discharge into estuary water and sea	10 <sup>3</sup> xm <sup>3</sup>	660,147	342,282	587,484	974,516
Municipal treatment	10 <sup>3</sup> xm <sup>3</sup>	2.54	3.52	4.25	2.27
<b>In water-stressed regions<sup>2</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>176</b>	<b>1,065</b>	<b>867</b>	<b>1,255</b>
Pecém	10 <sup>3</sup> xm <sup>3</sup>	176	1,065	418	672
Castejón	10 <sup>3</sup> xm <sup>3</sup>	n.a.	n.a.	449	583
Total water consumption	10 <sup>3</sup> xm <sup>3</sup>	14,797	16,248	14,967	21,736
Total freshwater consumption	10 <sup>3</sup> xm <sup>3</sup>	9,964	13,045	10,252	16,817
<b>In water-stressed regions<sup>2</sup></b>	<b>10<sup>3</sup>xm<sup>3</sup></b>	<b>213</b>	<b>9,042</b>	<b>5,847</b>	<b>11,192</b>
Pecém	10 <sup>3</sup> xm <sup>3</sup>	213	9,042	4,260	n.d.
Castejón	10 <sup>3</sup> xm <sup>3</sup>	0	0	1,594	n.d.
Specific freshwater consumption	m <sup>3</sup> /GWh	162	217	161	254

CARING FOR OUR PLANET	UN	2022	2021	2020	2019
<b>Fuel</b>					
Coal	TJ	62,435	71,109	55,515	101,514
Natural gas	TJ	61,961	45,334	67,447	70,823
Diesel	TJ	217	69	127	173
Fuel oil	TJ	20	21	220	337
Waste gas	TJ	7,965	11,158	7,046	11,836
<b>Chemicals consumption</b>					
Sodium hydroxide	t	464	462	608	892
Hydrochloric acid	t	875	710	1,236	1,008
Sodium hypochlorite	t	1,957	2,094	3,087	4,175
Ammonia	t	8,848	2,368	6,063	10,557
Calcareous	t	24,934	24,327	27,254	54,267
Acquired oils	t	185	155	140	229
Environmental fines	000€	2	15	0	0
Indemnities to third parties	000€	97	26	11	4
<b>CLIMATE CHANGE</b>					
<b>Hydroelectric Productivity Index</b>					
Portugal	#	0.63	0.93	0.97	0.81
Spain	#	0.67	0.91	1.03	0.90
<b>Emissions</b>					
<b>Specific CO<sub>2</sub> emissions<sup>3</sup></b>					
Global	g/kWh	152	164	146	216
Thermal	g/kWh	575	673	567	649
<b>CO<sub>2</sub> equivalent emissions</b>					
<b>Scope 1</b>	ktCO <sub>2</sub> eq	9,405	9,819	9,304	14,363
Stationary combustion	ktCO <sub>2</sub> eq	9,381	9,794	9,273	14,338
SF <sub>6</sub> Emissions	ktCO <sub>2</sub> eq	9	11	17	9
Company fleet	ktCO <sub>2</sub> eq	15	14	13	15
Natural gas consumption	ktCO <sub>2</sub> eq	0	0	0	0
<b>Scope 2 (location-based<sup>4</sup>)<sup>6</sup></b>	ktCO <sub>2</sub> eq	469	791	594	846
Electricity consumption in office buildings	ktCO <sub>2</sub> eq	1	2	1	1
Electricity losses in distribution	ktCO <sub>2</sub> eq	443	766	568	824
Renewable plants self-consumption	ktCO <sub>2</sub> eq	25	23	25	21
<b>Scope 2 (market-based<sup>5</sup>)<sup>6</sup></b>	ktCO <sub>2</sub> eq	443	773	574	829
Electricity consumption in office buildings	ktCO <sub>2</sub> eq	0	0	0	0
Electricity losses in distribution	ktCO <sub>2</sub> eq	443	766	568	824
Renewable plants self-consumption	ktCO <sub>2</sub> eq	0	7	6	5
<b>Scope 3<sup>7</sup></b>	ktCO <sub>2</sub> eq	9,279	10,304	9,595	11,730
Purchased goods and services (C01)	ktCO <sub>2</sub> eq	713	721	1,116	28
Capital goods (C02)	ktCO <sub>2</sub> eq	2,935	2,610	1,878	349
Fuel and energy related activities (C03)	ktCO <sub>2</sub> eq	4,159	5,185	4,131	6,784
Upstream transportation and distribution (C04)	ktCO <sub>2</sub> eq	6	66	39	611

CARING FOR OUR PLANET	UN	2022	2021	2020	2019
Waste generated in operations (C05)	ktCO <sub>2</sub> eq	10	18	11	n.a.
Business travels (C06)	ktCO <sub>2</sub> eq	9	3	3	7
Commuting (C07)	ktCO <sub>2</sub> eq	11	12	11	n.a.
Use of sold products (C11)	ktCO <sub>2</sub> eq	1,437	1,688	2,405	3,951
<b>SF<sub>6</sub></b>	<b>kg</b>	<b>389</b>	<b>459</b>	<b>724</b>	<b>394</b>
Portugal	kg	220	240	206	194
Spain	kg	62	53	298	54
South America	kg	104	166	217	140
North America	kg	0	0	0	6
Rest of the Europe	kg	2	0	3	0
APAC	kg	0	0	0	0

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

<sup>2</sup> ≤1,000 mg / L of total dissolved solids.

<sup>3</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>4</sup> Based on global emission factors of each geography.

<sup>5</sup> Based in the suppliers' emission factors.

<sup>6</sup> Calculation methodology of Scope 2 was revised to avoid emissions duplication with scope 1.

<sup>7</sup> Methodological review conducted in 2021. The 2020 figures were adjusted based on the new methodology, but the calculations were not audited for that year. The 2020 figure includes 1.4 ktCO<sub>2</sub>e from category 15 (investments).

SUPPLIER MANAGEMENT	UN	2022	2021	2020	2019
<b>SUPPLIERS</b>					
Number of Suppliers by purchase region	#	4,199	13,385	13,185	16,686
Portugal	#	1,052	3,649	3,923	4,200
Spain	#	549	1,421	2,552	1,966
South America	#	1,053	3,749	4,720	4,353
North America	#	357	654	594	763
Rest of the Europe	#	1,381	3,916	1,559	5,404
APAC	#	0	1	0	0
Purchase volume by purchase region	ME	10,074	5,724	4,738	5,391
Portugal	ME	3,003	1,395	965	1,078
Spain	ME	1,500	722	615	1,047
South America	ME	596	887	617	753
North America	ME	3,010	1,268	1,376	1,182
Rest of the Europe	ME	1,965	1,429	1,165	1,331
APAC	ME	0	23	0	0
Local Suppliers volume of purchases					
Portugal	%	27	58	76	92
Spain	%	40	51	58	88
South America	%	99	99	99	99
North America	%	99	100	100	100
Rest of the Europe	%	82	100	45	92
APAC	%	0	0	0	0

SUPPLIER MANAGEMENT	UN	2022	2021	2020	2019
<b>Critical Suppliers<sup>1</sup></b>					
ISO 14001 or equivalent	%	In clearance	25	69	82
OHSAS 18001 or equivalent	%	In clearance	36	55	65
Assessed by ESG criteria	%	In clearance	100	100	n.d.
Service providers with audited ESG risks	%	In clearance	45	53	n.d.
Human and labour rights due diligence	%	100	100	100	n.d.
<b>ORIGIN OF FUEL</b>					
<b>Coal Origin</b>					
Colombia	%	58	100	100	76
USA	%	2	0	0	13
South Africa	%	0	0	0	0
Russia	%	10	0	0	8
Australia	%	3	0	0	0
Kazakhstan	%	27	0	0	0
Ukraine	%	0	0	0	3
<b>Gas Origin</b>					
USA	%	57	81	n.d.	n.d.
Russia	%	0	12	n.d.	n.d.
Equatorial Guinea	%	6	5	n.d.	n.d.
Nigeria	%	0	2	n.d.	n.d.
Trinidad and Tobago	%	37	0	n.d.	n.d.
<b>PURCHASE CATEGORY</b>					
Materials and Equipment	%	13	22	24	n.d.
Corporate Services and IT	%	16	18	14	n.d.
Construction and technical services	%	41	40	53	n.d.
Fuels	%	31	20	9	n.d.

<sup>1</sup> Critical Suppliers exposed to environmental or health and safety risks.

RESPECT AND ADVOCATE FOR HUMAN RIGHTS	UN	2022	2021	2020	2019
<b>HUMAN AND EMPLOYMENT RIGHTS</b>					
Human Rights due diligence process	y/n	y	y	y	y

VOLUNTARY INVESTMENT IN THE COMMUNITY <sup>1</sup>	UN	2022	2021	2020	2019
Category	000€	19,857	21,275	20,654	23,650
Nonstrategic investment	000€	544	1,735	980	1,534
Strategic investment	000€	18,636	19,531	19,674	20,652
Commercial initiative	000€	677	9	0	1,464
Nature	000€	19,857	21,275	20,654	23,650
Education	000€	2,478	1,679	1,574	2,002
Health	000€	107	535	1	1,545
Economic development	000€	1,033	686	756	3,576
Environment	000€	2,414	1,125	787	1,616
Art and culture	000€	5,625	8,474	7,647	10,585
Social welfare	000€	6,104	6,271	2,432	2,907
Emergency response	000€	787	304	6,144	120
Other	000€	1,310	2,201	1,313	1,299
Type	000€	19,857	21,275	20,654	23,650
Cash contributions	000€	17,751	19,299	17,486	19,320
Kind contributions	000€	1,845	1,764	2,858	3,768
Working time contributions	000€	261	211	310	562
Management costs	000€	11,376	1,283	554	2,322
Total value of contributions (including management costs)	000€	31,233	22,558	21,208	25,972
Beneficiary entities	#	634	994	1,051	2,490
<b>CORPORATE VOLUNTEERING</b>					
EDP Volunteers	#	3,626	3,681	2,482	2,833
EDP time used in volunteering	h	10,551	11,307	14,457	23,258

<sup>1</sup> Determined according to the B4SI methodology. Not yet validated by Corporate Citizenship.

CORPORATE GOVERNANCE	UN	2022	2021	2020	2019
<b>NUMBER OF MEMBERS</b>					
EBD	#	5	5	7	9
GSB	#	16	16	21	21
<b>NUMBER OF INDEPENDENT MEMBERS</b>					
GSB	#	9	9	11	11
<b>NUMBER OF WOMEN</b>					
EBD	#	2	2	2	2
GSB	#	6	6	5	5

## 4.2. GRI indicators

### Environmental indicators

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>ENVIRONMENTAL CERTIFICATION</b>								
ISO 14001 Certification <sup>1</sup>	%	87	98	41	95	96	93	n.d.
<b>TOTAL ENERGY CONSUMPTION</b>								
PRIMARY ENERGY CONSUMPTION	TJ	143,724	44,657	98,556	251	185	76	0
Coal	TJ	62,435	0	62,359	76	n.a.	n.a.	n.a.
Fuel oil	TJ	20	0	20	n.a.	n.a.	n.a.	n.a.
Natural gas	TJ	61,961	36,182	25,777	0	2	1	0
Blast furnace gas	TJ	7,965	n.a.	7,965	n.a.	n.a.	n.a.	n.a.
Coke gas	TJ	0	n.a.	0	n.a.	n.a.	n.a.	n.a.
Diesel oil	TJ	217	1	204	13	n.a.	n.a.	n.a.
Iron and steel industry gas	TJ	0	n.a.	0	n.a.	n.a.	n.a.	n.a.
Fuel for fleet	TJ	219	101	24	80	7	5	0
ENERGY INTENSITY <sup>2</sup>	MJ/EUR	7.0	5.1	14.6	0.1	0.2	0.1	0.0
THERMAL POWER PLANT EFFICIENCY (capacity based)	%	46.7	53.9	41.1	n.a.	n.a.	n.a.	n.a.
<b>ELECTRICITY CONSUMPTION</b>								
Generation self-consumption	MWh	2,998,126	2,304,172	609,888	17,806	47,126	19,133	0
Administrative service	MWh	33,275	21,837	3,159	6,512	1,654	113	0
Grid losses	%	8.2	8.3	4.8	9.5	n.a.	n.a.	n.a.
<b>GHG EMISSION</b>								
Direct emissions (scope 1)	ktCO <sub>2eq</sub>	9,405	2,020	7,368	16	1	0	0
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	9,381	2,007	7,365	8	0	0	0
SF <sub>6</sub> Emissions	ktCO <sub>2eq</sub>	9.14	5.18	1.46	2.45	0.00	0.05	0
Company fleet	ktCO <sub>2eq</sub>	15	8	2	5	1	0	0
Natural gas consumption	ktCO <sub>2eq</sub>	0.17	0.00	0.00	0.00	0.12	0.05	0
Indirect emissions (scope 2) <sup>4</sup>	ktCO <sub>2eq</sub>	469	358	0	85	19	8	0
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	1.4	0.0	0.0	0.0	1.3	0.0	0
Electricity losses	ktCO <sub>2eq</sub>	443	358	0	85	0	0	0
Renewable plants self-consumption	ktCO <sub>2eq</sub>	25.0	0.0	0.0	0.0	17.2	7.8	0

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Other indirect emissions (scope 3)	ktCO <sub>2eq</sub>	9,279	2,908	1,925	2,957	551	243	696
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	713	302	268	70	52	14	6
Capital Goods (C02)	ktCO <sub>2eq</sub>	2,935	171	203	1152	497	222	690
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	4,159	1,665	765	1,729	0	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	6	0	0	0	0	6	0
Waste generated in operations (C05)	ktCO <sub>2eq</sub>	10	0	9	1	0	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	9	3	2	2	1	0	0
Commuting (C07)	ktCO <sub>2eq</sub>	11	4	3	3	1	0	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	1,437	763	675	0	0	0	0
<b>GHG EMISSIONS INTENSITY<sup>5</sup></b>	<b>kgCO<sub>2</sub>/EUR</b>	<b>0.5</b>	<b>0.3</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>CO<sub>2</sub> AVOIDED EMISSIONS<sup>6</sup></b>	<b>ktCO<sub>2</sub></b>	<b>22,749</b>	<b>2,554</b>	<b>2,232</b>	<b>1,808</b>	<b>12,658</b>	<b>3,035</b>	<b>462</b>
<b>TOTAL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	kt	9,381	2,007	7,365	8	n.a.	n.a.	n.a.
NO <sub>x</sub>	kt	4.8	0.7	4.1	0.0	n.a.	n.a.	n.a.
SO <sub>2</sub>	kt	2.3	0.0	2.3	0.0	n.a.	n.a.	n.a.
Particulate matter	kt	0.23	0.01	0.22	0.00	n.a.	n.a.	n.a.
Mercury	kg	37	0	37	0	n.a.	n.a.	n.a.
SF <sub>6</sub>	kg	389	220	62	104	0	2	0
<b>SPECIFIC OVERALL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	g/kWh	152	147	458	1	n.a.	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0.1	0.1	0.3	0.0	n.a.	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0.0	0.0	0.1	0.0	n.a.	n.a.	n.a.
Particulate matter	g/kWh	0.00	0.00	0.01	0.00	n.a.	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	g/kWh	575	28	687	2,238	n.a.	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0.3	0.1	0.4	0.0	n.a.	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0.1	0.0	0.2	0.0	n.a.	n.a.	n.a.
Particulate matter	g/kWh	0.01	0.00	0.02	0.00	n.a.	n.a.	n.a.
<b>TOTAL WATER WITHDRAWAL BY SOURCE</b>								
Ocean <sup>8</sup>	10 <sup>3</sup> x m <sup>3</sup>	652,951	0	652,951	n.a.	n.a.	n.a.	n.a.
Surface	10 <sup>3</sup> x m <sup>3</sup>	20,849	11,442	9,382	25	n.a.	n.a.	n.a.
Fresh water	10 <sup>3</sup> x m <sup>3</sup>	9,407	n.a.	9,382	25	n.a.	n.a.	n.d.
Other water	10 <sup>3</sup> x m <sup>3</sup>	11,442	11,442	n.a.	n.a.	n.a.	n.a.	n.d.
Water hole <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	166	166	0	0	n.a.	n.a.	n.a.
Well <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	3	0	0	2	1	1	0
Municipal water supplies <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	1,555	93	1,198	258	6	0	0
Other private entity <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	144	106	37	0	0	0	0

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>MAIN USE OF WATER</b>								
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	673,386	11,460	661,734	192	n.a.	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	2,249	445	1,783	21	n.a.	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	175	75	23	69	8	0	0
<b>WASTEWATER</b>								
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	812	102	692	18	n.a.	n.a.	n.a.
Discharge into estuarine water and sea <sup>a</sup>	10 <sup>3</sup> x m <sup>3</sup>	660,147	6,662	653,309	176	n.a.	n.a.	n.a.
Discharge into inland water <sup>a</sup>	10 <sup>3</sup> x m <sup>3</sup>	1,215	3	1,212	n.a.	n.a.	n.a.	n.a.
<b>WASTE MATERIALS</b>								
	t	383,634	2,048	270,004	110,792	712	79	0
<b>Waste</b>								
Hazard waste	t	5,019	672	1,282	2,771	255	39	0
Non-hazard waste	t	330,137	1,377	220,243	108,020	457	41	0
Recovered waste	t	314,371	1,717	202,801	109,325	456	71	0
<b>Hazardous waste</b>	<b>t</b>	<b>3,842</b>	<b>452</b>	<b>839</b>	<b>2,287</b>	<b>226</b>	<b>37</b>	<b>0</b>
Recycled waste	t	3,002	0	639	2,245	118	0	0
On site	t	0	0	0	0	0	0	0
Off site	t	3,002	0	639	2,245	118	0	0
Other	t	840	452	201	42	108	37	0
On site	t	0	0	0	0	0	0	0
Off site	t	840	452	201	42	108	37	0
<b>Non-hazardous</b>	<b>t</b>	<b>310,529</b>	<b>1,265</b>	<b>201,963</b>	<b>107,038</b>	<b>229</b>	<b>34</b>	<b>0</b>
Recycled waste	t	196,790	198	177,789	18,577	219	7	0
On site	t	0	0	0	0	0	0	0
Off site	t	196,790	198	177,789	18,577	219	7	0
Other	t	113,694	1,067	24,129	88,461	10	27	0
On site	t	0	0	0	0	0	0	0
Off site	t	113,694	1,067	24,129	88,461	10	27	0
<b>Non-recovered waste</b>	<b>t</b>	<b>20,786</b>	<b>331</b>	<b>18,724</b>	<b>1,466</b>	<b>256</b>	<b>8</b>	<b>0</b>
<b>Hazardous waste</b>	<b>t</b>	<b>1,177</b>	<b>219</b>	<b>443</b>	<b>484</b>	<b>29</b>	<b>2</b>	<b>0</b>
Landfilling	t	172	32	86	25	29	0	0
On site	t	0	0	0	0	0	0	0
Off site	t	172	32	86	25	29	0	0
Other disposal operations	t	1,004	187	357	459	0	2	0
On site	t	0	0	0	0	0	0	0
Off site	t	1,004	187	357	459	0	2	0
<b>Non-hazardous</b>	<b>t</b>	<b>19,608</b>	<b>112</b>	<b>18,280</b>	<b>982</b>	<b>227</b>	<b>6</b>	<b>0</b>
Landfilling	t	18,537	0	17,325	982	227	2	0
On site	t	10,618	0	10,618	0	0	0	0
Off site	t	7,918	0	6,707	982	227	2	0
Other disposal operations	t	1,071	112	955	0	0	4	0
On site	t	0	0	0	0	0	0	0
Off site	t	1,071	112	955	0	0	4	0

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
By-products	t	48,478	0	48,478	n.a.	n.a.	n.a.	n.a.
Gypsum	t	48,478	0	48,478	n.a.	n.a.	n.a.	n.a.
Fly ash	t	0	0	n.a.	n.a.	n.a.	n.a.	n.a.
Slag	t	0	0	n.a.	n.a.	n.a.	n.a.	n.a.
Recovered waste materials	%	95	84	93	99	64	90	n.a.
<b>DISTRIBUTION IN PROTECTED AREAS</b>								
High voltage distribution grid in protected areas	km	1,521	915	209	397	n.a.	n.a.	n.a.
Overhead	km	1,505	899	209	397	n.a.	n.a.	n.a.
Underground	km	16	16	0	0	n.a.	n.a.	n.a.
Medium voltage distribution grid in protected areas	km	17,870	9,216	1,777	6,877	n.a.	n.a.	n.a.
Overhead	km	16,713	8,212	1,632	6,869	n.a.	n.a.	n.a.
Underground	km	1,158	1,004	145	9	n.a.	n.a.	n.a.
Substations in protected areas	#	72	29	28	15	n.a.	n.a.	n.a.
<b>TRANSMISSION IN PROTECTED AREAS</b>								
High voltage transmission grid in protected areas	km	84	n.a.	n.a.	84	n.a.	n.a.	n.a.
Overhead	km	84	n.a.	n.a.	84	n.a.	n.a.	n.a.
Underground	km	0	n.a.	n.a.	0	n.a.	n.a.	n.a.
Substations in protected areas	#	0	n.a.	n.a.	0	n.a.	n.a.	n.a.
<b>FLOODED AREAS BY RESERVOIRS</b>								
	ha	2,919	2,585	329	5	n.a.	n.a.	n.a.
<b>ENVIRONMENTAL COMPLAINTS</b>								
	#	222	30	66	100	20	6	0

<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 plants in Spain.

<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> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

<sup>8</sup> Other water: > 1,000 mg/L of total dissolved solids.

<sup>9</sup> Fresh water: ≤1,000 mg/L of total dissolved solids.

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>ENVIRONMENTAL CERTIFICATION</b>								
ISO 14001 Certification <sup>1</sup>	%	90	100	66	89	96	74	n.d.
<b>TOTAL ENERGY CONSUMPTION</b>								
<b>PRIMARY ENERGY CONSUMPTION</b>	TJ	127,897	27,445	63,944	36,494	9	6	0
Coal	TJ	71,109	0	34,727	36,382	n.a.	n.a.	n.a.
Fuel oil	TJ	21	0	21	n.a.	n.a.	n.a.	n.a.
Natural gas	TJ	45,334	27,352	17,977	0	5	0	0
Blast furnace gas	TJ	10,891	n.a.	10,891	n.a.	n.a.	n.a.	n.a.
Coke gas	TJ	0	n.a.	0	n.a.	n.a.	n.a.	n.a.
Diesel oil	TJ	69	1	38	31	n.a.	n.a.	n.a.
Iron and steel industry gas	TJ	266	n.a.	266	n.a.	n.a.	n.a.	n.a.
Fuel for fleet	TJ	206	92	23	81	5	5	0
<b>ENERGY INTENSITY<sup>2</sup></b>	MJ/EUR	9.2	5.0	16.5	12.6	0.3	0.2	0.0
<b>THERMAL POWER PLANT EFFICIENCY (capacity based)</b>	%	45.9	53.8	42.0	34.6	n.a.	n.a.	n.a.
<b>ELECTRICITY CONSUMPTION</b>								
Generation self-consumption	MWh	2,869,800	2,002,784	418,907	381,551	48,392	18,164	0
Administrative service	MWh	32,975	24,111	1,978	5,136	1,626	125	0
Grid losses	%	8.2	8.2	4.7	10.0	n.a.	n.a.	n.a.
<b>GHG EMISSION</b>								
<b>Direct emissions (scope 1)</b>	ktCO <sub>2eq</sub>	9,819	1,532	4,265	4,022	1	0	0
Stationary combustion <sup>3</sup>	ktCO <sub>2eq</sub>	9,794	1,519	4,262	4,013	0	0	0
SF <sub>6</sub> Emissions	ktCO <sub>2eq</sub>	10.79	5.64	1.24	3.90	0.00	0.00	0
Company fleet	ktCO <sub>2eq</sub>	14	7	2	5	0	0	0
Natural gas consumption	ktCO <sub>2eq</sub>	0.23	0.00	0.00	0.00	0.22	0.01	0
<b>Indirect emissions (scope 2)<sup>4</sup></b>	ktCO <sub>2eq</sub>	791	527	11	228	18	7	0
Electricity consumption in office buildings	ktCO <sub>2eq</sub>	1.5	0.0	0.0	0.0	1.5	0.0	0
Electricity losses	ktCO <sub>2eq</sub>	766	527	11	228	0	0	0
Renewable plants self-consumption	ktCO <sub>2eq</sub>	23.3	0.0	0.0	0.0	16.6	6.7	0
<b>Other indirect emissions (scope 3)</b>	ktCO <sub>2eq</sub>	10,304	2,913	1,651	3,942	1,335	403	59
Purchased goods and services (C01)	ktCO <sub>2eq</sub>	721	343	246	72	43	17	1
Capital Goods (C02)	ktCO <sub>2eq</sub>	2,610	168	58	652	1,291	382	58
Fuel and energy related activities (C03)	ktCO <sub>2eq</sub>	5,185	1,426	556	3,203	0	0	0
Upstream transportation and distribution (C04)	ktCO <sub>2eq</sub>	66	66	0	0	0	0	0
Waste generated in operations (C05)	ktCO <sub>2eq</sub>	18	1	4	12	0	0	0
Business Travels (C06)	ktCO <sub>2eq</sub>	3	1	1	1	1	0	0
Commuting (C07)	ktCO <sub>2eq</sub>	12	4	2	3	0	3	0
Use of sold products (C11)	ktCO <sub>2eq</sub>	1,688	904	784	0	0	0	0

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>GHG EMISSIONS INTENSITY<sup>5</sup></b>	kgCO <sub>2</sub> /EUR	0.7	0.3	1.1	1.4	0.0	0.0	0.0
<b>CO<sub>2</sub> AVOIDED EMISSIONS<sup>6</sup></b>	ktCO <sub>2</sub>	23,752	4,579	2,354	2,565	11,383	2,853	18
<b>TOTAL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	kt	9,794	1,519	4,262	4,013	n.a.	n.a.	n.a.
NO <sub>x</sub>	kt	8.9	0.6	3.7	4.7	n.a.	n.a.	n.a.
SO <sub>2</sub>	kt	12.1	0.0	1.6	10.5	n.a.	n.a.	n.a.
Particulate matter	kt	1.26	0.01	0.15	1.10	n.a.	n.a.	n.a.
Mercury	kg	42	0	42	0	n.a.	n.a.	n.a.
SF <sub>6</sub>	kg	459	240	53	166	0	0	0
<b>SPECIFIC OVERALL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	g/kWh	164	95	340	372	n.a.	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0.1	0.0	0.3	0.4	n.a.	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0.2	0.0	0.1	1.0	n.a.	n.a.	n.a.
Particulate matter	g/kWh	0.02	0.00	0.01	0.10	n.a.	n.a.	n.a.
<b>SPECIFIC THERMAL EMISSIONS</b>								
CO <sub>2</sub> <sup>37</sup>	g/kWh	673	384	627	1,175	n.a.	n.a.	n.a.
NO <sub>x</sub>	g/kWh	0.6	0.1	0.5	1.4	n.a.	n.a.	n.a.
SO <sub>2</sub>	g/kWh	0.8	0.0	0.2	3.1	n.a.	n.a.	n.a.
Particulate matter	g/kWh	0.09	0.00	0.02	0.32	n.a.	n.a.	n.a.
<b>TOTAL WATER WITHDRAWAL BY SOURCE</b>								
Ocean <sup>8</sup>	10 <sup>3</sup> x m <sup>3</sup>	335,269	0	335,269	n.a.	n.a.	n.a.	n.a.
Surface	10 <sup>3</sup> x m <sup>3</sup>	12,936	8,684	4,244	7	n.a.	n.a.	n.a.
Fresh water	10 <sup>3</sup> x m <sup>3</sup>	4,252	n.a.	4,244	7	n.a.	n.a.	n.d.
Other water	10 <sup>3</sup> x m <sup>3</sup>	8,684	8,684	n.a.	n.a.	n.a.	n.a.	0
Water hole <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	142	142	0	0	n.a.	n.a.	n.a.
Well <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	3	0	0	0	2	1	0
Municipal water supplies <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	9,794	107	605	9,080	1	0	0
Other private entity <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	337	115	222	0	0	0	0
<b>MAIN USE OF WATER</b>								
Cooling water	10 <sup>3</sup> x m <sup>3</sup>	355,935	8,696	339,100	8,138	n.a.	n.a.	n.a.
Row water	10 <sup>3</sup> x m <sup>3</sup>	2,212	225	1,082	904	n.a.	n.a.	n.a.
Potable water	10 <sup>3</sup> x m <sup>3</sup>	156	77	25	46	7	0	0
<b>WASTEWATER</b>								
Wastewater from generation with treatment	10 <sup>3</sup> x m <sup>3</sup>	972	110	765	97	n.a.	n.a.	n.a.
Discharge into estuarine water and sea <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	342,282	5,558	335,660	1,065	n.a.	n.a.	n.a.
Discharge into inland water <sup>9</sup>	10 <sup>3</sup> x m <sup>3</sup>	1,554	2	1,552	n.a.	n.a.	n.a.	n.a.

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>WASTE MATERIALS</b>	t	216,164	13,711	65,756	135,180	1,311	207	0
<b>Waste</b>								
Hazard waste	t	6,728	2,292	1,456	2,257	637	85	0
Non-hazard waste	t	167,042	8,077	25,246	132,923	674	121	0
Recovered waste	t	136,025	7,867	17,324	109,775	886	173	0
<b>Hazardous waste</b>	t	<b>4,334</b>	<b>1,308</b>	<b>702</b>	<b>1,669</b>	<b>576</b>	<b>79</b>	<b>0</b>
Recycled waste	t	2,099	0	72	1,612	409	7	0
On site	t	0	0	0	0	0	0	0
Off site	t	2,099	0	72	1,612	409	7	0
Other	t	2,235	1,308	631	57	168	72	0
On site	t	17	0	17	0	0	0	0
Off site	t	2,218	1,308	614	57	168	72	0
<b>Non-hazardous</b>	t	<b>131,690</b>	<b>6,559</b>	<b>16,622</b>	<b>108,106</b>	<b>309</b>	<b>94</b>	<b>0</b>
Recycled waste	t	34,147	3,170	15,114	15,563	281	20	0
On site	t	0	0	0	0	0	0	0
Off site	t	34,147	3,170	15,114	15,563	281	20	0
Other	t	97,543	3,389	1,508	92,543	29	74	0
On site	t	10	0	0	10	0	0	0
Off site	t	97,533	3,389	1,508	92,533	29	74	0
<b>Non-recovered waste</b>	t	<b>37,744</b>	<b>2,502</b>	<b>9,378</b>	<b>25,405</b>	<b>426</b>	<b>34</b>	<b>0</b>
<b>Hazardous waste</b>	t	<b>2,393</b>	<b>983</b>	<b>754</b>	<b>588</b>	<b>61</b>	<b>7</b>	<b>0</b>
Landfilling	t	562	120	367	14	61	0	0
On site	t	0	0	0	0	0	0	0
Off site	t	562	120	367	14	61	0	0
Other disposal operations	t	1,831	863	387	574	0	7	0
On site	t	0	0	0	0	0	0	0
Off site	t	1,831	863	387	574	0	7	0
<b>Non-hazardous</b>	t	<b>35,351</b>	<b>1,518</b>	<b>8,624</b>	<b>24,817</b>	<b>365</b>	<b>27</b>	<b>0</b>
Landfilling	t	33,682	0	8,489	24,812	365	16	0
On site	t	28,843	0	4,581	24,262	0	0	0
Off site	t	4,839	0	3,908	550	365	16	0
Other disposal operations	t	1,669	1,518	136	4	0	11	0
On site	t	0	0	0	0	0	0	0
Off site	t	1,669	1,518	136	4	0	11	0
<b>By-products</b>	t	<b>42,395</b>	<b>3,342</b>	<b>39,053</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
Gypsum	t	39,053	0	39,053	n.a.	n.a.	n.a.	n.a.
Fly ash	t	3,071	3,071	n.a.	n.a.	n.a.	n.a.	n.a.
Slag	t	271	271	n.a.	n.a.	n.a.	n.a.	n.a.

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Recovered waste materials	%	83	82	86	81	68	84	n.a.
<b>DISTRIBUTION IN PROTECTED AREAS</b>								
High voltage distribution grid in protected areas	km	1,493	915	209	369	n.a.	n.a.	n.a.
Overhead	km	1,477	899	209	369	n.a.	n.a.	n.a.
Underground	km	16	16	0	0	n.a.	n.a.	n.a.
Medium voltage distribution grid in protected areas	km	16,858	9,196	1,776	5,886	n.a.	n.a.	n.a.
Overhead	km	15,717	8,208	1,632	5,877	n.a.	n.a.	n.a.
Underground	km	1,141	989	144	9	n.a.	n.a.	n.a.
Substations in protected areas	#	70	29	28	13	n.a.	n.a.	n.a.
<b>TRANSMISSION IN PROTECTED AREAS</b>								
High voltage transmission grid in protected areas	km	127	n.a.	n.a.	127	n.a.	n.a.	n.a.
Overhead	km	127	n.a.	n.a.	127	n.a.	n.a.	n.a.
Underground	km	0	n.a.	n.a.	0	n.a.	n.a.	n.a.
Substations in protected areas	#	0	n.a.	n.a.	0	n.a.	n.a.	n.a.
<b>FLOODED AREAS BY RESERVOIRS</b>	ha	2,919	2,585	329	5	n.a.	n.a.	n.a.
<b>ENVIRONMENTAL COMPLAINTS</b>	#	261	42	34	113	27	45	0

<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 plants in Spain.

<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> CO<sub>2</sub> emissions that would have occurred if the electricity generated by renewable energy sources were produced by thermal power plants. For each country, it is obtained by multiplying the net renewable energy production by the emission factor of the thermoelectric mix of that country.

<sup>7</sup> Includes only stationary combustion emissions.

<sup>8</sup> Other water: > 1,000 mg/L of total dissolved solids.

<sup>9</sup> Fresh water: ≤1,000 mg/L of total dissolved solids.

## Social indicators

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>EMPLOYMENT</b>								
Employees	#	13,211	5,716	2,119	3,328	1,041	476	531
Executive Board of Directors	#	5	5	0	0	0	0	0
Senior Management	#	386	182	88	30	52	7	27
Supervisors	#	1,323	520	291	189	192	62	69
Specialists	#	6,469	2,733	1,180	1,475	477	391	213
Technicians	#	5,028	2,276	560	1,634	320	16	222
Male employees	%	72.1	72.3	70.6	75.5	66.0	64.9	73.8
Female employees	%	27.5	27.7	29.4	24.5	28.9	35.1	26.2
Not declared employees	%	0.4	0.0	0.0	0.0	5.1	0.0	0.0
Females in management position	%	28	32	27	21	23	23	34
Senior management hired from the local community	%	88	99	81	90	75	86	67
Employees by types of contract	#	13,211	5,716	2,119	3,328	1,041	476	531
<b>Executive bodies</b>	#	<b>53</b>	<b>32</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>
Male	#	37	21	0	16	0	0	0
Female	#	16	11	0	5	0	0	0
Not declared	#	0	0	0	0	0	0	0
<b>Permanent workforce</b>	#	<b>13,024</b>	<b>5,628</b>	<b>2,116</b>	<b>3,307</b>	<b>972</b>	<b>470</b>	<b>531</b>
Male	#	9,416	4,084	1,495	2,495	643	307	392
Female	#	3,555	1,544	621	812	276	163	139
Not declared	#	53	0	0	0	53	0	0
<b>Fixed-term contracts</b>	#	<b>134</b>	<b>56</b>	<b>3</b>	<b>0</b>	<b>69</b>	<b>6</b>	<b>0</b>
Male	#	74	26	2	0	44	2	0
Female	#	60	30	1	0	25	4	0
Not declared	#	0	0	0	0	0	0	0
Employees by occupational contract	#	13,211	5,716	2,119	3,328	1,041	476	531
<b>Full-Time</b>	#	<b>13,205</b>	<b>5,711</b>	<b>2,119</b>	<b>3,328</b>	<b>1,041</b>	<b>475</b>	<b>531</b>
Male	#	9,526	4,131	1,497	2,511	687	308	392
Female	#	3,626	1,580	622	817	301	167	139
Not declared	#	53	0	0	0	53	0	0
<b>Part-time</b>	#	<b>6</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
Male	#	1	0	0	0	0	1	0
Female	#	5	5	0	0	0	0	0
Not declared	#	0	0	0	0	0	0	0
Employees with special needs	#	191	72	18	70	31	0	0
Male	#	110	44	11	36	19	0	0
Female	#	81	28	7	34	12	0	0
Not declared	#	0	0	0	0	0	0	0

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Foreign employees	#	480	91	114	18	56	84	117
New employees <sup>2</sup>	#	2,064	521	272	595	381	161	134
Direct admissions to permanent workforce	#	1,831	443	271	588	311	102	116
Admissions with fixed-term contracts	#	71	70	1	0	0	0	0
Other admissions	#	162	8	0	7	70	59	18
Male	#	1,216	302	175	437	118	113	71
Female	#	642	219	97	158	57	48	63
Not declared	#	206	0	0	0	206	0	0
<30 years	#	854	275	123	186	161	68	41
[30-50 years[	#	1,069	236	140	357	170	84	82
≥50 years	#	141	10	9	52	50	9	11
F/M new admissions rate	x	0.53	0.73	0.55	0.36	0.48	0.42	0.89
Employees leaving	#	1,553	474	135	487	251	49	157
Male	#	1,140	336	102	370	177	31	124
Female	#	400	138	33	117	61	18	33
Not declared	#	13	0	0	0	13	0	0
<30 years	#	333	76	29	90	70	7	61
[30-50 years[	#	779	144	70	290	149	40	86
≥50 years	#	441	254	36	107	32	2	10
Turnover	%	11.76	8.29	6.37	14.63	24.11	10.29	29.57
Male	%	11.97	8.13	6.81	14.74	25.76	10.03	31.63
Female	%	11.02	8.71	5.31	14.32	20.27	10.78	23.74
Not declared	%	24.53	n.a.	n.a.	n.a.	24.53	n.a.	n.a.
<30 years	%	14.40	8.00	12.83	15.33	25.27	6.14	38.36
[30-50 years[	%	9.80	4.70	5.63	12.09	25.82	12.23	25.22
≥50 years	%	15.31	14.91	5.54	31.20	27.12	5.71	32.26
Average age of workforce	years	41	43	44	38	37	37	35
Average age of new admissions	years	34	31	33	36	35	34	36
Average age of leaving	years	42	49	42	41	37	38	33
Average seniority of employees	years	12	16	14	9	4	3	2
Average seniority of leaving	years	12	23	12	10	3	4	1
Absenteeism rate	%	3.00	3.49	3.87	1.38	3.46	8.14	2.26
Employees entitled to parental leave	#	625	234	118	197	40	23	13
Male	#	397	153	79	118	24	12	11
Female	#	228	81	39	79	16	11	2
Not declared	#	0	0	0	0	0	0	0
Employees that took parental leave <sup>3</sup>	#	459	165	118	106	37	20	13
Male <sup>3</sup>	#	236	84	79	n.a.	24	9	11
Female	#	223	81	39	77	13	11	2
Not declared	#	0	0	0	0	0	0	0

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Retention rate of employees who took parental leave	%	98	100	94	99	98	96	100
Male <sup>3</sup>	%	98	100	96	n.a.	96	100	100
Female	%	99	100	97	99	100	91	100
Not declared	%	0	0	0	0	0	0	0
Annualized average base salary								
Male	€	3,631	3,227	4,467	1,877	10,623	4,206	3,265
Female	€	3,825	3,542	3,923	2,023	10,162	3,282	4,147
Not declared	€	4,232	0	0	0	4,232	0	0
Pay ratio by gender (F/M)	x	1.05	1.10	0.88	1.08	0.96	0.78	1.27
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	12.99	6.34	7.86	11.80	4.69	5.22	9.76
<b>TRAINING</b>								
Total hours of training	hours	309,935	140,908	86,147	49,191	22,451	9,831	1,407
<b>Sustainability</b>								
Environment	hours	1,648	886	483	94	19	165	1
Social and Economic	hours	225	194	5	1	0	24	1
Ethics	hours	5,714	1,037	582	3,620	349	32	93
Quality	hours	1,721	904	195	17	149	455	0
Languages	hours	20,212	3,356	14,050	1,285	299	1,221	0
Information systems	hours	28,900	6,927	16,888	2,002	1,428	1,467	186
Other	hours	251,515	127,604	53,942	42,172	20,206	6,466	1,126
Average total training	h/p	24	25	41	15	23	21	3
<b>Executive Board of Directors</b>	<b>h/p</b>	<b>5</b>	<b>5</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
Male	h/p	5	5	n.a.	n.a.	n.a.	n.a.	n.a.
Female	h/p	5	5	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Senior Management</b>	<b>h/p</b>	<b>60</b>	<b>50</b>	<b>118</b>	<b>20</b>	<b>39</b>	<b>136</b>	<b>7</b>
Male	h/p	61	51	112	21	42	136	6
Female	h/p	58	47	140	15	33	n.a.	9
<b>Supervisors</b>	<b>h/p</b>	<b>36</b>	<b>41</b>	<b>63</b>	<b>23</b>	<b>8</b>	<b>19</b>	<b>4</b>
Male	h/p	36	39	73	21	8	12	4
Female	h/p	34	44	38	29	10	36	5
<b>Specialists</b>	<b>h/p</b>	<b>18</b>	<b>18</b>	<b>33</b>	<b>10</b>	<b>14</b>	<b>19</b>	<b>3</b>
Male	h/p	19	19	35	10	16	20	3
Female	h/p	16	17	29	8	11	19	3
<b>Technicians</b>	<b>h/p</b>	<b>24</b>	<b>26</b>	<b>34</b>	<b>18</b>	<b>43</b>	<b>8</b>	<b>1</b>
Male	h/p	26	29	35	20	50	4	1
Female	h/p	14	11	29	11	14	9	2
Employees with training	%	100	91	100	100	100	87	100



2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>Contractors</b>								
Covered by certification	#	20,689	7,699	2,839	6,215	549	517	0
Covered by certification	%	81	100	100	49	37	99	0
<b>Work-related injuries<sup>4</sup></b>								
Recordable work-related injuries	#	161	55	33	64	9	0	0
High-consequence work-related injuries (excluding fatalities)	#	10	5	3	2	0	0	0
Fatal work-related injuries	#	5	3	0	2	0	0	0
<b>Work-related ill health</b>								
Recordable ill health	#	0	0	0	0	0	0	0
Fatalities as a result of ill health	#	0	0	0	0	0	0	0
Accidents with lost workdays <sup>7</sup>	#	105	50	23	32	0	0	0
Hours worked	hours	50,470,660	15,213,865	5,609,617	25,063,733	2,933,039	1,030,850	619,556
<b>Rates</b>								
Frequency rate <sup>9</sup>	Fr	2.18	3.48	4.10	1.36	0.00	0.00	0.00
Severity rate <sup>10</sup>	Sr	144	208	361	79	0	91	0
Overall severity rate <sup>11</sup>	oSr	749	1,412	361	566	0	91	0
<b>Work-related injuries<sup>5</sup></b>								
Recordable Frequency Rate	RFr	3.19	3.62	5.88	2.55	3.07	0.00	0.00
High consequence Frequency Rate	HFr	0.20	0.33	0.53	0.08	0.00	0.00	0.00
Fatal Frequency Rate	FFr	0.10	0.20	0.00	0.06	0.00	0.00	0.00
<b>EDP employees and contractors</b>								
<b>Rates</b>								
Frequency rate <sup>9</sup>	Fr	1.84	2.50	2.69	1.30	0.00	0.62	3.37
Severity rate <sup>10</sup>	Sr	118	164	239	66	45	59	33
Overall severity rate <sup>11</sup>	oSr	526	896	239	443	45	59	33
Near accidents	#	471	135	85	107	125	19	0
<b>People outside the activity</b>								
Electrical accidents involving third parties <sup>12</sup>	#	41	12	0	29	0	0	0
Fatal electrical accidents involving third parties <sup>13</sup>	#	14	2	0	12	0	0	0
<b>Representatives elected in H&amp;S Commissions</b>								
EDP employees represented <sup>14</sup>	%	75	87	56	77	44	66	16
Employee's representative	#	9,782	5,183	1,162	2,772	455	210	6
<b>H&amp;S TRAINING</b>								
<b>Employees</b>								
Awareness actions	#	5,398	405	724	3,328	784	145	12
Employees	#	36,152	8,423	6,335	13,101	7,549	673	71
Training hours	hours	176,500	28,112	21,239	115,553	8,888	2,457	251

2022	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>Contractors</b>								
Awareness actions	#	9,388	5,880	109	3,194	0	198	7
Employees	#	35,432	24,817	1,171	8,674	0	610	160
Training hours	hours	173,241	50,903	153	120,377	0	180	1,628

<sup>1</sup> Data including employees of Viesgo companies acquired in December by the EDP Group.

<sup>2</sup> Net values of the employees transfer from fixed-term contracts to permanent workforce.

<sup>3</sup> These values do not include information about male employees that took parental leave at South America.

<sup>4</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>5</sup> Includes accidents: fatal, absence from work (TTI – Temporary Total Incapacity), with TPI (Temporary Partial Incapacity) or PPI (Permanent Partial Incapacity); Without absence, with use of non-prescription medication at prescription strength; without absence, with use of wound closing treatment, such as suture, staples; without absence, administering immunization vaccines; without absence, with use of devices with rigid stays/others designed to immobilization; without absence, with physical therapy treatment; without absence, with loss of consciousness.

<sup>6</sup> An accident at work in which a serious injury has resulted and from which the worker does not recover, or may not fully recover, or from which it is not expected to recover in less than 6 months. Excludes fatal accidents.

<sup>7</sup> Accidents occurred at the place and working time or on a journey, with 1 or more days of absence and fatal accidents.

<sup>8</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>9</sup> Number of accidents at work in service with absence/fatalities, per million hours worked.

<sup>10</sup> Number of calendar days lost due to work accident per million hours worked, in the reference period.

<sup>11</sup> Number of calendar days lost due to work accidents per million hours worked, in the reference period, including days for permanent disability and a portion of 6,000 days for each fatal accident.

<sup>12</sup> Accidents involving persons outside EDP's activity, including fatal accidents.

<sup>13</sup> Accidents involving persons outside EDP's activity. It should be noted that in 2021, there were 14 fatal accidents, two of which had two victims.

<sup>14</sup> Numbers of EDP employees represented by the total number of EDP employees.

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>EMPLOYMENT</b>								
Employees	#	12,236	5,716	2,021	3,226	909	352	12
Executive Board of Directors	#	5	5	0	0	0	0	0
Senior Management	#	962	519	208	89	117	29	0
Supervisors	#	865	332	285	127	85	36	0
Specialists	#	5,276	2,414	961	1,144	463	282	12
Technicians	#	5,128	2,446	567	1,866	244	5	0
Male employees	%	73.3	73.4	72.4	75.7	71.1	61.7	75.0
Female employees	%	26.7	26.6	27.6	24.3	28.9	38.4	25.0
Not declared employees	%	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Females in management position	%	26	29	27	20	24	22	0
Senior management hired from the local community	%	92	100	76	89	64	67	0
Employees by types of contract	#	12,236	5,716	2,021	3,226	909	352	12
<b>Executive bodies</b>	<b>#</b>	<b>58</b>	<b>33</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>
Male	#	42	22	0	20	0	0	0
Female	#	16	11	0	5	0	0	0
Not declared	#	0	0	0	0	0	0	0
<b>Permanent workforce</b>	<b>#</b>	<b>12,126</b>	<b>5,650</b>	<b>2,010</b>	<b>3,201</b>	<b>909</b>	<b>344</b>	<b>12</b>
Male	#	8,898	4,153	1,454	2,423	646	213	9
Female	#	3,228	1,497	556	778	263	131	3
Not declared	#	0	0	0	0	0	0	0
<b>Fixed-term contracts</b>	<b>#</b>	<b>52</b>	<b>33</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>
Male	#	34	20	10	0	0	4	0
Female	#	18	13	1	0	0	4	0
Not declared	#	0	0	0	0	0	0	0
Employees by occupational contract	#	12,236	5,716	2,021	3,226	909	352	12
<b>Full-Time</b>	<b>#</b>	<b>12,189</b>	<b>5,710</b>	<b>1,990</b>	<b>3,226</b>	<b>909</b>	<b>342</b>	<b>12</b>
Male	#	8,967	4,193	1,460	2,443	646	216	9
Female	#	3,222	1,517	530	783	263	126	3
Not declared	#	0	0	0	0	0	0	0
<b>Part-time</b>	<b>#</b>	<b>47</b>	<b>6</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>
Male	#	7	2	4	0	0	1	0
Female	#	40	4	27	0	0	9	0
Not declared	#	0	0	0	0	0	0	0
Employees with special needs	#	179	71	17	67	21	3	0
Male	#	98	40	10	34	12	2	0
Female	#	81	31	7	33	9	1	0
Not declared	#	0	0	0	0	0	0	0

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Foreign employees	#	263	70	104	22	42	24	1
New employees <sup>2</sup>	#	1,599	471	229	434	316	137	12
Direct admissions to permanent workforce	#	1,497	405	215	418	316	131	12
Admissions with fixed-term contracts	#	60	44	11	0	0	5	0
Other admissions	#	42	22	3	16	0	1	0
Male	#	1,047	306	153	291	213	75	9
Female	#	552	165	76	143	103	62	3
Not declared	#	0	0	0	0	0	0	0
<30 years	#	749	302	86	186	123	51	1
[30-50 years[	#	777	157	129	236	168	76	11
≥50 years	#	73	12	14	12	25	10	0
F/M new admissions rate	x	0.53	0.54	0.50	0.49	0.48	0.83	0.33
Employees leaving	#	1,543	570	300	455	183	35	0
Male	#	1,180	430	256	333	136	25	0
Female	#	363	140	44	122	47	10	0
Not declared	#	0	0	0	0	0	0	0
<30 years	#	261	90	20	89	54	8	0
[30-50 years[	#	566	80	56	293	113	24	0
≥50 years	#	716	400	224	73	16	3	0
Turnover	%	12.61	9.97	14.84	14.10	20.13	9.94	0.00
Male	%	13.15	10.25	17.49	13.63	21.05	11.52	0.00
Female	%	11.13	9.20	7.90	15.58	17.87	7.41	0.00
Not declared	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<30 years	%	12.72	9.35	11.90	14.64	23.08	10.26	0.00
[30-50 years[	%	7.85	2.75	4.61	12.92	20.29	9.60	0.00
≥50 years	%	24.10	21.73	35.16	20.80	13.56	12.50	0.00
Average age of workforce	years	42	43	45	38	37	37	36
Average age of new admissions	years	33	30	35	33	34	35	36
Average age of leaving	years	47	53	55	39	36	37	0
Average seniority of employees	years	13	17	14	9	4	3	1
Average seniority of leaving	years	19	27	28	8	4	3	0
Absenteeism rate	%	2.66	3.02	2.95	2.00	2.50	n.d.	n.d.
Employees entitled to parental leave	#	504	218	60	165	48	13	0
Male	#	350	152	36	115	37	10	0
Female	#	154	66	24	50	11	3	0
Not declared	#	0	0	0	0	0	0	0
Employees that took parental leave <sup>3</sup>	#	320	149	60	50	48	13	0
Male <sup>3</sup>	#	167	84	36	n.d.	37	10	0
Female	#	153	65	24	50	11	3	0
Not declared	#	0	0	0	0	0	0	0

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
Retention rate of employees who took parental leave	%	94	100	100	82	100	100	0
Male <sup>3</sup>	%	100	100	100	n.d.	100	100	0
Female	%	94	100	100	82	100	100	0
Not declared	%	0	0	0	0	0	0	0
Annualized average base salary		0	0	0	0	0	0	0
Male	€	3,133	3,154	4,513	1,139	7,025	4,202	5,191
Female	€	3,316	3,527	3,963	1,232	6,905	3,359	3,893
Not declared	€	0	0	0	0	0	0	0
Pay ratio by gender (F/M)	x	1.06	1.12	0.88	1.08	0.98	0.80	0.75
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	11.13	6.12	5.55	20.05	5.09	3.66	2.23
<b>TRAINING</b>								
Total hours of training	hours	337,051	148,582	67,050	91,993	20,508	8,819	99
<b>Sustainability</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Environment	hours	3,513	1,160	1,457	448	75	372	1
Social and Economic	hours	414	363	31	0	0	20	0
Ethics	hours	6,892	2,749	1,402	1,699	871	162	8
Quality	hours	3,049	1,021	683	645	504	193	3
Languages	hours	15,937	3,220	10,358	1,486	0	874	0
Information systems	hours	37,687	22,078	10,296	3,273	941	1,078	20
Other	hours	269,560	117,990	42,824	84,442	18,117	6,120	67
Average total training	h/p	28	26	33	29	23	25	8
<b>Executive Board of Directors</b>	<b>h/p</b>	<b>0</b>	<b>0</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
Male	h/p	0	0	n.a.	n.a.	n.a.	n.a.	n.a.
Female	h/p	0	0	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Senior Management</b>	<b>h/p</b>	<b>23</b>	<b>20</b>	<b>39</b>	<b>14</b>	<b>9</b>	<b>34</b>	<b>0</b>
Male	h/p	24	22	41	14	10	36	0
Female	h/p	18	14	34	15	5	28	0
<b>Supervisors</b>	<b>h/p</b>	<b>55</b>	<b>89</b>	<b>38</b>	<b>41</b>	<b>18</b>	<b>25</b>	<b>0</b>
Male	h/p	53	84	37	41	20	23	0
Female	h/p	7	104	40	42	10	30	0
<b>Specialists</b>	<b>h/p</b>	<b>23</b>	<b>25</b>	<b>33</b>	<b>15</b>	<b>11</b>	<b>24</b>	<b>8</b>
Male	h/p	25	26	35	18	13	29	10
Female	h/p	20	24	30	12	7	17	4
<b>Technicians</b>	<b>h/p</b>	<b>28</b>	<b>19</b>	<b>28</b>	<b>37</b>	<b>53</b>	<b>16</b>	<b>0</b>
Male	h/p	30	20	29	40	63	0	0
Female	h/p	17	17	24	13	20	16	0
Employees with training	%	100	97	100	100	100	85	100



2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>Contractors</b>		0	0	0	0	0	0	0
Covered by certification	#	27,529	7,504	2,002	5,966	2,065	887	50
Covered by certification	%	82	100	80	29	100	100	100
<b>Work-related injuries<sup>4</sup></b>		0	0	0	0	0	0	0
Recordable work-related injuries	#	187	49	32	86	14	6	0
High consequence work-related injuries (excluding fatalities)	#	9	6	0	2	0	1	0
Fatal work-related injuries	#	7	1	1	5	0	0	0
<b>Work-related ill health</b>		0	0	0	0	0	0	0
Recordable ill health	#	0	0	0	0	0	0	0
Fatalities as a result of ill health	#	0	0	0	0	0	0	0
Accidents with lost workdays <sup>7</sup>	#	132	45	18	57	6	6	0
Hours worked	hours	66,388,297	14,830,005	4,945,024	40,648,122	4,128,270	1,787,334	49,542
<b>Rates</b>		0	0	0	0	0	0	0
Frequency rate <sup>9</sup>	Fr	2.09	3.10	3.84	1.53	1.45	3.36	0.00
Severity rate <sup>10</sup>	Sr	109	225	221	41	147	316	0
Overall severity rate <sup>11</sup>	oSr	753	680	1,435	779	143	316	0
<b>Work-related injuries<sup>5</sup></b>		0	0	0	0	0	0	0
Recordable Frequency Rate	RFr	2.82	3.30	6.47	2.12	3.39	3.36	0.00
High consequence Frequency Rate	HFr	0.14	0.40	0.00	0.05	0.00	0.56	0.00
Fatal Frequency Rate	FFr	0.11	0.07	0.20	0.12	0.00	0.00	0.00
<b>EDP employees and contractors</b>		0	0	0	0	0	0	0
<b>Rates</b>		0	0	0	0	0	0	0
Frequency rate <sup>9</sup>	Fr	1.79	2.38	2.59	1.30	1.54	3.53	0.00
Severity rate <sup>10</sup>	Sr	99	178	142	35	164	252	0
Overall severity rate <sup>11</sup>	oSr	579	455	849	663	165	252	0
Near accidents	#	565	105	88	183	169	19	1
<b>People outside the activity</b>		0	0	0	0	0	0	0
Electrical accidents involving third parties <sup>12</sup>	#	39	19	0	20	0	0	0
Fatal electrical accidents involving third parties <sup>13</sup>	#	18	6	0	12	0	0	0
<b>Representatives elected in H&amp;S Commissions</b>		0	0	0	0	0	0	0
EDP employees represented <sup>14</sup>	%	81	86	41	61	51	75	22
Employee's representative	#	310	70	11	147	71	11	1
<b>H&amp;S TRAINING</b>								
<b>Employees</b>		0	0	0	0	0	0	0
Awareness actions	#	1,501	186	484	154	594	81	2
Employees	#	33,622	11,493	4,399	5,243	12,136	341	10
Training hours	hours	92,357	9,534	15,126	55,201	10,581	1,905	9

2021	UN	GROUP	PORTUGAL	SPAIN	SOUTH AMERICA	NORTH AMERICA	REST OF THE EUROPE	APAC
<b>Contractors</b>		0	0	0	0	0	0	0
Awareness actions	#	5,845	4,510	58	1,132	0	144	1
<b>Employees</b>	#	24,684	9,283	1,871	12,965	0	558	7
Training hours	hours	58,870	2,218	116	56,334	0	146	56

<sup>1</sup> Data including employees of Viesgo companies acquired in December by the EDP Group.

<sup>2</sup> Net values of the employees transfer from fixed-term contracts to permanent workforce.

<sup>3</sup> These values do not include information about male employees that took parental leave at South America.

<sup>4</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>5</sup> Includes accidents: fatal, absence from work (TTI – Temporary Total Incapacity), with TPI (Temporary Partial Incapacity) or PPI (Permanent Partial Incapacity); Without absence, with use of non-prescription medication at prescription strength; without absence, with use of wound closing treatment, such as suture, staples; without absence, administering immunization vaccines; without absence, with use of devices with rigid stays/others designed to immobilization; without absence, with physical therapy treatment; without absence, with loss of consciousness.

<sup>6</sup> An accident at work in which a serious injury has resulted and from which the worker does not recover, or may not fully recover, or from which it is not expected to recover in less than 6 months. Excludes fatal accidents.

<sup>7</sup> Accidents occurred at the place and working time or on a journey, with 1 or more days of absence and fatal accidents.

<sup>8</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>9</sup> Number of accidents at work in service with absence/fatalities, per million hours worked.

<sup>10</sup> Number of calendar days lost due to work accident per million hours worked, in the reference period.

<sup>11</sup> Number of calendar days lost due to work accidents per million hours worked, in the reference period, including days for permanent disability and a portion of 6,000 days for each fatal accident.

<sup>12</sup> Accidents involving persons outside EDP's activity, including fatal accidents.

<sup>13</sup> Accidents involving persons outside EDP's activity. It should be noted that in 2021, there were 14 fatal accidents, two of which had two victims.

<sup>14</sup> Numbers of EDP employees represented by the total number of EDP employees.

## Economic indicators

EDP GROUP	UN	2022	2021
Economic value generated	000€	22,660,644	16,479,886
Economic value distributed	000€	20,375,387	14,344,023
Economic value accumulated	000€	2,285,257	2,135,863
RDI	000€	186,004	102,794
Energy efficiency and supplementary energy services revenues <sup>1</sup>	000€	2,035,806	1,604,454
Energy efficiency services revenues	000€	491,013	261,415
Supplementary energy services revenues <sup>2</sup>	000€	1,544,793	1,343,039
Support from public authorities <sup>3</sup>	000€	58,389	63,211
Fines and penalties	000€	11,301	7,276
Environmental matters <sup>4</sup>	000€	1,111,545	422,438
Investments	000€	105,490	88,223
Expenses	000€	1,006,055	334,215
<b>Social matters</b>			
Personal costs	000€	684,355	574,541
Employee benefits	000€	86,445	91,918
Direct training investment	000€	3,788	3,704
Direct training investment per employee	€/p	287	303
HC ROI	€/p	6.51	5.92

<sup>1</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>2</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>3</sup>Support from public authorities both recognised and not recognised in the income statement.

<sup>4</sup>More information available on the Note 48 in Part II – Financial Statements of this report.

