

edp

Climate Transition Plan

We choose Earth

# This document

In 2022, EDP published its Commitment to Climate Transition, summarizing its goals and targets towards a low carbon economy, in line with the ambition of the Paris Agreement to limit the increase in global average temperature to 1.5°C, against pre-industrial levels.

This document sets a baseline of EDP's strategy for this decade, supported mainly by the business plan 23–26 under a broader pathway for a net zero goal in 2040. As a key player in the power sector, EDP assumes its responsibility to actively contribute to the entire decarbonization of the sector by 2040, according to the IEA Net Zero scenarios needed to be complied to reach the 1.5°C degree pathway for the sector.

Framed by this context, **EDP commits to achieve Net Zero by 2040, reducing in an absolute term its CO<sub>2</sub> emissions by 90% against 2020 base year, including Scope 1, 2 and 3.**

Along these pages, EDP's strategy is translated into climate metrics and targets. The overall climate governance in place is synthesized and the strategic levers are identified to align implementation with the overall climate commitments. The overall initiatives ongoing are consolidated by an internal Net Zero Program to accelerate and support the pathway ahead.

## Methodologies and frameworks

### STANDARDS USED

- TCFD: Guidance on Metrics, Targets and Transition Plans
- GHG Protocol Corporate Accounting and Reporting Standard
- SBTi Net-Zero Standard
- CDP Technical Note: Reporting on Transition Plans
- Transform to Net Zero: Climate Transition Action Plans
- Climate Action 100+

International standards on carbon accounting methodologies and metrics are tentatively converging to a common ground. However, those standards aren't set in stone and comparability of the information disclosed still poses considerable challenges. To a better understanding of this document, the main methodologies and external references used are

listed below, and a glossary is included in the end of the document. Progress is also tracked against internationally recognized frameworks and regulations such as CDP, SDFR, GRI Standards, SASB, TCFD and the EDP Green Finance Framework (per ICMA GBP 2021, LMA GLP 2021 rules and EU Taxonomy).

## Revision

EDP will report on the progress of this plan quarterly, for key CO<sub>2</sub> indicators through its ESG Report, and annually on the Integrated Report with a broader stakeholder approach. The company also maintains an institutional website with a core sustainability area, where information on Climate strategy is being updated regularly. EDP will review this Plan in each Business Plan Cycle.

## Legal disclaimer

This document contains statements regarding the perspectives, objectives, and goals of EDP, concerning ESG (Environmental, Social & Governance) issues, including with respect to energy transition, carbon intensity reduction or carbon neutrality. An ambition expresses an outcome desired or intended by EDP, it being specified that the means to be deployed may not depend solely on EDP.

Commitments undertaken are based upon various assumptions, supported by historical operating trends, data contained in the Company's records and other data available from third parties. Although the Company believes these assumptions were reasonable when made, they are inherently subject to significant known and unknown risks, uncertainties, contingencies, and other important factors beyond company's management control. As such, these forward-looking statements are subject to change without notice unless required by applicable law.

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# Message



Miguel Stilwell D'Andrade Chairman of the Executive Board of Directors



Miguel Setas Member of the Executive Board of Directors

## Dear shareholders and other interested stakeholders,

The science has been telling us year after year that we need to halve our emissions by 2030 and reach carbon neutrality by 2050 to secure the raise temperature within the 1.5°C limit by end of century, if we are to avoid further severe disruptions of the climate system that sustain our life on earth.

We are living an unprecedented energy crisis with global implications. Short-term measures to address energy security that are not aligned with a long-term energy transition will delay us on the path we need to pursue: a decarbonized energy sector by 2040.

The energy transition through renewable energy and electrification of the economy stands at the heart of the climate transition.

EDP's prioritization of investment in renewable generation started in 2006, through the anticipation of major trends in the energy market and the support to the vision of a society capable of reducing CO<sub>2</sub> emissions, by replacing thermal with renewable energy, decentralizing generation, promoting smart grids and energy storage and encouraging the demand for renewable electricity.

Recognizing the climate emergency, EDP was one of the front runners undertaking the United Nation's challenge during the Climate Summit in New York in 2019. We committed to reduce emissions and to align our business strategy with the aim to limit global temperature raise to 1.5°C.

Ramping up that commitment, EDP incorporated in its Updated Strategic Plan 2021-2025 the ambitious goals to be coal free by 2025 and carbon neutral by 2030, supported by a strong investment in acceleration of renewables installed capacity, smart grids, and decarbonized services for our customers.

We are committed to reinforce our ambition even further to reach Net Zero by 2040, by including our scope 3 emissions in our targets. Our global carbon footprint today is about 50% lower than it was in 2015, as a result of our efforts to decarbonize our operations in our value chain. With a new baseline year set for 2020, we aim to reach net-zero greenhouse emissions across the value chain by 2040, with ambitious mid-term targets by 2030. These targets have been approved by SBTi under the Net Zero Standard.

To support this ambition, EDP launched an internal Net Zero Acceleration Task Force to promote the engagement of the Groups' efforts in a comprehensive way, deep diving on the challenges ahead, identifying the right levers to get us there, while engaging with the supply chain, partners, and global community, to drive a real and just transformation.

In our updated Business Plan for 2023-2026 we continue to lead the decarbonization of the energy sector by further reinforcing our investments in renewables with €25 Bn energy transition CAPEX and with annual gross additions of 4.5 GW to reach an ambitious target of 50GW renewable additions by 2030, while continuing our fast adoption of innovative solutions.

The present Climate Transition Plan reinforces our commitments by clarifying the challenges that must be met and the road we need to follow to curb all our sources of direct and indirect emissions and activate the right levers to achieve our targets, while managing climate risks and transparently reporting our progress towards Net Zero.

We cannot do it alone. We need all to join our efforts and engage actively with all our stakeholders.

**At EDP we will continue to take our responsibility and drive today for a better tomorrow!**



**Miguel Stilwell d'Andrade**

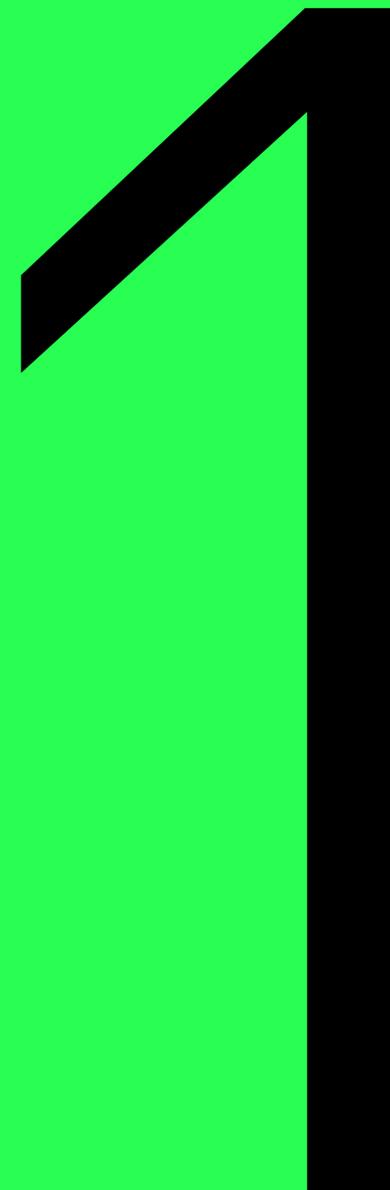


**Miguel Setas**

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# Climate emergency



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# Climate emergency

## A decisive decade

The physical and socioeconomic impacts of climate change are being felt around the world with increasing frequency and the climate disasters are becoming more extreme. In 2022 the CO<sub>2</sub> emission rates are set to return to pre-pandemic levels<sup>1</sup>, but despite the current energy crisis originated by Russia’s invasion of Ukraine, the rise of CO<sub>2</sub> emissions in 2022 was limited by major deployments of renewable energy and electric vehicles<sup>2</sup> around the world, with the power sector stepping up in its crucial role to decarbonize the world.

### CLIMATE CHALLENGES



Source: Emissions Gap Report 2022 and World Meteorological Organization

To accelerate decarbonization and respond to the 2030 ambition, bold steps continue to be needed, with good examples coming from Europe and USA:

- building up on the European Green Deal plan to make Europe climate neutral by 2050 and the “Fit for 55” package, in 2022 EU announced the REPowerEU plan to transform Europe’s energy system through energy savings, diversification of energy

- supplies and accelerated roll-out of renewable energy to replace fossil fuels in homes, industry and power generation
- USA’s Inflation Reduction Act (IRA) of 2022 is set to spur a clean energy transition through additional zero and low-carbon grid resources and wind and solar power generation growth, resulting in 340 million tons of annual carbon emission reductions from the power sector<sup>3</sup>.

Simultaneously, the Science Based Targets initiative continues pushing companies to commit to climate action towards the 1.5°C goal and to decarbonization. There are currently more than 4.000 companies already taking action. Of those, more than 2.000 have targets aligned with science and more than 1.600 have net-zero commitments. Recognizing the importance of the power sector, SBTi requires action aligned with a sector specific net-zero pathway by 2040.

To overcome this unprecedented challenge, there must be a coordinated commitment from all countries, involving policymakers, businesses, and consumers. The challenge is even bigger with the rise of social and geopolitical instability, growing uncertainty, global recession, and black swan crises. With this possibly hindering the fulfilment of NDCs, it’s up to the private sector to take centre stage in the climate agenda. Business sector leadership is therefore critical to address the climate emergency and accelerate the transition to a carbon-neutral economy. Businesses around the world are already scaling innovative solutions, investing in ESG, and presenting strong plans for urgent action in line with 1.5°C and net-zero ambition.

## The crucial role of the energy sector

For the world to achieve Net-Zero by 2050, the current pace of the global economy decarbonization pathway needs to increase about five-fold, with the power sector playing a key role in this transition.

Currently, electricity generation represents 36% of total global CO<sub>2</sub> emissions, with the Net-Zero scenario of the International Energy Agency (IEA) pointing to decarbonization by 2035 in advanced economies and 2040 for emerging markets and developing economies, i.e., 10 years ahead of other sectors of activity.

Also, according to the IEA, world electricity demand will more than double between 2020 and 2050, with the electrification of consumption based on electricity produced from renewable

<sup>1</sup> United in Science: We are Heading in the Wrong Direction, UNFCCC, 13 September 2022

<sup>2</sup> Defying expectations, CO<sub>2</sub> emissions from global fossil fuel combustion are set to grow in 2022 by only a fraction of last year’s big increase, IEA, 19 October 2022

<sup>3</sup> Clean electricity tax credits in the Inflation Reduction Act will reduce emissions, grow jobs, and lower bills, NRDC, September 2022

sources playing a crucial role in the reduction of CO<sub>2</sub> emissions, contributing around 20% of the necessary global reduction by 2050. The greatest energy conversion will take place:

- in industry, with the use of electricity for low and medium temperature heat production and the recycling of scrap steel
- in transport, where the share of electricity consumption will rise from 2% today in 2020 to 45% in 2050. 2030 will see the sale of electric vehicles exceed 60% and by 2050 light fleets will be almost entirely electric
- in buildings, where intensive consumers of electricity will represent about 55% of the total consumption of electricity worldwide.

As the aftermath of the global energy crisis that marked the year 2022, the fragilities of the energy system reinforced the need for change and highlighted the importance of the key pillars of decarbonization.

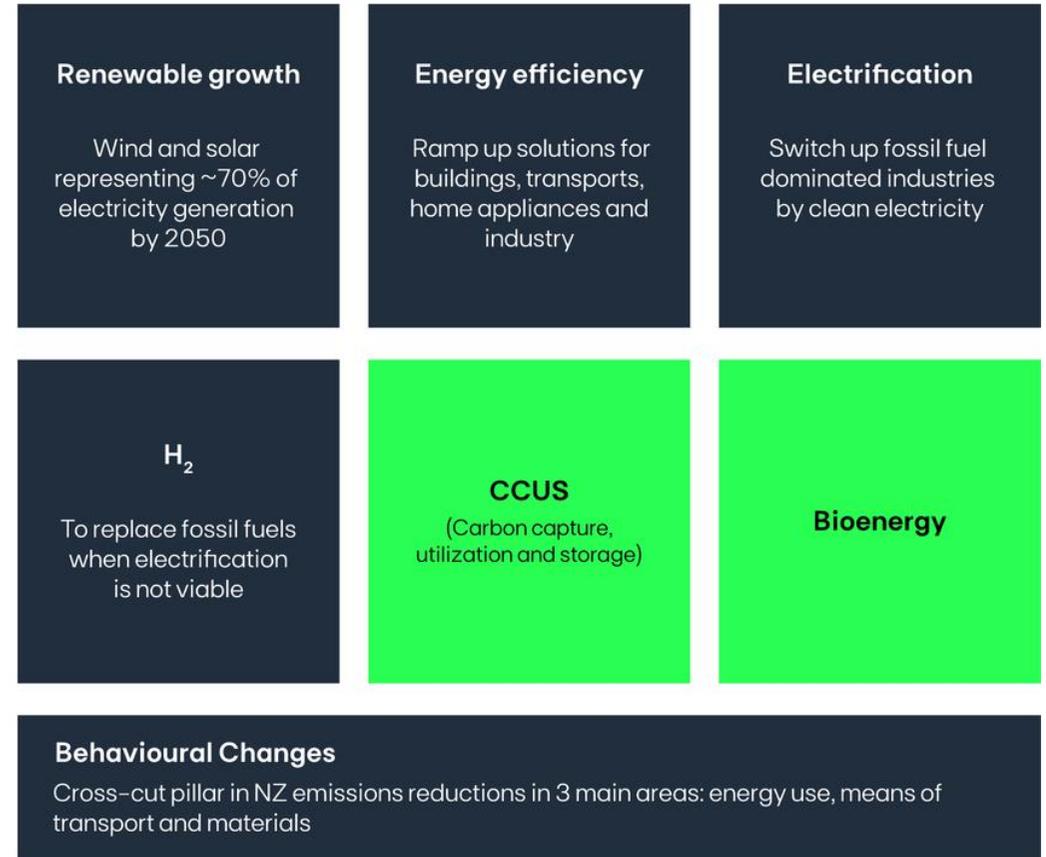
The electricity sector will thus have to rely increasingly on renewable energies, complemented by the rapid abandonment of coal and the decarbonization of natural gas, while energy supply remains secure and affordable for consumers and businesses. However, global decarbonization efforts will have to be complemented by investment in alternative low-carbon technologies, especially for hard-to-abate uses.

The future power system will 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 and battery storage, interconnections, hydrogen, and demand-side response.

Digitalization also offers several opportunities for utilities throughout the entire value chain, fostering energy transition. Operational efficiency can be maximized both in generation (e.g., predictive maintenance, automated work) and networks (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.

To keep up with the decarbonization goals, innovation will be essential, as the world needs 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.

## KEY PILLARS OF THE DECARBONIZATION PATHWAY



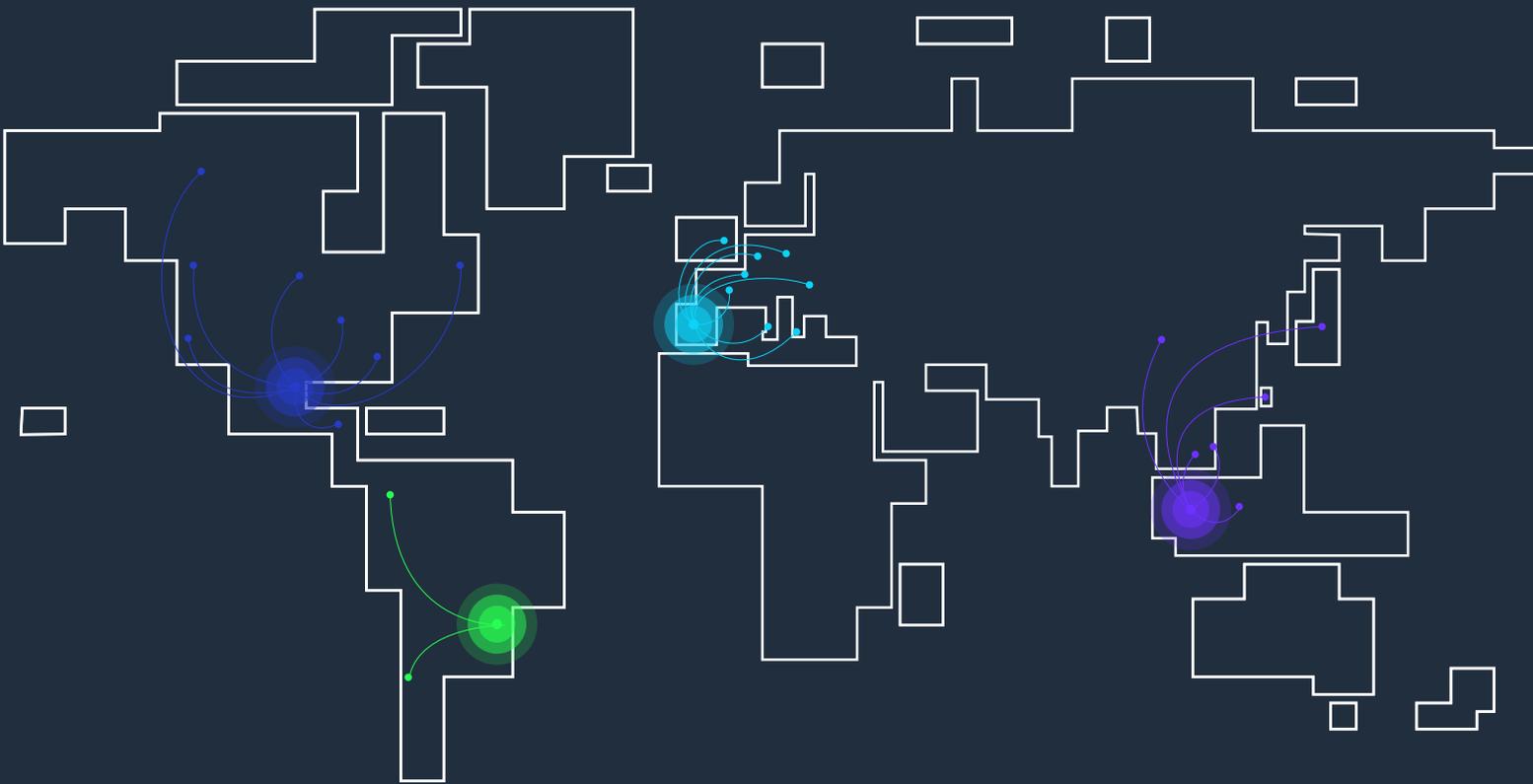
- On EDP's Climate Transition Plan scope of action
- Not on EDP's Climate Transition Plan scope of action

Figure adapted from IEA net Zero Report

# EDP

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**Europe**

4,728 MW	284,733 km	631,474
10,795 MW	4,908,535	14.8 MtCO <sub>2</sub> e

**APAC**

711 MW	0.7 MtCO <sub>2</sub> e
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**North America**

6,650 MW	0.6 MtCO <sub>2</sub> e
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**South America**

720 MW	98,240 km	
2,572 MW	3,586,216	3.1 MtCO <sub>2</sub> e

Thermal Capacity	Networks	Gas clients
Renewable Capacity	Electricity clients	S1+S2+S3 Emissions

# EDP in the world

4  
strategic hubs

13,211  
employees

74%  
renewable energy generation

19.2  
Total emissions (MtCO<sub>2</sub>e)

## Leading towards a Net-Zero world

As a leading global player in the energy sector, EDP is working to decarbonize its business for a climate-positive world, aware of the Climate emergency the world is facing.

EDP will do it by accelerating renewable energy, decarbonizing operations and by empowering communities, protecting the planet, and joining partners for an impactful transformation, driven by a strong ESG culture.

After a renewed ambition on the Sustainability Strategy in 2022 with a comprehensive ESG Masterplan EDP went further to fully integrate the complexity of the journey ahead. To support decarbonization efforts EDP launched an internal work on a Net Zero Acceleration Task Force (NZATF) deep diving on the challenges ahead, identifying the right levers, while engaging with the supply chain, partners, and global community, to drive a real and just transformation aligned with best practices and standards.

The Net Zero Acceleration Program (NZAP) aggregates a set of core initiatives to directly curb the company's emissions that will allow the tracking of the decarbonization performance, potentiating top management involvement over time in a responsive way and prioritized a set of enablers initiatives that will support the transition in a collaborative and transparent way. A number of initiatives were prioritized in the NZAP and integrated into ESG Masterplan as part of broader sustainability efforts.

This Climate Transition Plan is supported by an integrated ESG Masterplan roadmap and the new BP23-26. All dimensions are critical for the road ahead:

- decarbonization efforts supported by transparent emissions accounting
- embedded social aspects in the transition
- nature positive impacts
- decarbonized supply chain with ESG Committed Suppliers
- climate Governance and transparency
- Net-Zero mindset on knowledge and behaviours.

## EDP'S MISSION IN THE CLIMATE TRANSITION

### Mission

**Decarbonize for a climate-positive world**

Coal Free by 2025      All Green by 2030      Net Zero by 2040

### Drivers

<p><b>Empowering our communities</b> for an active role in the transition</p>	<p><b>Protecting our planet</b> contributing to its regeneration</p>	<p><b>Engaging our partners</b> for an impactful transformation</p>
<p>~200M€ in social investments &gt;3000 new hires by 2026</p>	<p>100% biodiversity net gain in new projects by 2030 90% waste recovery along the value chain by 2026</p>	<p>100% suppliers compliant with ESG Due Diligence of purchases volume aligned with EDP's ESG goals by 2026 90%</p>

### ESG Culture

Climate Governance

Strategy and risk management

Climate Transparency

Climate Policy & Advocacy

Net Zero Culture

# Climate pathway



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# Climate pathway

## Carbon footprint

EDP's global emissions are 48% less today than they were in 2015, showing the continuous process of transition to a low-carbon operation. However, for a more accurate representation on EDP's organization and operation, the baseline for the company's targets was set on 2020.

In 2020, half of EDP's emissions where from scope 3, of which 99% were from non-commodity supply chain, coal, gas, and electricity retail. On an operational level, more than half of EDP's emissions (~11 MtCO<sub>2</sub>e) came from thermal generation, materialized in both scope 1 (stationary combustion) and scope 3 (category 3).

In 2022, despite the decommission of Sines' coal-fired power plant, scope 1 emissions saw a slight increase due to a higher operation of Spanish coal-fired power plants, unavoidable in the current energy crisis context. Propelled by the acquisition of Sunseap, non-commodity supply chain emissions increased by 22%. However, EDP's retail operation materialized less emissions, enough to result in a 3% scope 3 reduction vs 2020.

### TOTAL EMISSIONS (MtCO<sub>2</sub>e)

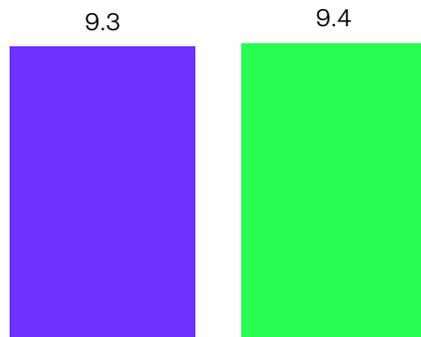
■ 2020

■ 2022

19.5

19.2

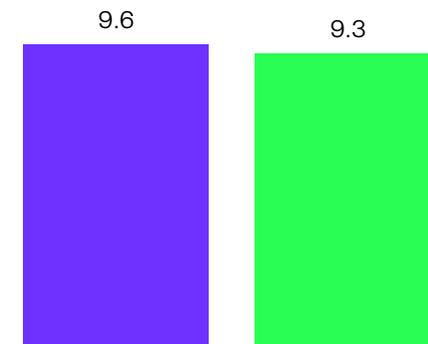
### Total Scope 1 emissions (MtCO<sub>2</sub>e)

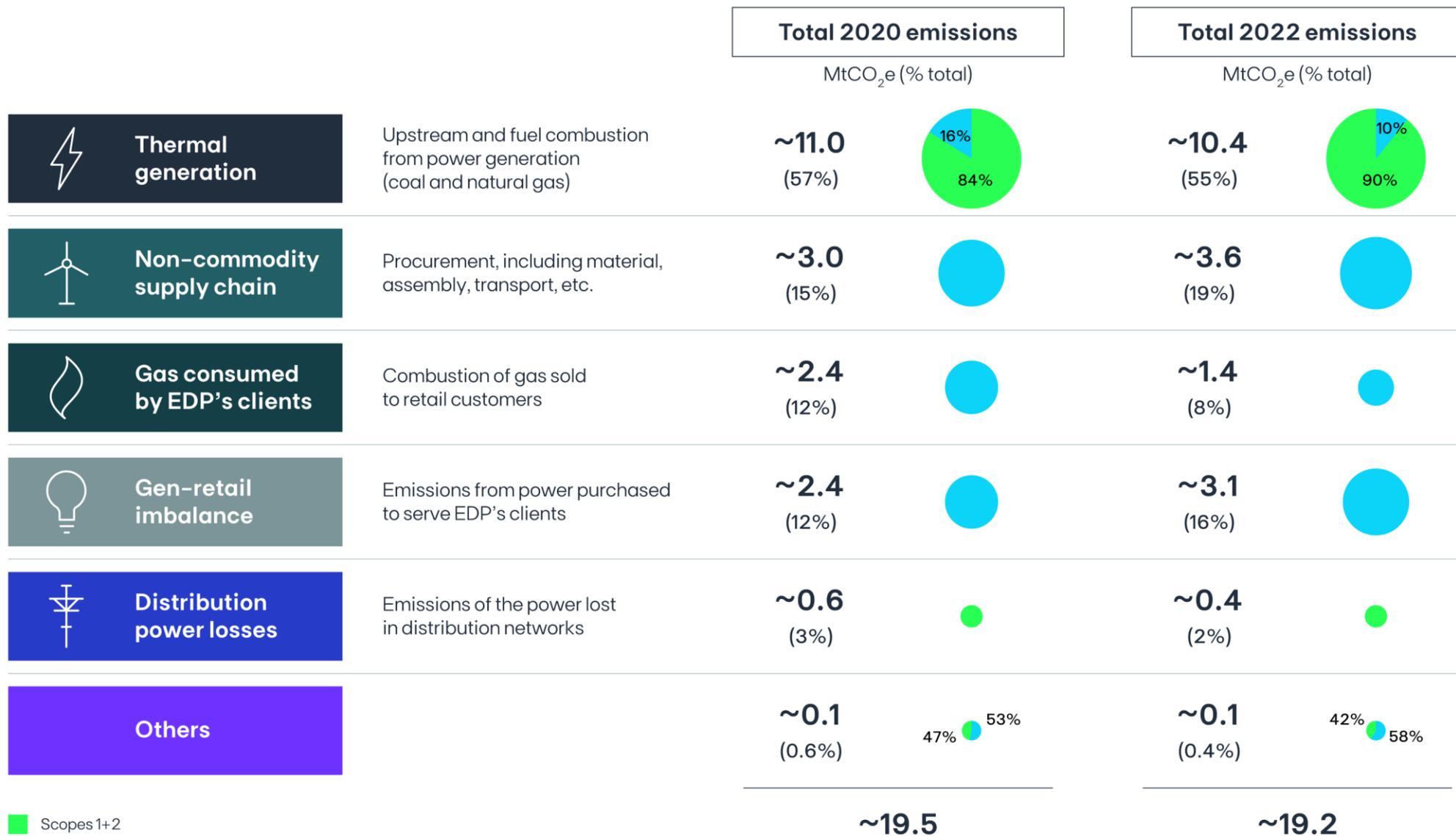


### Total Scope 2 emissions (MtCO<sub>2</sub>e)



### Total Scope 3 emissions (MtCO<sub>2</sub>e)



**MAIN EMISSION SOURCES**

 Scopes 1+2

 Scope 3

## Science-based Net-Zero targets

### NET-ZERO MAIN REDUCTION TARGETS AND ACTIONS



Medium term (2030) SBTi targets	Long term (2040) SBTi targets	Levers	Actions
S1+S2 [intensity] 95%	S1+S2 [intensity] 96%	<ul style="list-style-type: none"> <li>0% thermal generation</li> </ul>	<ul style="list-style-type: none"> <li>Exit from coal-fired power plant generation by 2025</li> <li>Exit from gas-fired power plant generation by 2030</li> </ul>
S1+S3C3 [intensity] 80%	S1+S3C3 [intensity] 95%	<ul style="list-style-type: none"> <li>Increase renewable generation</li> </ul>	<ul style="list-style-type: none"> <li>~32 GW of renewable installed capacity by 2026</li> <li>0.1GW of H<sub>2</sub> electrolyzers by 2026</li> <li>Improve regulatory landscape to enable additional renewable capacity</li> </ul>
S3 [absolute] 45%	S3 [absolute] 90%	<ul style="list-style-type: none"> <li>Distribution power losses emissions reduction</li> </ul>	<ul style="list-style-type: none"> <li>Continue investment on reduction of distribution technical losses</li> <li>100% smart meters installed in Iberia by 2025</li> <li>Support systems' decarbonization targets</li> <li>Advocate for efficient incentives for reduction of distribution power losses</li> </ul>
S3C11 [absolute] 45%	S3C11 [absolute] 90%	<ul style="list-style-type: none"> <li>Reduce emissions from gen-retail imbalance</li> </ul>	<ul style="list-style-type: none"> <li>Investment in PPAs for renewable supply to clients</li> <li>Cover part of the client portfolio with EACs (I-RECs, GO,...)</li> <li>Increase offer of green offers in electricity retail</li> </ul>
		<ul style="list-style-type: none"> <li>Lower supply chain emissions</li> </ul>	<ul style="list-style-type: none"> <li>Continue the work on green(er) procurement</li> <li>Support suppliers' decarbonization path</li> <li>Work with suppliers for product specific emissions data</li> <li>Incentivize greener supply chains globally</li> </ul>
		<ul style="list-style-type: none"> <li>Minimize Natural Gas retail emissions</li> </ul>	<ul style="list-style-type: none"> <li>Optimize gas retail portfolio</li> <li>Negotiate increase of incentives for consumers' electrification</li> <li>Engage with gas consumers to promote gas alternatives/electrification</li> </ul>

■ Direct action    
 ■ External/Policy/Avocacy

Mid-term and Long-term targets: reduction compared with 2020 base year.

In 2019, EDP committed to setting a CO<sub>2</sub>e emission reduction target, consistent with what climate science defines as necessary to limit global warming to the most demanding level of the Paris Agreement. In 2022, EDP raised the ambition of its decarbonization goals by revising its targets under the new SBTi Net-Zero Standard, already approved in early 2023. **The overall goal is now reducing 90% of scope 1, 2 and 3 emissions by 2040** vs. 2020 and offset all remaining emissions.

From the NZATF, six main levers were identified to accelerate the implementation of EDP's Net-Zero targets, covering the main business areas, with a set of actions identified to reduce CO<sub>2</sub> emissions. Since global decarbonization will require global and collaborative efforts, EDP also defined external policy and advocacy areas to expedite Net-Zero goals.

### Net-Zero action plan

For the world to achieve carbon neutrality by 2050, the decarbonization of the electricity sector needs to happen by 2035 in advanced economies and 2040 for emerging markets and developing economies<sup>4</sup>.

EDP was one of the first power sector companies worldwide with a strategy aligned with the necessary CO<sub>2</sub> emissions' reduction trajectory required by the Paris Agreement. This ambition was supported by the reduction of EDP's thermal generation in recent years and an increasing energy generation from renewable sources.

Downstream, EDP offers its customers low carbon energy solutions and promotes technological innovation to accelerate the climate transition, contributing to the electrification of consumption and energy efficiency improvement and to overcome the main barriers still existent along this challenge path.

The new business plan 2023-2026 provides the level of investment and strategic decisions built upon the path EDP already started and cementing its Net-Zero decarbonization path.

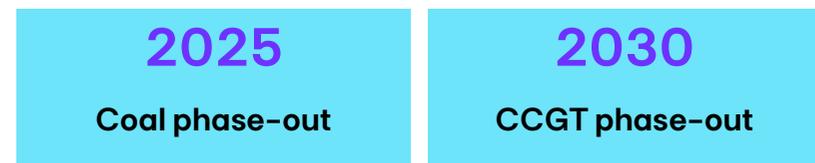
### Zero thermal generation

The cornerstone of EDP's decarbonization path lies in the ambition for clean generation. In 2020, over 50% of EDP's emissions came from thermal generation and the goal is to reduce these emissions to zero by 2030. For that, EDP plans to execute the progressive

decommissioning of the Group's coal-fired power plants by 2025. The first step of this plan was carried out during 2020 with the decommissioning of Sines' coal plant, ceasing EDP's coal generation in Portugal. EDP continues committed to phasing out its ownership of Pecém power plant in Brazil. EDP's remaining coal-fired power plants operation occurs in the Spanish market. The decommissioning processes of Soto 3, Los Barrios and Aboño 1 are expected to be concluded until 2025, and Aboño 2 will be converted to a gas-fired power plant, guaranteeing the security of the electric system in the Asturias region.

Regarding CCGT power plants, EDP will work on the feasibility of multiply options such as decommissioning, repurposing/conversion or deconsolidation.

### PHASE-OUT THERMAL GENERATION



### Increase renewable generation

Today, 79% of EDP's installed capacity is of renewable origin. By 2030, EDP has committed to increase this share to 100%. Clean generation is EDP's greatest contribution to the climate transition, accounting for 85%<sup>5</sup> of the Group's total investment in the 2023-2026 period. This investment includes wind, solar, green hydrogen, and energy storage technologies.

With a renewable installed capacity of 22 GW<sup>6</sup> by 2022YE, EDP plans to deploy 4.5 GW<sup>7</sup> per year until 2026, reaching 33 GW installed capacity, predominantly based on wind and solar.

<sup>4</sup> Net Zero by 2050, A Roadmap for the Global Energy Sector, IEA, 2021

<sup>5</sup> Renewables, Clients & EM, including financial investments

<sup>6</sup> EBITDA + Equity MW

<sup>7</sup> Gross additions

**RENEWABLE GOALS BY 2026**



A dedicated business unit has been set up to promote **green hydrogen projects**, either at scale, associated with centralized generation, or in smaller units for self-consumption. The development of different pilots has been allowing EDP to strengthen internal knowledge and define lines of investment for the future.

Currently, EDP has already a project in operation in Brazil (1.25 MW in Pecém), which started to produce renewable hydrogen in December 2022, and another under construction in Portugal (1.45 MW in Ribatejo). There are also several other projects under development, mainly in the USA, Brazil and the Iberian Peninsula, the latter with the particularity of being a region where EDP is also closing coal-fired power stations. Synergies are sought between this new line of growth and sites with coal power plants in the decommissioning phase, as a contribution to the Group's ongoing Just Transition strategy.

An example is in the Sines region, Portugal, where the coal plant was closed in 2020 and a 100 MW hydrogen project is already under development, as part of an extended consortium financed by Horizon 2020. Similar projects are being developed in Spain, with 100 MW projects in Aboño and Los Barrios having been granted IPCEI status (Important Projects of Common European Interest) by the European Commission.

**By 2025, the Group expects to have 250 MW of electrolyzers, accelerating the business from there to reach 1.5 GW in 2030.**

Complementary to the increase of renewables in the electric system and to maintain a flexible, optimized, and efficient electric system, the ability to store energy is as important as the ability to generate electricity.

EDP already has **2.3 GW of pumped storage**, a solution provided by the hydroelectric plants, in a strong investment by EDP in Portugal. It allows EDP to store water in periods of excess renewable generation and to respond to situations of need in the short term.

Battery energy storage systems appear as a complementary solution. Although considered important technological facilitators, improvements in performance must be achieved to increase competitiveness, with reduced costs and sustainability. The different solutions under development vary in their location in the electricity system and may exist in grid-scale systems for load management purposes, with the hybridization of wind and solar farms, or on the customer's side, for private consumption including, or not, the delivery of electricity to the distribution network.

Given the importance of this issue for the success of the climate transition, energy storage is a key area for EDP with an internal unit dedicated exclusively to the development of storage solutions. Complementarily, it is also one of the areas defined by the Group's Innovation Strategy, which has different projects underway, to contribute to EDP's commitment of reaching 0.5 GW of storage capacity by 2026. EDP has already started the construction of its first 40 MW storage project in the US, California.

**H<sub>2</sub> AND STORAGE GOALS**

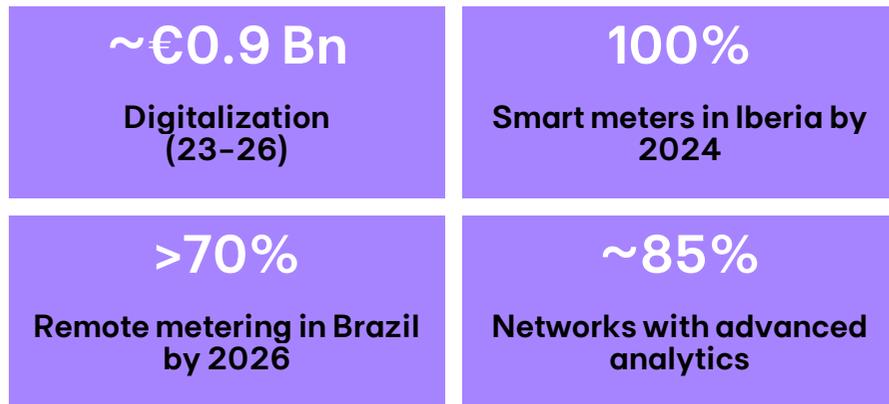


## Distribution power losses emission reduction

Electricity networks are at the core of energy transition by enabling stable and secure supply, on-time RES connection, and supporting increasing electrification. However, they are not without climate impact. Distribution power losses represent almost 100% of EDP's scope 2 emissions (typical for integrated utilities), and even if the level of emissions is highly dependent on the energy mix of the geography where those networks operate, EDP has direct action plans to tackle these emissions:

- continuous **asset renewal** contributing to a reduction of technical losses
- specific technical losses reduction **investment**
- **grid optimization investment** through digitalization and innovation (e.g., smart meters, smart grids, automation).

### INNOVATION AND DIGITALIZATION GOALS



By capturing the energy transition investment super cycle, EDP plans on growing regulatory approved CAPEX sustainably, **with ~€1Bn of CAPEX planned between 2023 and 2026.**

On an external level, EDP will continue contributing to the achievement of national energy plans, leading to a greener energy mix, and will increase its policy and advocacy efforts towards electricity networks developments and investment.

<sup>8</sup>Life Cycle Assessment

## Lower supply chain emissions

EDP's ambitious renewable deployment plan brings challenges on supply chain related emissions. By 2030, **it is expected that over 65% of EDP's non-commodity supply chain emissions are associated with solar and wind farms activity** (construction, operation, and maintenance). This poses an incredible challenge for EDP: lowering its level of supply chain emissions whilst growing its renewable deployment requires the emissions intensity of the supply chain to decrease significantly. To better track the impact of supply chain decarbonization action, EDP is considering the implementation of an emission intensity target that covers emissions from scope 3 category 1 and 2.

Decarbonizing the supply chain will be an effort that involves everyone: companies, suppliers, governments, and sectorial institutions. On EDP's side, it is set on four main courses of actions:

- **green(er) procurement**, by reinforcing internal processes to incorporate net-zero factors on procurement decisions (e.g., product carbon footprint information)
- identify **key partners** and analyse potential joint path forward to reduce their emissions in line with EDP's targets (e.g., work with suppliers to define targets or find alternative materials to build equipment)
- improve **data quality and systems robustness**, being able to use direct information from suppliers, supporting their evolution and identifying product related emissions hot spots
- increase **policy and advocacy** efforts for a standardized framework on product level emissions information (e.g., LCA<sup>8</sup> or EPD<sup>9</sup>).

## Reduce emission from gen-retail imbalance

Having a target on all sold electricity implies that EDP will tackle the generation vs. retail imbalance in the geographies with electricity retail activity (Portugal, Spain, and Brazil). Renewable deployment plays an important role, especially due to the thermal phase-out planned by 2030.

However, with increasing electrification and electricity demand growth, EDP's renewable deployment won't be able to close the gap between electricity generated and electricity sold

<sup>9</sup> Environmental Product Declarations

to clients. To address emissions resulting from gen-retail imbalance, EDP will focus on three levers:

- **corporate PPAs<sup>10</sup>** applied mainly to long-term B2B contracts, with a target of +1TWh/year between 2023 and 2026
- increase **green electricity** offer to clients
- define and **develop an EAC<sup>11</sup>** acquisition strategy (e.g., RECs<sup>12</sup>, I-RECs<sup>13</sup>, GO<sup>14</sup>).

The ability of the countries to achieve their national energy plans (Portugal, Spain, and Brazil) will play a crucial role in reducing the emissions associated with sold electricity, as the grid emission factor reduces due to higher penetration of renewable generation in the pool mix.

With an indirect impact on emissions reductions, EDP also promotes the improvement of energy efficiency throughout the value chain as an important element to decarbonization, contributing to greater efficiency in the end use of energy by offering its customers low carbon products and services. The aim is to ensure the offer of these services to 25% of EDP's B2C customers in the liberalized market by 2025, which has already been achieved, and 50% by 2030.

### Minimize natural gas retail emissions

IEA's Net Zero by 2050 report estimates over 70% decrease in the use of natural gas driven by decarbonization, with most of the reduction taking place post 2030, especially in industry. Within this frame, EDP considers the gas retail business as an opportunity to further contribute to the energy transition. The reduction of use of sold products emissions will derive from the progressive adjustments on the gas client portfolio, on which EDP plans on:

- 30–40% reduction in gas sold to clients by 2026
- **pushing for electrification of gas clients**, especially on residential clients, through an offer of alternative electric appliances solutions for heating and cooling, cooking, and water heating
- developing and delivering **low carbon solutions** for clients (e.g., solar DG and energy communities)

- **optimizing the B2B gas portfolio** (portfolio restructuring and/or electrification solutions for industrial clients).

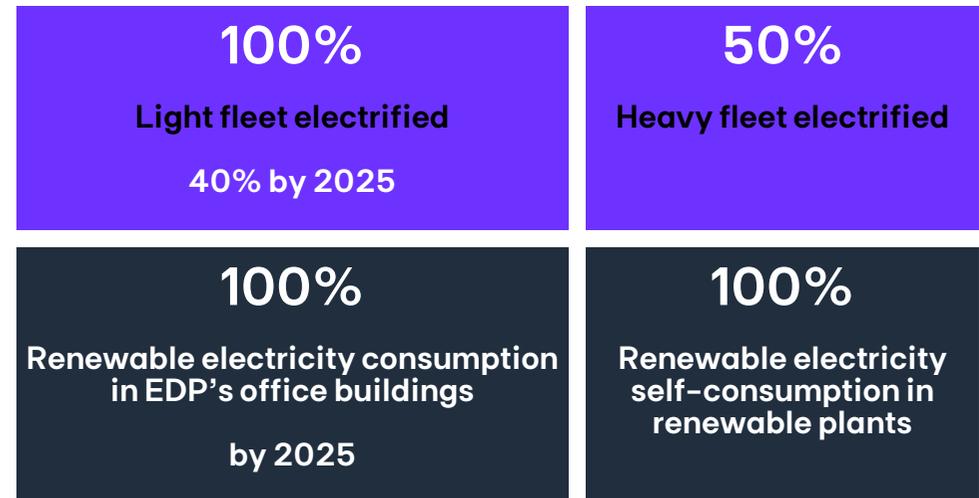
The execution of these plans is highly dependent on regulatory support as the business case for electrification on both B2C and B2B clients is still limited:

- **long payback time for electrification** options in the markets where EDP operates (Portugal and Spain)
- **lack of technological readiness** for alternatives solutions for industrial customers (use of green H<sub>2</sub> on hard-to-abate industries).

Policy and advocacy efforts will be a complementary part of EDP's strategy to decarbonize the gas retail business, as will be the engagement with customers to promote low carbon and electrification solutions.

### Non-core activities

#### NON-CORE ACTIVITIES DECARBONIZATION TARGETS BY 2030



<sup>10</sup> Power Purchase Agreement

<sup>11</sup> Energy Attribute Certificate

<sup>12</sup> Renewable Energy Certificate

<sup>13</sup> International Renewable Energy Certificate

<sup>14</sup> Guarantee of Origin

**Non-core activities account for less than 1% of EDP’s emissions in both 2020 and 2022.**

Despite having a smaller impact, EDP has also set goals within its Net-Zero ambitions, mainly to walk the talk and learn by doing.

Together with its own Net-Zero targets, EDP goes further in the energy transition path, actively contributing to the acceleration of electric mobility. In this context, EDP has set the goals of achieving over 40,000 EV charging points installed by 2025 and 100,000 by 2030, as well as reaching 180,000 clients with electric mobility solutions by 2025, in the geographies with commercial activity (Portugal, Spain, and Brazil).

SF<sub>6</sub> emissions represent ~0.1% of EDP’s scope 1 emissions, although it is an important source in the distribution and transmission networks. As an alternative to using electrical equipment with SF<sub>6</sub>, equipment using vacuum or solid insulators are already being used in the medium voltage network. EDP will strengthen an internal plan to better understand the challenge and the rate of replacement required to reduce these emissions.

**Digitalization and innovation** are at the core of EDP’s strategy to lead the energy transition across all business areas. EDP is focused on becoming a digital and data leader by having a universal digital first mindset and culture across the group. By being a fast adopter on innovation and focusing on key domains aligned with its corporate strategy and market trends, EDP will be able to scale up internal incubation and to leverage the broader ecosystems to stay ahead of the curve.

**Offsetting** will be promoted only in situations where emissions cannot be avoided or mitigated and can be done through two complementary approaches:

- nature-based solutions
- technological solutions for carbon dioxide removal.

The use of a voluntary carbon market, facilitating the carbon offsetting with quality, is urgent and EDP expects the publication of consensual benchmarks that frame this activity, restoring the confidence that is currently eroded but necessary for the proper fulfilment of the goals EDP has set.

The carbon offsetting of the Group will then be subject to an internal regulation that will necessarily consider references such as The Oxford Principles for Net Zero Aligned Carbon Offsetting, the SBTi Net-Zero Guidelines or the Voluntary Carbon Market Integrity initiative.

**Leaving no one behind**

EDP is committed to respecting and ensuring respect for internationally recognized human and labour rights by implementing the obligation of duty of care and diligence in all its decisions, as set out in EDP’s Human and Labour Rights Policy, paying special attention to the rights of local communities and extending equivalent obligations to its suppliers. EDP will also promote the development of respect for human and labour rights within the framework of sectoral corporate initiatives and associations.

EDP goes further in the energy transition path, actively contributing to the decarbonization pathway of several stakeholders by promoting incentives in several areas where it can have a positive influence in their decarbonization journey or quality of life improvement. Furthermore, EDP strives to extend its positive contribution through the mitigation of the impacts that the climate transition is set to have in supply chains, employment, and communities.

**SUPPORTING SOCIETY IN THE ENERGY TRANSITION BY 2026**



## EMPLOYEES

Employment opportunities are key in planning for a low carbon economy. EDP's planned investment in climate transition leads to an intensive job creation, with the Group anticipating **more than 3,000 new hires by 2026**.

In addition to job generation, EDP is consolidating and reinforcing its internal talent to compete in an evolving sector. To empower and prepare for the future EDP will continue to focus on training in **upskilling and reskilling, reaching up to 45% of its employees**.

Additionally, to support employees in their decarbonization pathway, EDP encourages sustainable mobility practices, namely with the initiatives "Pack Employee Electric Mobility" and "Sustainable Mobility Support Credits".

## SUPPLIERS

EDP expanded the sustainable procurement targets to define the obligation of strategic alignment of suppliers with its goals. EDP needs its supply chain to commit to the same practices towards decarbonization, as well as circularity, biodiversity, and human rights, and to contribute to transparency, traceability, verification of impacts and the reduction of the negative ESG footprint.

Additionally, EDP will continue to reinforce its supplier engagement process to provide support to their own decarbonization pathway.

## VULNERABLE COMMUNITIES

Energy poverty results from the financial inability of families to maintain the levels of thermal comfort recommended by public health authorities. Low income, combined with poor thermal quality in residential buildings, creates a social problem which must be tackled through structural public policies and within the scope of energy transformation.

Public policies should prioritize financing energy efficiency and the decarbonization of vulnerable people's buildings in energy poverty and create market incentives. In addition, as part of its voluntary social investment programme, EDP is committed to supporting social sector projects in the energy rehabilitation of buildings.

As part of the strategy to support the electrification of populations without access to energy (A2E), the A2E Fund was set up to improve the lives of people living in energy poverty, recognizing that access to clean, affordable, and reliable energy is a necessary condition for breaking this cycle, enabling social and economic development in remote rural areas. Through this Fund, EDP supports sustainable, clean energy projects in the areas of education, health, water and agriculture, business, and community. By 2025, €22.5 Mn will be invested in access to energy projects, with an additional €50 Mn of investment in communities, in projects aligned with the United Nations' Sustainable Development Goals. **By 2030, EDP aims to reach €300 Mn of investment in the communities, accumulated from 2021.**

## LOCAL COMMUNITIES

Just Transition is a priority of EDP's business strategy, and the company is committed to ensuring the social protection of unemployed direct workers, favouring their redeployment of these workers to new job opportunities, ensuring their requalification, and mitigating their relocation. EDP also advocates for effective public policies for social protection and requalification of directly and indirect workers affected in the framework and spirit of the European Fair Transition Mechanism.

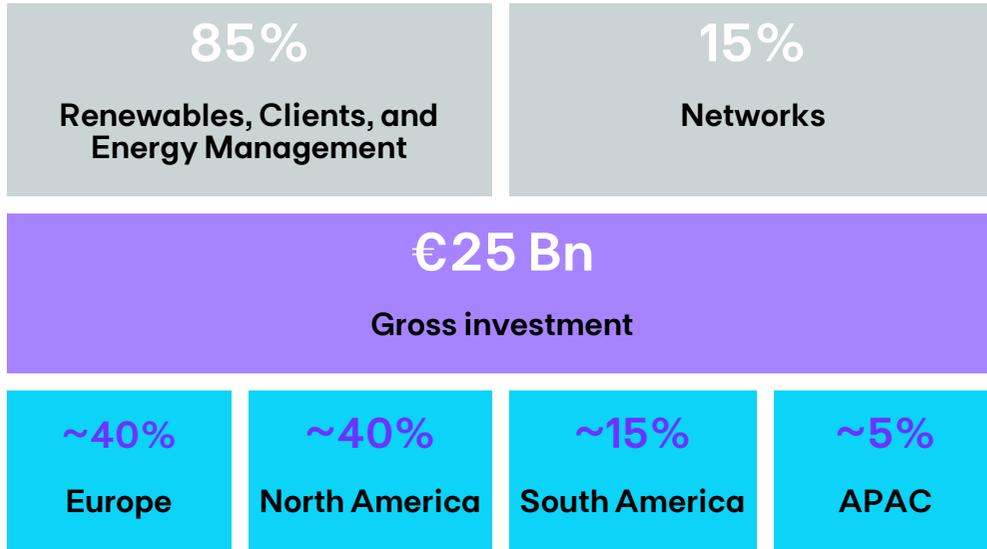
To mitigate negative social impacts on employment and local communities, EDP is committed to the closure of coal-fired power plants by 2025, identifying impactable stakeholder Groups, promoting social dialogue and joint action. The company is also committed to creating employment opportunities and promoting equality for affected communities by investing in new renewable projects that create local employment, and, broadly, to fostering gender balance and the inclusion of vulnerable people in the employment opportunities generated by renewable investment.

## Sustainable financing

Sustainable financing is key to accelerating the transition to a carbon-neutral society. "Use-of-proceeds financing", where companies commit to allocate the proceeds of a deal for green/social/sustainable projects, has proven to be an effective form of finance for the energy transition. Investors, and the market in general, have accepted and welcomed this type of product warmly. Although EDP's strategy has long been focused on sustainability, the issuance of Green Bonds has promoted a greater alignment of the company's financial policy with its sustainability strategy, while the market's awareness of this topic is increasing. EDP's green bond issuances have contributed heavily towards UN Sustainable Development Goal

SDG 7 – affordable and clean energy and SDG 13 – Climate Action. EDP issued its first Green Bond in 2018, of €600 Mn.

**BUSINESS PLAN 23–26 INVESTMENT**



Currently, Sustainability linked finance corresponds to €12.4 Bn (€8.7 Bn in green bonds and €3.7 Bn in sustainability-linked loans), which represents 44% of the nominal debt. Aligned with EDP’s net zero target, EDP will achieve 50% of its funding from sustainable sources by 2025, and will continue to issue green, as well as other sustainable instruments along its Net Zero journey.

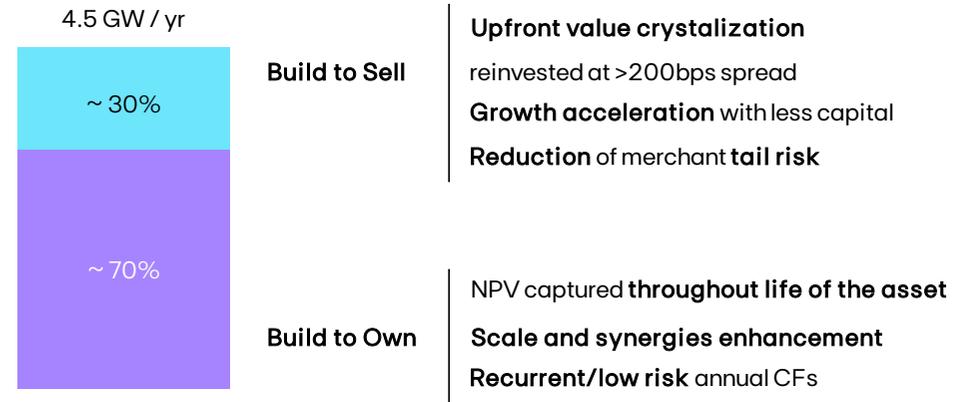
In the following BP23–26 period, EDP plans on having €25 Bn<sup>15</sup> of CAPEX and 100% energy transition EBITDA by 2030. EDP will reinforce its investment across core low risk markets through an integrated position and enhanced value proposition and risk management strategy by following a clear investment framework and maintaining a selective and disciplined approach. From the €25 Bn of EDP’s gross investments, ~85% will be applied in renewables, clients, and energy management, and the remaining ~15% to electricity networks. As for geographical distribution, Europe and North America are the backbone of

EDP’s investment, each with ~40% of the expected investment, while South America represents ~15% and APAC grows to ~5%.

**Asset rotation strategy**

EDP will continue to leverage the asset rotation model to further empower growth with ~30% of the 4.5 GW yearly gross additions to “build to sell”. This allows upfront value crystallization, growth acceleration with less capital and reduction of merchant tail risk. **EDP will deploy more than 50 GW of renewable capacity by 2030, using 2020, as a base year.**

**ASSET ROTATION 2023–2026**



<sup>15</sup>Including financial investments

# Approaching climate transition

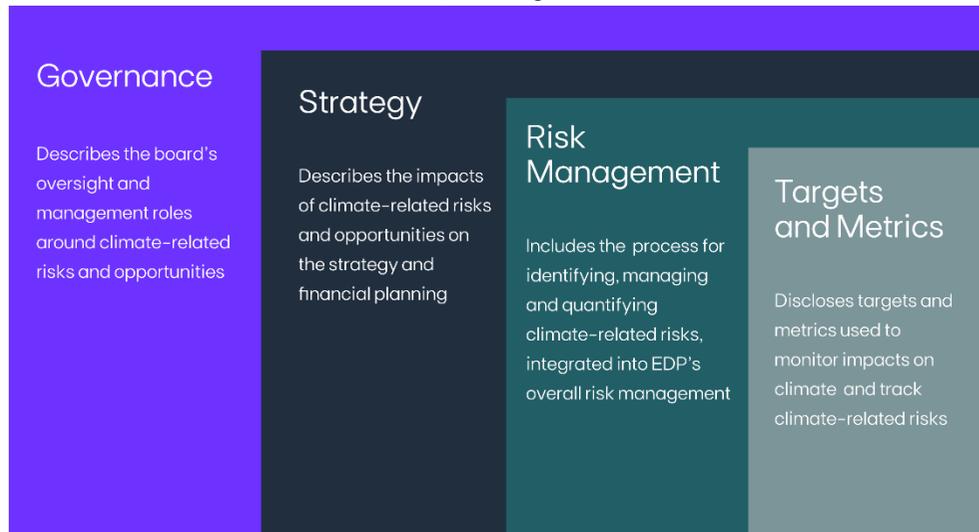


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# Approaching climate transition

## TCFD alignment

EDP Group has been adopting the recommendations issued by the Task force on Climate-Related Financial Disclosures since 2018, covering the four main areas of this as follow:



## Governance model

Climate transition is intrinsic to EDP's business, with an internal governance model set to assure a resilient climate strategy, its effective implementation, and a monitoring system to track performance efficiently.

The General Supervisory Board oversees EDP's Climate Strategy implementation through its Corporate Governance and Sustainability Committee. It meets with the Executive Board of Directors (EBD) on ESG issues three to four times per year, with Climate at the top of this agenda. Its Remuneration Committee submits a proposal for a remuneration policy to be approved by the General Shareholders' Meeting, at least every four years.

The EBD remuneration policy establishes a fixed component and a variable component, the latest including ESG Key Performance Indicators (KPI). ESG KPIs, including Climate KPI, are aligned with the company's Business Plan in place and applicable for the three-year term of office and determine the following structure and weightings:

- annual – ESG KPI (20%), including EDP's **Dow Jones Sustainability Index** performance
- multi-annual – ESG KPI (20%) including:
  - **CO<sub>2</sub>e intensity reduction target**, aligned with public commitments: Reduction of total scope 1 and 2 GHG emissions per electricity produced by the Group, compared with 2015 baseline
  - **renewables installed capacity**, aligned with public commitments
  - Bloomberg Gender Diversity Index performance.

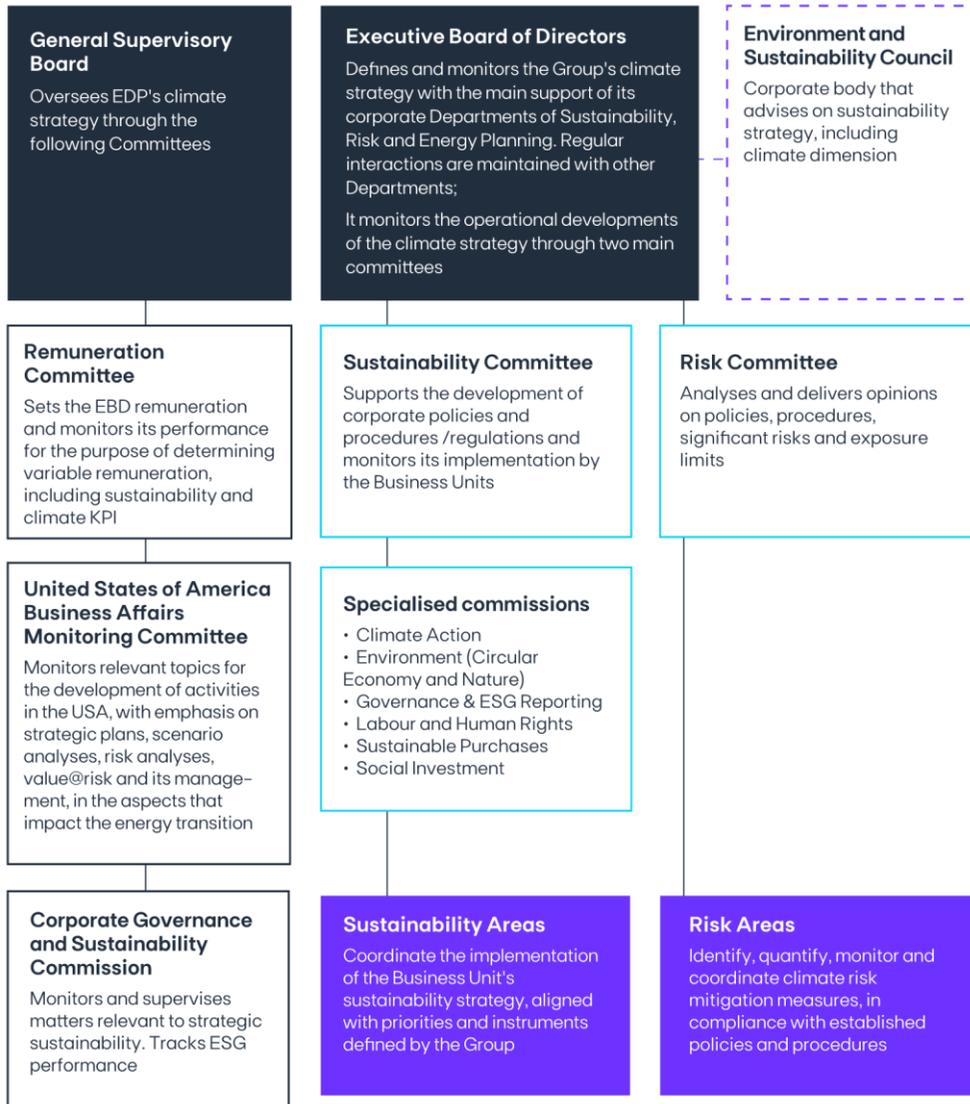
To advise and support the Company's environmental and sustainability strategy, the governance model of EDP includes an Environment and Sustainability Board whose function is to advise the EBD on environment and sustainability matters, with climate issues being a top priority. With two to four meetings per year, this body drafts opinions and recommendations on key ESG issues.

Finally, the EBD plays a central role approving the Group's Business Plan, investment budget and forecast and its Sustainability Strategy, including decarbonization pathway, all supported by an overall risk management process aligned with different climate scenarios.

Before approval, the sustainability strategy is prepared by the Sustainability Corporate Global Unit, supported by the Risk Corporate Global Unit and Energy Planning Corporate Global Unit. A Sustainability Committee, involving all main Business Units, discusses the proposal before approval and a set of specialized commissions were put in place to improve efficiency on key ESG topics.

To better highlight the role and impact of EDP's strategy on climate, a Net Zero Acceleration Program was put in place framing the Climate Transition Plan.

## CLIMATE GOVERNANCE

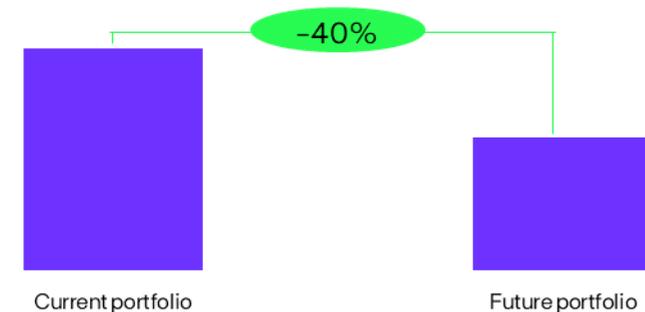


## Climate resilience strategy

EDP's strategy is set weighing risks and opportunities to move forward, and test resilience under several climate scenarios, including the below 2°C Scenario.

To inform strategy, three climate scenarios are used aggregating transition and physical variables mostly based on the RCP (Representative Concentration Pathway) scenarios of the IPCC (Intergovernmental Panel on Climate Change) and on the IEA (International Energy Agency) scenarios, for the transition risks, with some internal adjustments to better reflect EDP's context.

### EDP'S STRATEGY FOR CLIMATE RESILIENCE



Climate risks and opportunities with a material impact (over 1M€) are periodically calculated based on the analysis of the impact on EBITDA and assessed through a Climate Value@Risk approach.

The results of the exercises carried out so far, demonstrate the resilience of EDP's strategy, with an annual risk reduction of around 40%, in 2050, compared with the current portfolio, mainly due to the mitigation of physical risks, derived from an increasing diversification of the business, technologies and geographies where EDP operates, and to the value creation of transition opportunities related with new energy sources (namely, hybridization projects and green hydrogen).

Short-term risk (i.e., 5-10 years) is mostly related to transition risks, namely energy market design, prices, regulatory framework, and technological developments.

Long-term risk (i.e., 10–20 years) is mostly related to physical risks that may impact EDP’s assets portfolio, namely regarding extreme events of temperature, wind and precipitation, and structural changes to physical parameters.

The following table shows, for the 10–year horizon and RCP 2.6 scenario, the potential impact on the EDP Group of the relevant physical risks and opportunities (chronic and acute), linking them to the mitigation measures in place.

## PHYSICAL RISKS

Risk	Main Impact	Business segment	Quantification			Mitigation measures	
			0–50 M€	50–100 M€	+100 M€		
Chronic	Temperature increase	Rise of energy losses Loss of efficiency (thermal power plants and solar) Demand increase	EDP Group	OPP& Risk			Natural mitigation, i.e., increase in temperature will result on an increase in demand. Additionally, EDP Group has an integrated energy risk management and follows a strategy of diversification by business area and geography.
	Water availability	Reduction of hydro generation	Hydro Generation	Risk			Strategy of diversification by technology, business segment and geography.
	Extreme temperatures	Unpredictability of consumption Loss of efficiency Malfunction of turbines and panels	Client Solutions EDPR	Risk			Energy risk management to cover potential generation outages and a strategy of diversification by technology, business segment and geography.
Acute	Extreme events	Disruption of activities (generation and networks) Increase operating costs Damage to assets	EDP Group	Risk			Preventive maintenance of protection strips on distribution lines, a comprehensive insurance plan, and EDP Group has also been strengthening business continuity and crisis management plans, minimizing the impact on business and third parties.
	Wildfires	Damage to assets (distribution networks, generation)					

Similarly, for the next 10 years horizon and IEA SDS scenario, the following tables provide the main potential impacts and mitigation measures for the transition risks and opportunities.

**TRANSITION RISKS**

Risk	Main Impact	Business Segment	Quantification			Mitigation measures
			0-50 M€	50-100 M€	+100 M€	
Regulatory and legal	Increase exposure to environmental litigation Changes in product regulation	EDP Group (mainly EDPR)	<b>RISK</b>			Strategy of diversification by technology, business segment and geography, asset maturity, as well as through a close monitoring of government regulation and policies.
Market	Loss of revenue due to new competitors Effect of additional environmental measures on market prices variables	EDP Group (mainly Generation and EDPR)		<b>RISK</b>		Focus on electrification of the economy, (through energy services, EVs, among others), as an offsetting strategy.
Technology	Failure to follow/ delay in the adoption of new technologies Devaluation/ replacement of assets due to technological obsolescence	EDP Group (mainly Generation and EDPR)	<b>RISK</b>			Close monitoring of market trends, technological development (including emerging technologies across value chain) together with a clear Innovation Policy focused on the main trends in the sector.
Reputational	Stakeholders concerns regarding the company's path to climate transition Implementation failures of environmental measures or market positioning regarding the new climate reality	EDP Group	<b>RISK</b>			Electricity sector has traditionally been seen as a net contributor to climate change. In a paradigm shift, the Group is strengthening its renewable portfolio, and is committed to attaining 100% renewable capacity by 2030. At the same time, it is recognized for its excellent performance in the various sustainability indexes of which it forms part, demonstrating its sustainable character and providing evidence of adopted measures and strategies.

**TRANSITION OPPORTUNITIES**

Opportunity	Main impact	Business Segment	Quantification		
			0-50 M€	50-100 M€	+100 M€
Energy source	Use of incentive policies for renewable generation Explore new green energy sources	EDP Group			OPP
Product & services	Greater electrification leading to increased energy demand Higher need for heating and cooling because of physical risks	EDP Group			OPP
Resource efficiency	Use of more efficient means of transport and consequent increase in installed capacity	EDP Group			OPP
Market	Access to new markets and consequent increase in installed capacity	EDP Group			OPP
Resilience	Increase supply chain reliability				OPP

## Climate risk management process

EDP has in place an internal climate risk management governance model, integrated into the overall risk management process, to annually review and inform EDP's strategy resilience to climate change. This process is aligned with TCFD recommendations and ensures an adequate assessment of potential risks and opportunities of business evolution within its Business Units.

The process is co-led by the Risk and Sustainability corporate units, with the collaboration of the Energy Planning corporate unit, and supported by a team of specialised interlocutors of the different Business Units (risk-officers, sustainability officers and energy planning areas). It is divided into three phases: 1) validation of EDP's climate taxonomy; 2) alignment with climate scenarios; 3) quantification by BU and calculation of an aggregate Climate Value@Risk

### CLIMATE RISK PROCESS



#### Risk identification



Guarantees the exhaustive identification of risks and opportunities in each business and geography and in line with the structure defined in the TCFD recommendations



#### Climate Scenario Alignment



Includes the validation and updating of the physical and transition sub-scenarios, as well as the main climate variables (physical and transition)



#### Risk quantification and Climate Value@Risk aggregation



Considers the quantification of the most relevant climate-related risks and opportunities of each business/geography (i.e., with an impact on EBITDA of over €1 Mn)

Climate risks and opportunities with a material impact (over €1Mn) are periodically calculated based on the analysis of the impact on EBITDA and reported by each Business Unit/geography and duly aggregated through a Climate Value@Risk (considering a set of assumptions of correlation between risks and opportunities).

The assessment of each material risk is done according to 3-time horizons (Business Plan horizon of 4 years, 10 and 30 years) and under 3 different climate scenarios. The exercise is consolidated at Group level, by Business Unit and by business segment.

## Validation

Climate risk and opportunity taxonomies are integrated in the overall corporate risk taxonomy and are updated regularly.

Climate risks are present in several risk categories:

- physical risks impact, at business level
- energy market risks (volume of renewable energy generation and demand)
- and physical assets risks (damages, efficiency losses, delays, among others), at the operational level.

Transition risks and opportunities impact: i) at strategic level, the surrounding context (technological disruption and change in the competitive paradigm) and the stakeholders' relations; ii) at business level, the energy market (commodity and pool prices and demand) and regulation; and iii) at operational level, the legal, compliance and ethical risks.

## Climate scenarios

Scenarios integrate physical and transition dimensions and are updated whenever new public scenarios are published and may impact on EDP's results.

Assuming a time horizon of 30 years, and based on the IEA scenarios (SDS, STEPS and CPS), narratives were built for each scenario, focusing on several dimensions (social, regulatory, and political, economic, and technological, and energy). The evolution of prices, energy demand and energy mix are also based on the IEA scenarios, with an adaptation to the geographies where the EDP Group is present.

To date, the physical variables to inform EDP's Scenarios were obtained from the World Bank Group and the Copernicus database, validated with local databases.

CLIMATE SCENARIOS

Physical scenarios

Transition scenarios



**IEA SDS**  
(w/ internal adjust.)  
+ RCP 2.6

- **Compliance with the Paris Agreement**
- Energy system becomes **carbon neutral by 2070**
- **Temperature increases between 1.5°C and 2°C**
- Mean sea level rises by 0.4m and ocean acidification begins to recover by 2050

- Sustainable energy-related **economic growth and job creation**
- More **resilient and clean energy system**
- Full international cooperation for **sustainable development**
- **Lower fuel prices** and renewable generation
- **Very high CO<sub>2</sub> price**



**IEA STEPS**  
(w/ internal adjust.)  
+ RCP 4.5

- **Paris Agreement is not met**
- **Temperature increases between 2°C and 3°C**
- Extreme temperatures become more frequent
- Mean sea level rises by 0.5m and **many species are unable to adapt**

- **Announced policies** are generally **complied with**
- Policies are adopted to **reduce** the use of **fossil fuels**, but the **demand is still high**
- **Increased fuel prices and cheaper renewables**, with average CO<sub>2</sub> price



**IEA CP**  
(w/ internal adjust.)  
+ RCP 8.5

- **The Paris Agreement is not met**
- **Temperature rises above 3°C**
- Extreme events become more frequent
- Wide variations in precipitation
- Mean sea level rises by 0.7m

- **No additional efforts towards sustainable development**
- Limited policies to reduce fossil fuels and promote **sustainable sources**
- **High demand and prices for fossil fuels**
- **No change in the share of fossil fuels and CO<sub>2</sub> emissions**
- **CO<sub>2</sub> price** remains **low**

**RISK VARIABLES**

Risk Category	Risk	Variable
<b>Physical Risk</b>		
Chronic	Temperature increase	Average temperature rise
	Sea level rise	Rise of sea level
	Water availability	Average precipitation variation Average days with rainfall <1mm var
	Wind availability	Average wind speed
Acute	Extremely hot days	Days w/ temperature >35°C
	Extremely consecutive hot days	Consecutive days w/ temperature >35°C
	Extremely cold days	Days w/ temperature <0°C
	Extremely consecutive cold days	Consecutive days w/ temperature <0°C
	Extreme wind events	Extreme events per year
	Extreme rain events	
	Extreme wildfire events	Wildfires per 100ha
<b>Transition Risk</b>		
Prices		Brent
		Natural gas
		Coal
		CO <sub>2</sub>
		Electricity pool price
Foreign exchange		EUR/USD EUR/BRL
Generation mix		Hydro Thermal CHP Nuclear Wind Solar
Renewable adjustment factors		WAF SAF
Electricity demand		

**Climate Value@Risk**

The quantification methodology is based on individual analysis of the impact on EBITDA of each risk and opportunity (physical and transition), carried out by each Business Unit and for each geography. This quantification considers the identification of the physical variables and their evolution according to specialists, and the political/ social/ economic/ technological narratives related to the different scenarios.

The quantification method depends on each risk and opportunity, using, whenever possible, the direct method (expected loss/gain and maximum loss/gain at P95%), or alternatively the indirect method (probability/frequency, average impact, and maximum impact P95%). For the purposes of the Group's analysis, the consolidation of losses and gains is made considering correlations between risks and opportunities and between geographies.

**Internal price on carbon**

Meaningful carbon prices strongly benefit EDP's business strategy, fully align with the Paris Agreement, and contribute decisively to its commitment to be carbon neutral by 2040. A carbon price is used company-wide to assess the impact of current and future carbon regulation and carbon taxes on energy prices, energy volumes, and existing assets' value, as well as to evaluate capital investments in building or acquiring new electricity generation assets across the globe. Furthermore, EDP will continue to explore the use of an internal carbon price in the procurement activities, to better inform decision and actively contribute to the reduction of scope 3 emissions.

GHG-related regulation considered the European Union Emissions Trading System (EU-ETS), which applies to EDP's thermal power generation assets in Europe (Portugal and Spain).

**Climate-related targets and KPI**

EDP's strategy alignment with climate transition is materialized by the definition of a set of metrics and targets, aligned with the financial consolidation criterion. Medium and long-term goals are established and monitored at different times of the year, either monthly, quarterly, or annually. Two complementary sets of metrics are defined, based on 2020, when applicable:

- operational metrics and targets, illustrating the evolution of the business in each fundamental pillar to the climate transition
- climate metrics and targets, reflecting the evolution of the business in terms of its impact on CO<sub>2e</sub> emissions, or avoided CO<sub>2e</sub>, when applicable. For this last Group of indicators, EDP uses the GHG Protocol as main reference.

The data necessary to calculate the indicators is extracted quarterly from an internal platform, where sustainability information from the Business Units is stored, including environment and climate activity data. The data is consolidated at the corporate level and the information is verified annually by an independent auditor. It is thus possible to monitor the evolution of the

indicators against the defined targets, both quarterly and annually. Climate Indicators. The methodology used to establish these targets may be summarized as follows:

- short-term targets (up to 5 years) – based on the consolidated operating data from the multi-annual business plans, the evolution of the referred indicators is simulated, and the respective targets are established. In the case of emission scopes, the categories with the most material weight are considered
- medium/long term goals (10 to 30 years) – focus only on electricity generation and CO<sub>2</sub> emissions. Targets are set based on internal projections under different scenarios of EDP’s portfolio evolution.

Indicator	Categories	Reference
Scope 1 Emissions	<ul style="list-style-type: none"> <li>Stationary combustion (emissions from thermal power stations)</li> <li>Mobile combustion: car fleet emissions (combustion engines) • Fugitive emissions: e.g., SF6</li> <li>Gas consumption in administrative buildings</li> </ul>	GHG Protocol, TCFD, CDP, GRI
Scope 2 Emissions	<ul style="list-style-type: none"> <li>Losses in transmission and distribution networks, when not produced by EDP</li> <li>Electricity consumption in administrative buildings, if supplied by third parties</li> <li>Self-consumption of electricity in renewable power stations if it is supplied by third parties</li> </ul>	GHG Protocol, TCFD, CDP, GRI
Scope 3 Emissions	<ul style="list-style-type: none"> <li>Acquisition of goods and services</li> <li>Capital goods</li> <li>Fuel and energy related activities</li> <li>Purchased products and waste transportation</li> <li>Business travel</li> <li>Employees' home-workplace travel</li> <li>Waste from operations</li> <li>Use of products sold (e.g., natural gas)</li> <li>Financial investments</li> </ul>	GHG Protocol, TCFD, CDP, GRI
CO <sub>2</sub> Specific Emissions	<ul style="list-style-type: none"> <li>GHG emissions (scope 1 or Scope 1 and 2) by net generation</li> </ul>	GRI
% Renewable Installed Capacity	<ul style="list-style-type: none"> <li>EU1 INDICATOR GRI</li> </ul>	GRI
% Renewable Generation	<ul style="list-style-type: none"> <li>EU2 INDICATOR GRI</li> </ul>	GRI
% Fleet Electrification	<ul style="list-style-type: none"> <li>305-1 INDICATOR GRI</li> </ul>	GRI
Avoided CO <sub>2</sub> (by renewable generation)	<ul style="list-style-type: none"> <li>Emissions that would have occurred if electricity from renewable energy sources in each geography had been produced by the mix of thermoelectric power stations in that geography</li> </ul>	
Avoided CO <sub>2</sub> (from clients)	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions avoided by the supply of energy efficiency, sustainable mobility, distributed generation and green electricity products and services</li> </ul>	

## Climate policy

EDPs' corporate strategy focus on leading the energy transition to create superior value on a path aligned with the ambition of the Paris Agreement to limit the increase of the global average temperature to 1.5°C. This position has been stressed in all the fora and trade associations in which the company participates, as well as with all regulatory bodies EDP interacts with.

EDP works pro-actively and constructively with governments, sector associations and other stakeholders such as suppliers, clients, communities, to advocate for sound climate action that contributes to the goals of the Paris Agreement in all the geographies where the EDP Group operates.

Climate Change and promotion of renewable energy have been critical top topics within EDP's materiality analysis process, where the Group identifies the most important issues for society and business to optimize the Group's strategic orientation and to direct its internal management towards internalizing and responding to material issues, so that they become an integral element of the Group's strategy guidelines.

All stakeholders are required to play a role in the climate transition and working together is essential for the success of EDP's commitment to an energy transition aligned with the Paris Agreement.

## Public policy and business associations engagement

The approach to public institutions relations (national and international) is carried out 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 addressing the Group's interest representation, transparency and responsible political involvement.

The company's interest representation means prohibiting any contribution or association of the EDP brand with political parties, candidates, political campaign/candidacy structures or related people or entities, namely through the direct or indirect delivery of goods or provision of services on behalf of or representing EDP and the prohibition on using EDP resources for actions related to political processes. In this sense, although some of the legal regimes in force in countries where the EDP group operates allows for this, none of the Group's companies does monetary contributions or contributions in kind to political parties.

Nevertheless, EDP participates in the processes of forming public decisions, developing activities with various institutions at the national and international level, aiming to bring to the attention of public entities the legitimate interests of the Group and/or the sector, including Paris-Aligned lobbying to progress carbon emissions policy and targets for the electricity sector and global economy, through interaction with public entities and through strengthened alliances with similar parties to establish macro platforms for joint public positions that reflect the vision of the sector as a whole concerning the major decarbonization commitments undertaken internationally.

The list of the most relevant organizations and trade associations, material for climate action that EDP is engaged with is consistently updated with details on fees/contributions, advocacy activities supported, roles performed. They were reported annually in the Sustainability Annual Reports and are reported in the Integrated Annual Reports and publicly disclosed on-line. [Transparency in institutional relations | edp.com](#).

Recognizing EDP's role as leaders in the energy transition, the company also actively engages in supporting a sector and climate policy aligned with the Paris Agreement goals by assuming public positions on the different issues under discussion, through:

- the participation in organizations focused on sustainability issues
- active participation in the Conferences of the Parties (COPs) on climate change, organized annually by the UNFCCC, since COP21 (2015, Paris) or
- by endorsing joint letters or campaigns with other companies or organizations when it becomes relevant to be an active voice advocating for policies accelerating a climate and just transition.

EDP actively joins global progressive initiatives committed to respond to climate change and climate transition such as UN Global Compact, Race to Zero, SEforALL, WBCSD, We Mean Business Coalition, Global Alliance for Sustainable Energy, The Climate Group, among others (see details in EDP [Joining our partners](#)).

## Collective efforts

With a vast network of partners, EDP believes it can create positive change in the supply chain. EDP expects all partner companies to make a positive contribution to the success of the United Nations agenda. EDPPartners is the EDP Group's main Supplier Relationship Management programme that combines strategic initiatives with suppliers' daily procurement interactions. Through this programme, EDP involves EDPPartners in achieving

common collective goals, strengthening relationships by sharing best practices, joint project development, and process alignment. (see how at [Suppliers | edp.com](#)).

EDP works continuously with its customers, raising awareness and promoting services that contribute to the reduction of emissions and energy efficiency. Therefore, in a liberalized and regulated market, the company has a diversified offer of products and services that will help drive the transformations needed. (see how at [Client solutions | edp.com](#)).

EDP believes to have a relevant influence in the communities where it is present. That it can make a difference. Therefore, a Social Investment Policy was defined based on the United Nations Principles for Social Investment with the objective of promoting and changing towards a better future today. (see how at [Empower our communities | edp.com](#))

## Alignment with Paris Agreement

EDP's Executive Board of Directors ("EBD") is the corporate entity responsible for setting out the objectives and for approving and implementing the policies and management models of EDP Group, in line with the strategic objectives.

The corporate centre, the controlled companies and respective subsidiaries have local teams that manage the relation with the supervisory bodies of the energy sector and sector associations in the geography where they operate and are responsible for verifying the consistency of the membership in organizations and associations and positions advocacy alignment to EDP's Group strategic objectives, including alignment with Paris Agreement goals. These structures ensure the overall alignment of EDP's climate policy engagement activities with the corporate climate strategy.

The review process of EDP's membership alignment is carried out mainly in three stages: (i) Before joining an association, through an in-depth analysis of the public positions and mission of the organization and its alignment to EDP's Group strategic objectives, including alignment with Paris Agreement goals, with new memberships to be approved at EBD level. (ii) After joining an organization, reviewing the alignment through contributions to the organizations' work or taking positions of responsibility within the organization or promoting the EDP Group's position within working groups. (iii) Finally, a review of the level of alignment of the associations with EDP's strategy is conducted annually upon renewal of membership, to be approved at EBD level.

Where a misalignment with EDP's corporate strategy aligned with the ambition of the Paris Agreement occurs, EDP may:

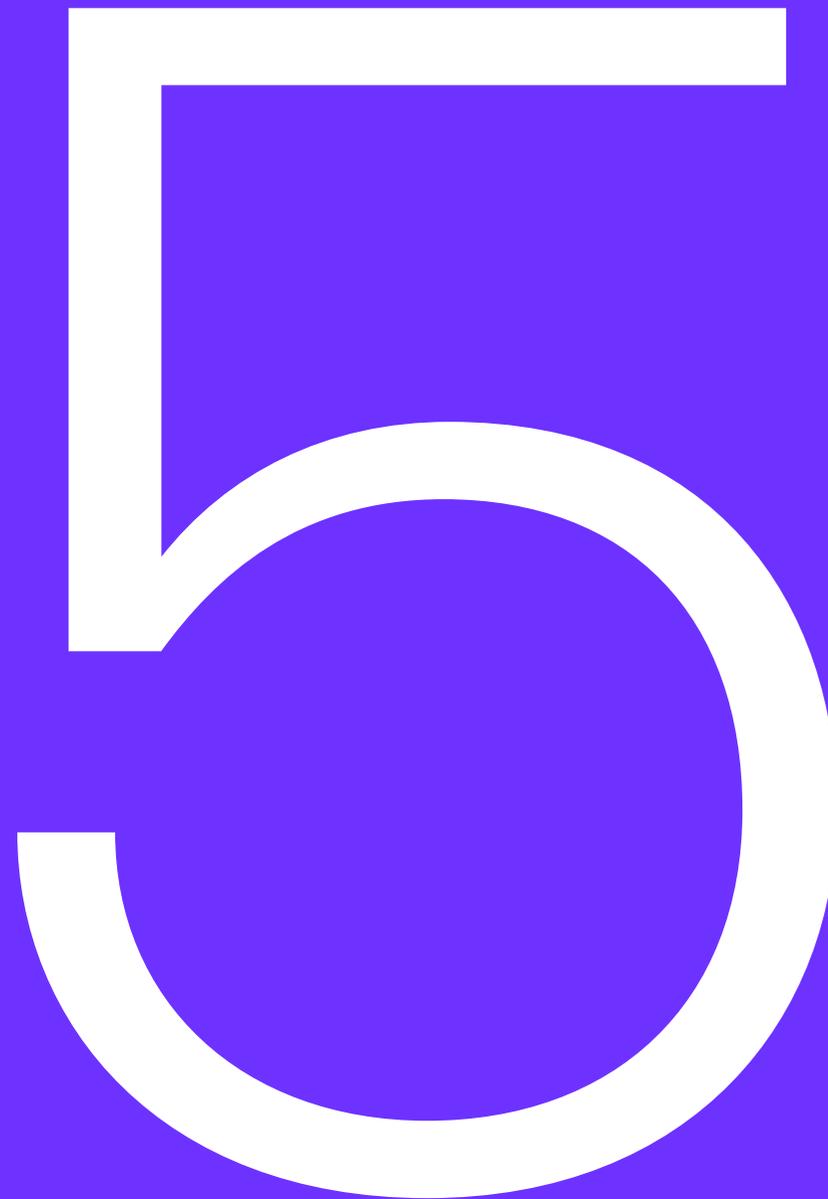
- work to actively contribute through working groups promoting the EDP Group's position and/ or taking positions of responsibility within it, to promote common ground that enables progress to be made towards climate transition alignment and further influence the policies and perspectives of that organization
- expressly state non-support to public advocacy activity carried out by the organization considered misaligned
- ultimately, if differences in policy positions remain unsurpassable and extremely significant, consider reviewing its ongoing membership of that organization and withdraw from it, publicly disclosing it.

## Critical policy and advocacy for a Net-Zero path

Beyond all EDP's efforts for emissions reduction throughout all its value chain, critical policy issues and advocacy activities were identified, within the work of the EDP's internal project Net Zero Acceleration Taskforce, regarding several external contexts that must be in place to ensure that Net Zero targets are reachable. Among these it is crucial to advocate for:

- Delivery of national system's decarbonization targets.
- Improve regulatory landscape to scale additional renewable energy and for new generation alternatives.
- Balanced energy market design.
- Efficient incentives to the reduction of distribution power losses.
- Incentivize greener supply chains globally.
- Increased incentives for consumer's electrification.

# Appendix



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# Acronyms

**ESG** – Environmental, Social, Governance

**EU ETS** – EU Emissions Trading System

**GHG** – Greenhouse Gas

**IEA** – International Energy Agency

**IPCC** – Intergovernmental Panel on Climate Change

**NDC** – Nationally Determined Contributions

**SASB** – Sustainability Accounting Standards Board

**SBTi** – Science Based Target initiative

**SFDR** – Sustainable Finance Disclosure Regulation

**TCFD** – Taskforce on Climate-related Financial Disclosure

**UNEP** – United Nations Environment Programme

**R&D** – Research and Development

**B2B** – Business to Business

**B2C** – Business to Consumer

**CCUS** – Carbon Capture, Utilization and Storage

**NZATF** – Net Zero Acceleration Task Force

**NZAP** – Net Zero Acceleration Program

**A2E** – Access to Energy

**SDG** – Sustainable Development Goals

**EBD** – Executive Board of Directors

**RCP** – Representative Concentration Pathway

**SDS** – Sustainable Development Scenario

**STEPS** – Stated Policies Scenario

**CPS** – Current Policies Scenario

**CCGT** – Combined Cycle Gas Turbine

**PPA** – Power Purchase Agreement

**EAC** – Energy Attribute Certificate

**REC** – Renewable Energy Certificate

**GO** – Guarantee of Origin

**LCA** – Life Cycle Assessment

**EPD** – Environmental Product Declaration

# Concepts and definitions

## C

**Carbon (GHG) neutral(ity):** occurs when CO<sub>2</sub>e (GHG) emissions attributable to an organization are fully compensated by CO<sub>2</sub>e (GHG) offsets claimed by the organization. For EDP, means CO<sub>2</sub>e emissions' reductions of its scope 1 and 2 emissions by 2030, with neutralization of residuals emissions through high quality carbon credits.

**CAPEX (Capital Expenditure):** Capex includes increases in Property, Plant and Equipment and in Intangible Assets, excluding CO<sub>2</sub> licenses and Green certificates, net of increases in Government grants, Customer's contributions for investment and Sales of properties in the period.

**Climate-related risks:** risks arising from the effects of climate change. According to the TCFD taxonomy, they can be physical risks or transition risks.

**CO<sub>2</sub>e:** The CO<sub>2</sub> equivalent emissions of a given greenhouse gas (GHG) are obtained by multiplying the amount of emissions of that gas by its Global Warming Potential (GWP). It is a way to standardize the climatic effect of a given GHG in relation to the reference CO<sub>2</sub>, whose GWP=1.

**CO<sub>2</sub>e avoided (by renewables):** Emissions that would have occurred if the electricity generated by renewable energy sources in a given geography was produced from the mix of thermoelectric power plants in that geography.

**Customer Avoided Emissions:** CO<sub>2</sub>e emissions avoided through the offer of low carbon products and services, substituting other less efficient and/or more CO<sub>2</sub>e intensive. Examples are energy efficiency improvement measures, the sale of green electricity, distributed generation, and electric mobility.

## G

**Greenhouse Gases (GHG):** for the purposes of GHG inventories, the following gases are considered: Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur Hexafluoride (SF<sub>6</sub>).

## N

**Net-Zero emissions:** when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period (<https://www.ipcc.ch>). For an organization, it refers to the state achieved when an organization's GHG emissions are reduced according to a science-based trajectory, and any remaining emissions that cannot be mitigated are fully neutralized by permanent removals of equal value.

## O

**Offsetting:** Reducing GHG emissions or increasing GHG removals through activities external to an organization, to compensate for GHG emissions, such that the organization's net contribution to global emissions is reduced.

## P

**Physical risks:** climatic risks related to structural changes on physical parameters (e.g., precipitation, temperature) with potential financial impacts typically in the medium/ long term. They can be event driven (acute) or longer-term shifts (chronic) in climate patterns:

- Acute risks: refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods.
- Chronic risks: refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

## S

**Scope 1 emissions:** Direct GHG emissions that occur from sources owned or controlled by the company.

**Scope 2 emissions:** Indirect GHG emissions resulting from the generation of electricity (steam, heat or cold) acquired from third parties and consumed by the company.

**Scope 3 emissions:** Remaining indirect emissions, not included in scope 2, that occur upstream and downstream of the company's value chain. Scope 3 emissions are a consequence of the company's activities but occur from sources not owned or controlled by it. They comprise 15 categories (8 upstream and 7 downstream).

**Specific emissions** (also known as emissions intensity): GHG emissions per unit of energy produced (typically tCO<sub>2</sub>e/MWh or gCO<sub>2</sub>e/kWh).

## T

**Transition risks:** climate risks related to the transition to a lower-carbon economy, that may entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations.

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