

Climate Transition Plan  
Progress report 2023



We  
Choose  
Earth



# This document

In 2023 EDP published its [Climate Transition Plan](#), built upon its commitment to become Net Zero by 2040 and the results of the internal work by the Net Zero Acceleration Taskforce that undertook 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 Climate Transition Plan 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 from the baseline year 2020. It covers climate metrics and targets for emissions of all scopes (1, 2 and 3), the strategic levers and actions to align implementation with the overall climate commitments, synthesizing the overall climate governance in place, including TCFD alignment, Governance model, Climate Resilience strategy and Risk Management, Targets and KPIs and Climate Policy and Advocacy.

Progress report can be found quarterly, for key CO<sub>2</sub> indicators through its ESG Quarter Reports, and annually with the Integrated Report with broader scope of progress report against targets and designed for a larger audience.

This progress report is the first after the approval of the Net Zero target by the Science Based Target initiative (SBTi) and the following publication of the Climate Transition Plan in Q1 2023 and aims to provide a comprehensive account of the material progress over 2023 against the baseline year 2020 and the performance in 2022. This information and other comprehensive details on other dimensions complementary to the decarbonization path not found in this report, can be found in the 2023 Integrated Annual Report, which is subject to statutory audit (Pricewaterhouse Coopers & Associados - Sociedade de Revisores de Contas, Lda.).

EDP will review the Climate Transition Plan in each Business Plan Cycle to ensure strategic alignment.



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# Message from the CEO



Miguel Stilwell d'Andrade  
CEO of EDP and EDP Renewables

## Dear shareholders and stakeholders,

The urgency for climate action has been widely stated by sound science reports. To retain any chance of limiting global warming below 1.5°C, the world needs to reach net zero by 2050 and global emissions must decrease at least 43% by 2030 – around a 7% decrease annually. However, climate reports state that emissions are still increasing today by 1.5% per year globally<sup>1</sup>.

Mindful of the importance that the energy sector has in the transformation the world needs, in our updated Business Plan for 2023–2026 we continue leading the decarbonization of the sector by deploying a €25 Bn investment plan in the energy transition, targeting annual gross renewables additions of 4.5 GW.

EDP has been prioritizing investments in renewables for the last 20 years. By the end of 2023, around 87% of the energy generated by EDP came from renewable sources (vs. 20% two decades ago) and our renewable capacity reached 86%.

The company is replacing its legacy thermal assets, progressively decommissioning coal-fired power plants until the end of 2025 and is committed to achieve 100% of renewable power generation by 2030. This is being done with governments and local authorities to promote a fair and just transition in the regions affected by the closure of these legacy assets.

In 2023 we made material progress on our decarbonization efforts: our thermal generation decreased 54% compared to 2022 and the weight of coal on total generation is expected to be immaterial in 2024 confirming our steadfast delivery of our commitment of being coal-free by 2025. This is directly influencing our carbon footprint – in 2023 EDP registered an overall decrease of over 35% vs. 2020 (34% vs. 2022) on total emissions on all scopes.

In 2023 we published our Climate Transition Plan to clearly outline how EDP will pivot its existing assets, operations, and business model towards a trajectory that aligns with sound climate science. The Plan was submitted to the 2023 Annual General Meeting and was approved by a strong shareholders' vote of over 90%. Our engagement and the "Say on Climate" from shareholders bring consistency and credibility to the path we want to follow.

And we are being recognized as front runner regarding the credibility of our transition plan – I had the privilege to represent EDP as the only corporate selected to speak at the UN Climate Ambition Summit convened by UN Secretary General, in September 2023, to showcase first "movers and doers" and credible actions, policies and plans to accelerate the decarbonization of the global economy.

Additionally, EDP was invited by CDP to showcase its Climate Transition Plan among a wide audience and was just recently recognized for the 7<sup>th</sup> consecutive year as one of the few companies in the Leadership group (400 out of over 21,000 scored), in the CDP's annual 'A List' over the data reported in the Climate Change 2023 questionnaire.

In the Corporate ESG Awards 2023, covering the best listed companies across all areas of ESG and sustainability performance and reporting, EDP was winner in the category of “Best Company for Climate Reporting – Large Cap”.

We are proud to be part of the group of most progressive companies driving climate action and transparency. These recognitions give us the confidence to continue in the right track.

At EDP we value transparency and credibility of our actions. The present progress report of the Climate Transition Plan not only identifies the achievements but also the challenges where we must invest our efforts further.

As leaders in the energy transition, we will continue to foster engagement and collaboration, partnering with peers, suppliers, customers, and sharing our aspiration to secure a sustainable and safe future for all. Individual plans and actions are not enough, it requires collective effort by governments, policy makers, companies, communities. We all need to act, together.

**Miguel Stilwell d’Andrade,**  
**CEO of EDP and EDP Renewables**

<sup>1</sup> Intergovernmental Panel on Climate Change; Potsdam Institute for Climate Impact Research; Climate Action Tracker; BCG analysis, WEF, White paper, Nov 2023.

# Why we choose ocean

Moray East Offshore Wind Farm, Scotland

# Because We Choose Earth

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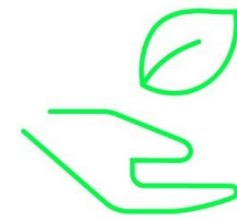
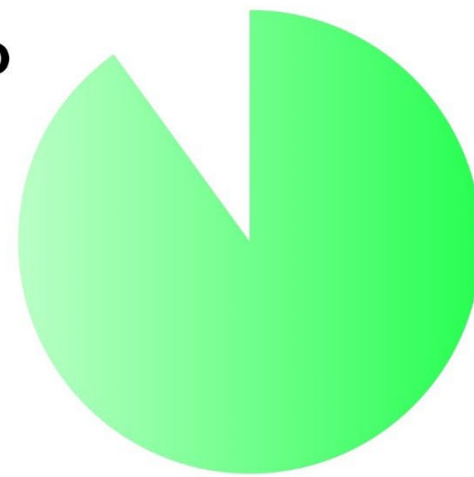
Sustainable financing

# Climate pathway

## Our science-based targets

In 2019, EDP committed to reduce by 98% our combined scope 1 and 2 emissions intensity in 2030, plus a 50% reduction in absolute scope 3 emissions in 2030 (both against 2015 levels), a commitment recognized by the Science Based Targets initiative (SBTi) as being aligned with the scientific trajectory required to limiting the increase in global average temperature to 1.5°C.

### EDP's Net Zero target



**Reducing 90%** of absolute scope 1, 2 and 3 emissions by 2040 vs. 2020 with near term targets by 2030

In 2022, EDP raise its ambition by committing to reach net zero greenhouse emissions across the value chain, by 2040, with ambitious mid-term targets by 2030 (from a baseline year set for 2020). The overall goal is to reduce 90% of scope 1, 2 and 3 emissions by 2040 vs. 2020 with near term targets by 2030. These targets have been approved by SBTi under the Net Zero Standard, in early 2023.

### Near and long term Net Zero targets

Scope	Target 2030	Target 2040
S1+S2 [intensity]	-95%	-96%
S3 [absolute]	-45%	-90%
S1+S3C3 [intensity]	-80%	-
S3C11 [absolute]	-45%	-90%
S1+S2+S3 [absolute]	-	-90%

To support these 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.

## Carbon footprint

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

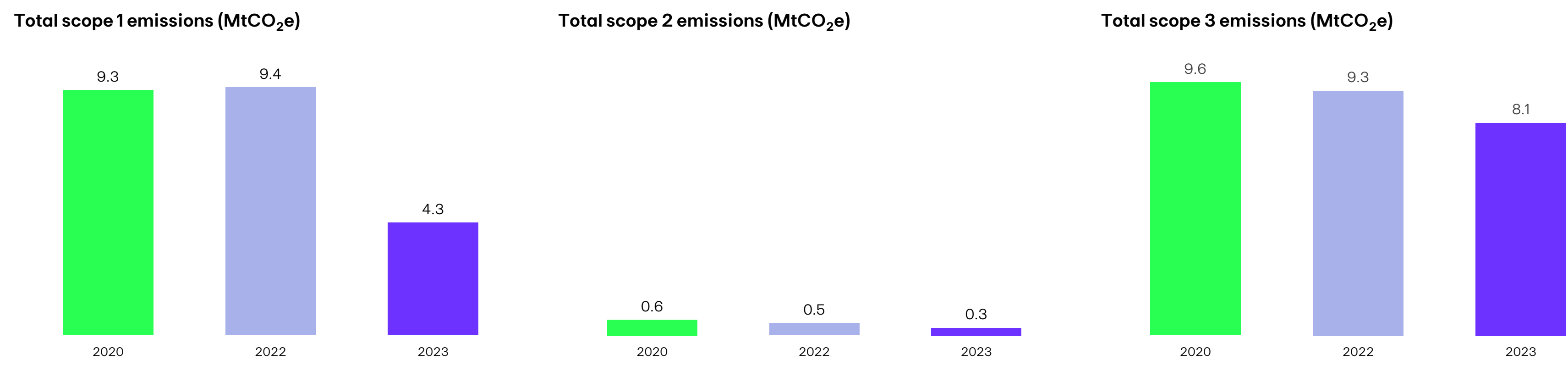


In 2023 EDP registered and overall decrease of 34% vs. 2022 on total emissions and this decrease occurred on all scopes:

- 55% reduction in scope 1 emissions heavily influenced by the reduction in coal and CCGT generation
- 39% reduction in scope 2 emissions, considering only the technical losses and also due to lower levels of losses in the grid, as well as lower energy market emission factors
- 54% reduction in scope 1 and 2 emissions, despite the decrease in electricity produced (-8%), has led to a decrease in Scope 1 and 2 emissions intensity by around 49% compared to 2022, which is now 81 gCO<sub>2</sub>e/kWh
- The total value of scope 3 emissions reached 8.1 MtCO<sub>2</sub>e, 13% less than in 2022, essentially due to the reduction in the categories of sale of gas to end customers, capital goods and fuel and energy related activities.













**Table 1: Net Zero targets calculation formulas and 2023 progress**

Target	Target formula	UN	Base year – 2020	2023	Var. vs. 2020	Target 2030	Target 2040
S1+S2	(Scope 1 + scope 2 emissions) / Electricity generated	gCO <sub>2</sub> e/kWh	156.8	80.6	-48.6%	-95%	-96%
Scope 1		tCO <sub>2</sub> e	9,304,139	4,275,846			
Scope 2 (location-based)		tCO <sub>2</sub> e	594,401	287,653			
Electricity generated		MWh	63,122,000	56,629,013			
S3		tCO <sub>2</sub> e	9,594,686	8,062,330	-16.0%	-45%	-90%
S1+S3C3 (All sold electricity)	(Scope 1 Stationary Combustion + scope 3 Category 3 from electricity that is purchased and sold) / All sold electricity	gCO <sub>2</sub> e/kWh	126.2	66.5	-47.3%	-80%	-95%
Scope 1 Stationary Combustion		tCO <sub>2</sub> e	9,273,373	4,249,329			
Scope 3 Category 3 Electricity that is purchased and sold		tCO <sub>2</sub> e	2,209,907	1,994,639			
Electricity that is purchased and sold		MWh	27,897,187	37,204,183			
All sold electricity (Electricity generated + Electricity that is purchased and sold)		MWh	91,019,187	93,833,196			
S3C11 (Use of sold products)		tCO <sub>2</sub> e	2,405,104	1,031,994	-57.1%	-45%	-90%
S1+S2+S3 (Net Zero)		tCO <sub>2</sub> e	19,493,226	12,625,828	-35.2%		-90%

Main emissions sources

		Total 2020 emissions		Total 2022 emissions		Total 2023 emissions	
		MtCO <sub>2</sub> e	% total	MtCO <sub>2</sub> e	% total	MtCO <sub>2</sub> e	% total
	<b>Thermal generation</b> Upstream and fuel combustion from power generation (coal and natural gas)	~11.0	57% 16% ⊕ 84%	~10.4	55% 10% ⊕ 90%	~4.8	38% 11% ⊕ 89%
	<b>Non-commodity supply chain</b> Procurement, including material, assembly, transport, etc.	~3.0	15%	~3.6	19%	~3.2	26%
	<b>Gas consumed by EDP's clients</b> Combustion of gas sold to retail customers	~2.4	12%	~1.4	8%	~1.0	8%
	<b>Gen-retail imbalance</b> Emissions from power purchased to serve EDP's clients	~2.4	12%	~3.1	16%	~3.2	26%
	<b>Distribution power losses</b> Emissions of the power lost in distribution networks	~0.6	3%	~0.4	2%	~0.3	2%
	<b>Others</b>	~0.1	0.6% 47% ⊕ 53%	~0.1	0.4% 42% ⊕ 58%	~0.1	0.8% 50% ⊕ 50%
		<b>~19.5</b>		<b>~19.2</b>		<b>~12.6</b>	

 Scopes 1+2     Scope 3



## Net zero action plan and main developments

2023 Status	Near term (2030) SBTi targets	Long term (2040) SBTi targets	Levers	Actions	Developments
S1+S2 [intensity] <b>-49%</b>	S1+S2 [intensity] <b>-95%</b>	S1+S2 [intensity] <b>-96%</b>	<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>	<ul style="list-style-type: none"> <li><b>Deconsolidation of Pecém and Aboño</b> coal power plants</li> <li>Plan to convert Aboño to gas fired power plant in 2025</li> <li><b>Request for decommissioning of Los Barrios and Soto 3</b> coal fired power plants</li> </ul>
S1+S3C3 [intensity] <b>-47%</b>	S1+S3C3 [intensity] <b>-80%</b>	S1+S3C3 [intensity] <b>-95%</b>	<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>250 MW of H<sub>2</sub> electrolysers by 2026</li> <li>Improve regulatory landscape to enable additional renewable capacity</li> </ul>	<ul style="list-style-type: none"> <li>~2.5 GW of solar and wind projects added in 2023</li> <li>EDP reached <b>24 GW of renewable installed capacity</b> in 2023</li> </ul>
S1+S3C3 [intensity] <b>-47%</b>	S1+S3C3 [intensity] <b>-80%</b>	S1+S3C3 [intensity] <b>-95%</b>	<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 eficiente incentives for reduction of distribution power losses</li> </ul>	<ul style="list-style-type: none"> <li>&gt; <b>€0.8Bn investment</b> in the grid on technical losses, digitalisation, and grid optimisation and modernisation</li> <li><b>Decarbonisation</b> of Iberia's and Brazil's <b>electric systems</b></li> </ul>
S3 [absolute] <b>-16%</b>	S3 [absolute] <b>-45%</b>	S3 [absolute] <b>-90%</b>	<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>Loss of generation capacity in Iberia and Brazil led to <b>slight increase in gen-retail imbalance</b></li> <li><b>New PPAs</b> in the US, the Netherlands, Spain, Italy and Greece</li> </ul>
S3C11 [absolute] <b>-57%</b>	S3C11 [absolute] <b>-45%</b>	S3C11 [absolute] <b>-90%</b>	<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><b>Data quality improvement</b> on carbon footprint from renewable suppliers</li> <li><b>EPD or LCA as a requisite for future RFPs</b></li> </ul>
S3C11 [absolute] <b>-57%</b>	S3C11 [absolute] <b>-45%</b>	S3C11 [absolute] <b>-90%</b>	<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>	<ul style="list-style-type: none"> <li><b>28% reduction</b> is gas supplied to clients, compared to 2022</li> </ul>

Direct action
  External/Policy/Public positioning



## 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. Regarding CCGT power plants, EDP is working on the feasibility of multiple options such as decommissioning, repurposing/conversion or deconsolidation.

### PHASE-OUT THERMAL GENERATION



EDP is accelerating the delivery of its coal free commitment by 2025 with reinforced plans for the group’s remaining coal plants in Spain. These decisions represent yet another relevant step in the company’s journey towards full decarbonization of its generation portfolio, following the disposal of the Pecém coal power plant in Brazil and the shutting down of Sines coal-fired plant, in Portugal.

In 2023, there were material developments in operation conditions with impact on emissions from generation:

- favourable hydro conditions in the Iberian Peninsula (productivity index close to the average year), after a 2022 of extreme drought, which led to a higher hydropower generation and a lower operation of the CCGT plants.
- the sharp reduction in production from coal-fired power plants in Spain, combined with the announced plans for the Spanish thermal assets:
  - plans to convert Aboño II from coal into gas fired, expected to occur by middle of 2025 while continuing to co-fire blast furnace gases, a case study of circular economy in Europe through the valorisation of this by-product, avoiding the emission of 1 million tons of CO<sub>2</sub>/year, with establishment of a new partnership with the Asturian based industrial Group Corporación Masaveu, S.A. (“CM”), through the sale of a 50% stake in Aboño (see details in the [case study](#))
  - authorization requested from the electricity system operator (Red Eléctrica) to close Aboño I coal plant, as well as EDP’s last remaining coal plants in Spain (Soto 3 and Los Barrios).

- the limited production from the Pecém power plant in Brazil and the sale of 80% of this power plant concluded in December 2023- The buyers have started studies for the conversion of the plant to other sources of fuel, such as natural gas and blends with hydrogen or biomass, through an Energy Transition Plan based on the best international decarbonization practices.

As a result of these operating conditions, there was a significant decrease in both EDP’s primary energy consumption (-51% YoY) and the CO<sub>2e</sub> emissions associated with electricity generation (-55% YoY).

With the announced plans for Aboño and Pecém, the weight of coal on total generation is expected to be immaterial in 2024 providing further visibility on the delivery of EDP’s commitment to become coal-free by 2025.

Regarding CCGT power plants in Portugal and Spain, EDP is working on the feasibility of multiply options such as decommissioning, repurposing/conversion or deconsolidation, with strong business plans that can bring value.

The new National Energy and Climate Plans from Portugal and Spain submitted to the European Commission in 2023 aim to the incorporation of renewable generation into the electrical system above 80% (Portugal 85% and Spain 81% by 2030).

Member States must implement policies and measures that will enable them to reach the new 2030 targets and the EU must ensure that all its members deliver on their promises by implementing adequate national decarbonisation policies.



# Delivering on Coal free by 2025

## Case study on conversion of Aboño plant

### Conversion of coal-fired plant

The conversion of the Aboño II coal plant to gas fired is a significant step in EDP's consistent journey towards full decarbonization of its portfolio.

Aboño consists of two coal groups (Aboño I and II) with a combined capacity of 904 MW, near Gijón and the port of Musel, which play a key role in supporting the security of electricity supply to the Asturias region, in Spain.

The conversion of the Aboño II thermal plant in Spain, from coal into gas fired, already awarded to the contractor, is expected to occur by middle of 2025 with 494 MW power capacity, while continuing to co-fire blast furnace gases, a case study of circular economy in Europe through the valorisation of this by-product, avoiding the emission of about 1 million tons of CO<sub>2</sub>/year.

Regarding CO<sub>2</sub> emissions, the average reduction will be of 30%, varying according to the volume of steel production gas being revalorized at the plant.

The conversion will have other relevant environmental benefits, including an 87% reduction in SO<sub>2</sub> emissions, a 78% reduction in NO<sub>x</sub> emissions and a 94% reduction in particulate emissions, and a 95% reduction in waste generated at the facility.

With a partnership consolidated by EDP through equity method with the Asturian based industrial Group Corporación Masaveu, concluded by the sale of a 50% stake in Aboño (Enterprise Value of c.€350 million and an Equity Value of €60 million for 100% of the asset), foresees joint control in the management of Aboño and transfer of liabilities related to the power plant. EDP will retain full ownership and development of the Just Transition projects in Aboño, such as hydrogen and renewables projects.

Meanwhile it was requested by EDP to the electricity system operator (Red Eléctrica) to close Aboño I coal plant, as well as EDP's last remaining coal plants in Spain (Soto 3 and Los Barrios).



## By transforming thermal power plants into "green hubs" linked to four energy axes: green hydrogen, energy storage, renewables and electricity system flexibility, EDP accelerates the achievement of its ambition to abandon coal-fired generation by 2025.

The **Asturias Green Hydrogen Valley project**, receives funding from all four European mechanisms, including the Innovation Fund (~18M confirmed in December 2023), confirming its strategic role in the energy transition. The European Commission considers it an Important Project of Common European Interest (IPCEI Hy2Use), and Project of Common Interest (PCI). In addition, Asturias H2 Valley is one of the initiatives to receive support from the IDAE (Spanish Institute for Diversification and Energy Saving) under the PERTE for Renewable Energy, Renewable Hydrogen and Storage (ERHA). These national grants, corresponding to the Pioneer Projects and Value Chain programs, amount to EUR 29.9 million, in a project with a total investment estimated of ~€210M.

The project foresees two main stages: first one adds up to a total power of 150 MW of electrolysers and its putting into service is expected to be during the first months of 2026; second stage of the project, if market conditions are favourable, will add another 350 MW of electrolyser power and will be put into service from 2027 onwards.

The project will contribute to retain jobs in a region where many industries are declining – during construction of the project it is estimated to generate around 400 direct jobs and in operation stage around 50 direct jobs.

### Social and Environment programs

Within EDP's ESG strategy, the promotion of **new energy transition projects is always accompanied by a portfolio of social and environmental programs** that seek to have a positive impact on the areas and local communities where EDP is present, with the capacity to create wealth, employment, fix population, and promote equity and equality, among other objectives.

### EDP Suma+ program

The EDP Suma+ program is a global program at EDP Spain to bring together the different projects and activities of stakeholder's management. In the municipality where the Aboño power plant is located (Council of Carreño) the program was launched already in 2019, and entails several components, such as:

**ENTAMA** – a program to support local entrepreneurs promoting the creation of employment and self-employment through the financing of local business projects.

**TECH Camps:** EDP España's technology camp program seeks to support digitalization and the development of new technological and STEM skills among children from 7 to 15 years old.

**MiEntorno EDP:** a collaboration agreement with the local organizations through which the recovery of trails and paths in the Areo mountain has been carried out, together the project for the recovery of the environment of the power plant's ash dump, proceeding to its re-naturalization, elimination of allochthonous species and recovery of ecosystem services.

**EDP+Cerca:** Support to municipal activities related to the improvement of services, promotion of neighbourhood activities.

**EDP Partners:** to promote projects with business and technology partners in education, digitalization and ESG aspects.

**Other STEM promotion programs** in collaboration with public schools and Universities.



## Increase renewable generation

The path to decarbonisation involves a strong commitment to electricity production from renewable sources. The [23-26 Business Plan](#), presented to the markets in May 2023, emphasised the acceleration of the group's investment in energy transition, with a total planned investment of 25 billion euros, 85% of which in renewables, clients and energy management. This unprecedented investment in renewable energy includes wind, solar and green hydrogen complemented by energy storage technologies.

In line with the marked investment planned in renewable energies, EDP has set ambitious targets, aiming at being all green by 2030, i.e., all power generated will be from renewable sources. By 2026, both the renewable installed capacity and generation should already exceed 90%, both indicators reaching 100% in 2030.

### RENEWABLE GOALS BY 2026



At the end of 2023, the percentage of renewable installed capacity was 86%, i.e., up 7 p.p. compared with 2022, well on track to reach over 90% by 2026.

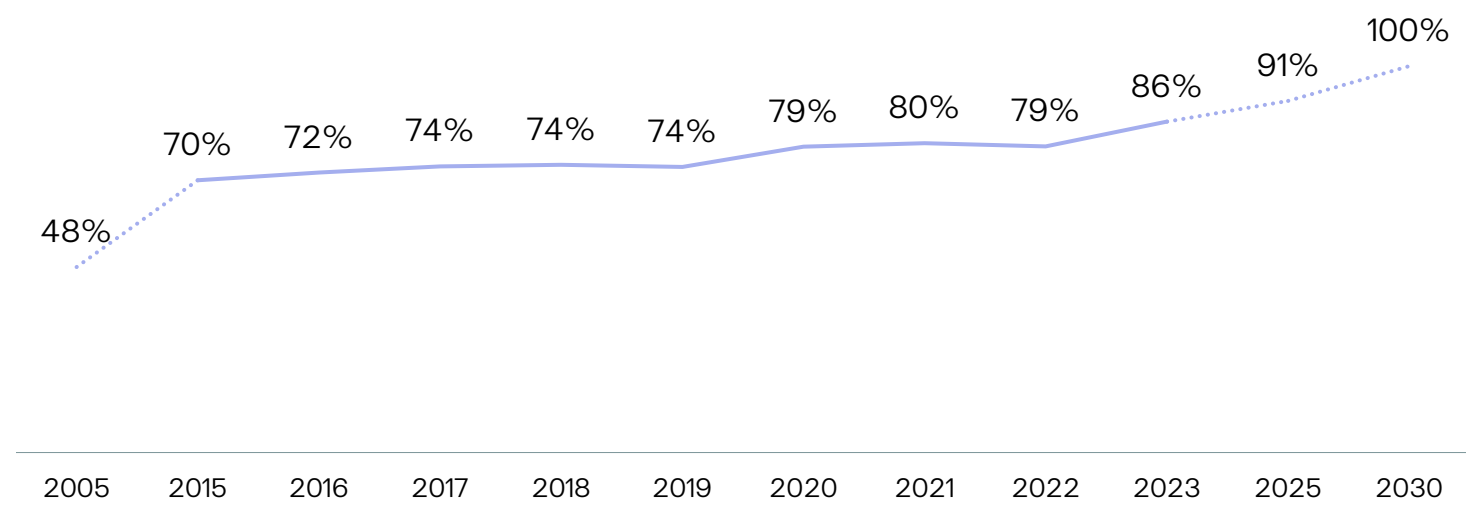
In 2023, electricity production from renewable sources accounted for 87% of the total electricity generated, 8 p.p. more than in 2022. Of this 87%, wind contributed with 56%, hydro with 25% and solar with 6%.

### Solar DG

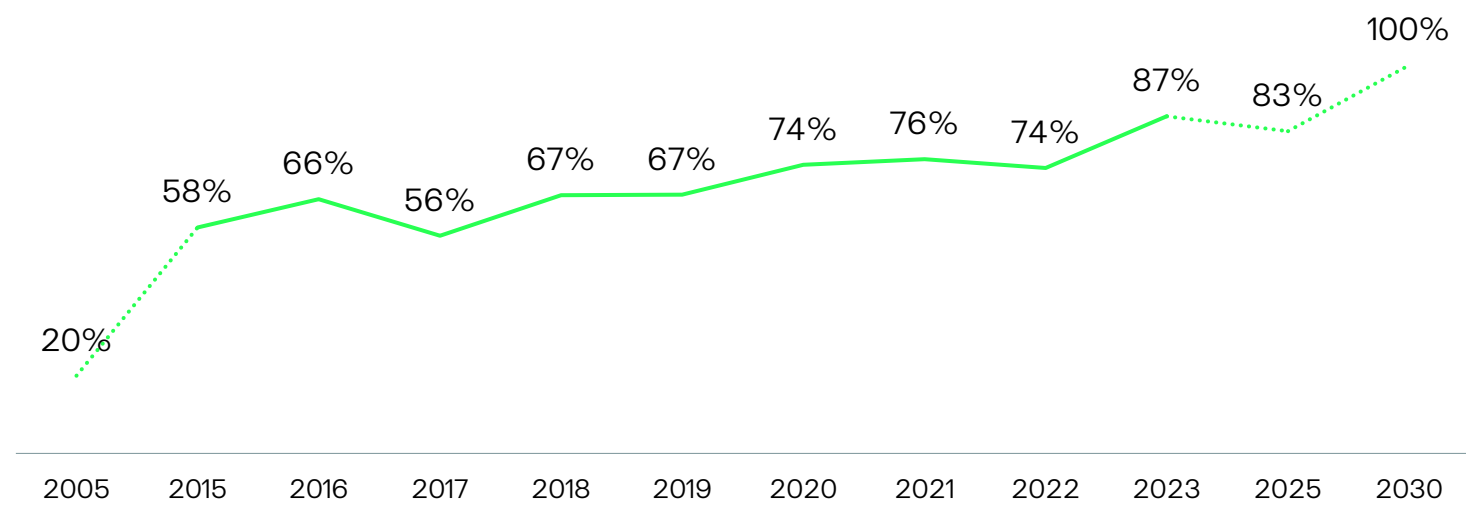
Anticipating the new energy paradigm, EDP has been consolidating over the last 3 years its presence in a future in which power production, consumption and distribution will be increasingly decentralised.

In 2023, EDP installed a total of 410 MW of decentralized solar photovoltaic systems, accounting for around 33% of the total solar portfolio and representing an increase of 59% YoY (+0.4 GW vs. 2022). The total installed capacity by the end of 2023 amounted to 1.1 GW, which produced 1,045 GWh and avoided 570 ktCO<sub>2e</sub> of emissions. EDP will continue to accelerate the global Solar DG business, deploying 2.1 GWac of PPA model until 2026.

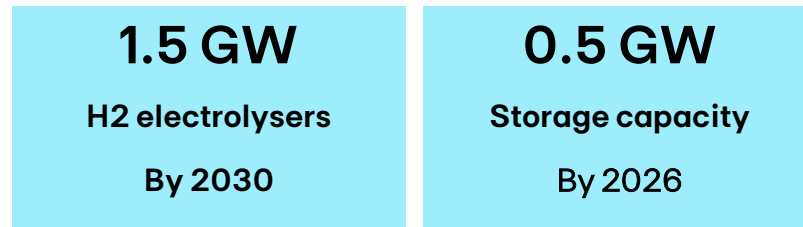
### Renewable installed capacity(%)



### Renewable energy generation(%)



## H2 and Storage goals



EDP has established a hydrogen business unit to develop renewable hydrogen projects in different geographies and support the decarbonization of hard-to-electrify energy uses, aiming to reach 1.5 GW of electrolyzer capacity by 2030, worldwide.

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

As of today, EDP has over 500 MW of electrolysis capacity under advanced development, with projects in Iberia, United States and Brazil, leveraging on local presence in these regions.

Throughout 2023, several of these projects have been undergoing environmental licensing procedures and been granted grid connection and public funding. By the end of 2023, EDP has secured public funding in the form of 2 Innovation Fund Projects, 2 Horizon2020, 5 projects in Spain and 1 in Portugal supported with funds from the Recovery and Resilience Facility, 3 projects in Spain considered IPCEI (Important Project of Common European Interest) by the European Commission and 1 project considered PCI (Project of Common Interest).

Currently, EDP is already producing renewable hydrogen in Brazil, from a 1.25 MW project that is operating since December 2022, and has another project under construction in Portugal, of 1.25 MW, which is expected to come online by Q2 2024.

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.

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. Complementary, 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.

Currently EDP has an operating storage portfolio of 19.4 MW (67.6 MWh), with additions in 2023 alone of 16.7 MW (65 MWh) and a portfolio under construction of ~140MW (361.6MWh).

## 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.

In the case of EDP, more than 90% of its scope 2 emissions is related to the distribution power grid losses. EDP has distribution grids in Portugal, Spain and Brazil, and this share of scope 2 emissions is highly dependent on the energy mix of the geography where those networks operate – the greener the electricity generation in these geographies, the less the contribution of grid losses for scope 2 emissions will be.

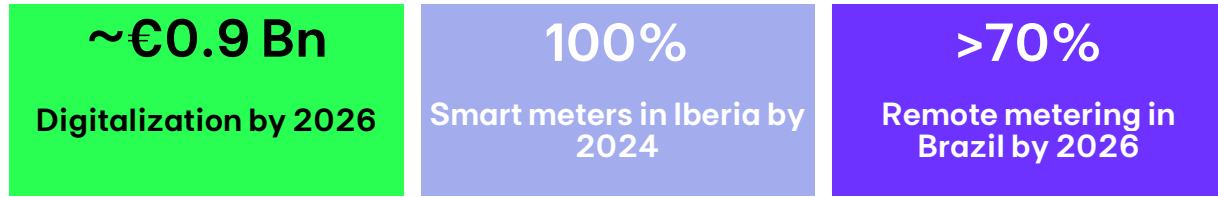
If systems are greener, EDP will have less emissions from distribution power losses. The pace of carbon intensity reduction in Iberia and Brazil's systems and distribution losses decreased contributed to reduce emissions by 41% vs. 2020 in 2023, considering only technical power losses.

Additionally, EDP, as a major renewable energy provider, plays an important role in scope 2 emissions' reduction across the value chain, contributing to decarbonising the power sector in the geographies where it is present.

Beyond the necessary transition on the national system energy mix, 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).





In 2023, the CAPEX deployed in Networks for technical losses, grid optimization and modernization through digital transformation was over €0.8Bn, of which over €0.2Bn for digitalization. The rate of remote metering where EDP has distribution networks was about 89% of distributed energy with smart meters in Iberia and 65% of penetration of remotely metered energy in Brazil by the end of 2023.

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.

EDP is among the global leader’s group that launched the 24/7 Carbon Free Energy (CFE) Compact (24 hours a day, seven days a week), a Google initiative in partnership with SEforALL and the United Nations (within the UN High Level Dialogue on Energy, September 2021), to accelerate the decarbonization of electricity grids, by adopting, enabling, and advancing 24/7 Carbon-Free Energy and that has now over 140 signatories from government to local and regional authorities, NGOs, energy providers, among others that are committed to advancing the 24/7 CFE approach to accelerate electricity system decarbonisation.

### 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.

Since 2022, one of the steps EDP is implementing to tackle the challenge of reducing supply chain emissions whilst growing its renewable deployment is the engagement with wind and solar suppliers with the purpose of improving data quality.

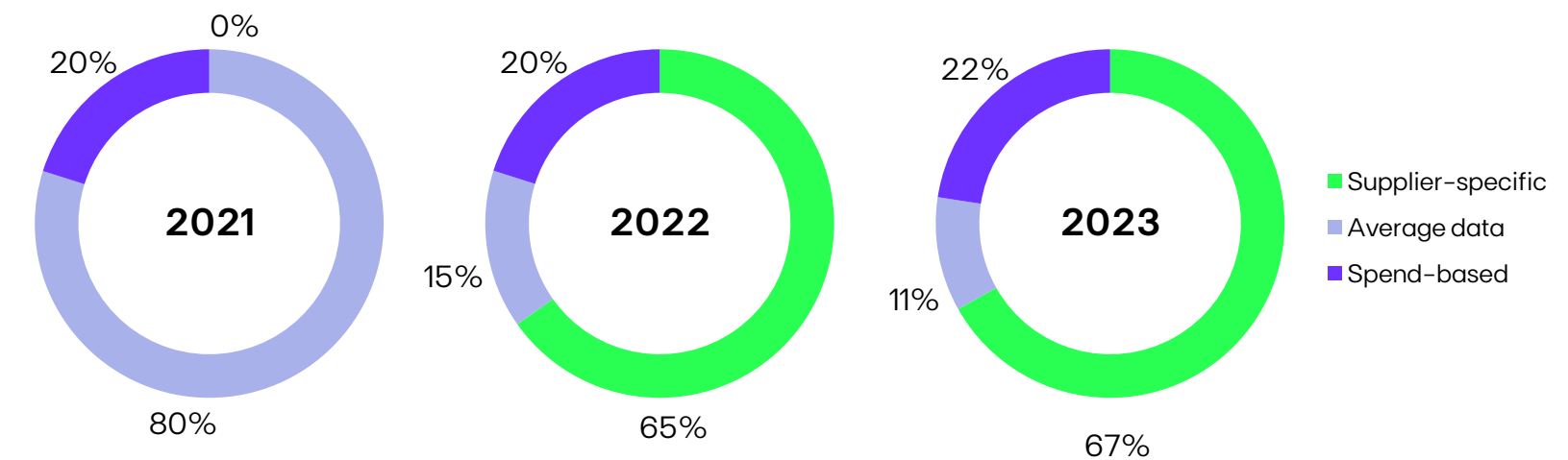
The first major developments were on wind projects, where all Capital Goods emissions were calculated using the global warming potential available on the Life Cycle Assessment

(LCA) or Environmental Product Declaration (EPD) of the specific turbine suppliers and models used in the 2022 projects.

During 2023 EDP has applied the same methodology to solar projects, engaging with the main solar suppliers of modules, inverters and trackers to request environmental information from their equipment. For this reason, this was the focus of the efforts that took place in 2023, with the majority of solar suppliers already able to provide information on the carbon footprint of PV modules and inverters.

As a result, EDP has been able to report with a higher level of precision on supply chain emissions, as seen in the graphs bellow, whilst mapping the carbon footprint impacts of both suppliers and their products.

### Evolution of supply chain scope 3 emissions data quality



While in 2023 supply chain emissions decreased 12% compared to 2022, there was a 20% increase on built renewable capacity. This translates into a 26% reduction on emissions intensity per MW that can be explained by having lower emissions factors from suppliers, compared to the industry averages, but also by having projects with equipment that have lower carbon footprints.

This progress reinforces the importance of the decision to ask suppliers to include their equipment’s LCA or EPD in the RFP process.

## 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 to clients.

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

- corporate PPAs 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 acquisition strategy (e.g., RECs, I-RECs, GO).

In 2023, EDP secured new corporate PPAs in the US, the Netherlands, Spain, Italy and Greece. EDP's success in securing new PPAs reinforces its low-risk profile and growth strategy based on the development of competitive projects with long-term visibility, fostering the acceleration of the energy transition and the decarbonization of the economy.

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.

## Minimize natural gas retail emissions

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).

In 2023, EDP supplied 28% less of gas to clients compared with 2022. In Portugal, the “[Casa Elétrica](#)” programme continued, focusing on B2C customers, aiming to promote the switching from 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.

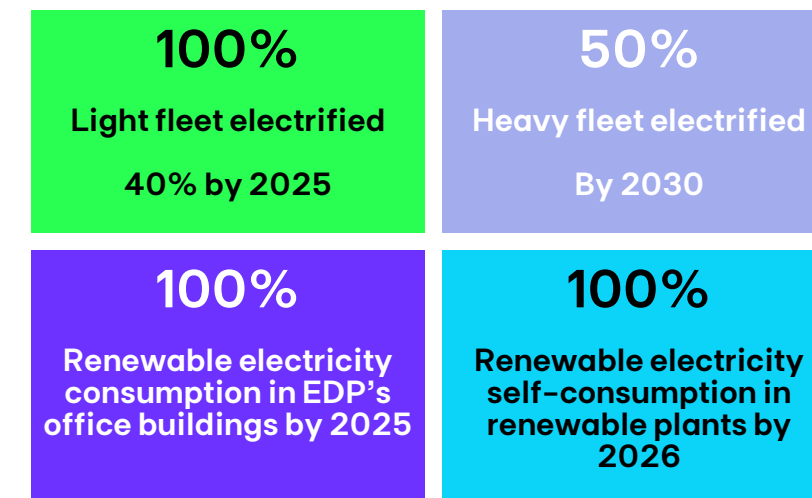
The execution of these plans is highly dependent on regulatory support as the business case for electrification on both B2C and B2B clients is still limited:

- 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 H2 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 account for less than 1% of EDP's emissions. Despite having a smaller impact, EDP has also set goals within its Net Zero ambitions.



EDP is committed to achieving a 100% electric fleet (light vehicles) by 2030, which will require a strong investment in the renewal of its vehicle fleet. In 2023 reached 29.4% of the light fleet electrified (15% in 2022). This transition will now be accelerated and will enable a 70% reduction in CO<sub>2</sub> emissions from the global fleet, which consists of around 4,000 service vehicles.

EDP has also committed to installing 40,000 public and private charging points by 2025 (a total of 8,510 installed by the end of 2023) in the different geographies where it has commercial activity (Portugal, Spain and Brazil), as well as reaching 180,000 customers with electric mobility solutions by 2025 (in 2023 reached 107 k clients).

Renewable electricity in buildings and in self-consumption in renewable power plants is being re-evaluated within the Group, taking into account, not only the best long-term solution (green sourcing, PPA or REC/GO), but also alignment with the most recent developments in standards regarding 24/7 Carbon Free Electricity to build a robust and verifiable claim of these targets.

### Acting beyond mitigation

EDP's Net Zero commitment approved by SBTi does not require offsetting emissions before 2040 in line with the Net Zero Standard. By 2040 onwards EDP will need to offset residual emissions which cannot be mitigated, through carbon removals.

While international and national rules are not completely stabilised and credibility standards are taking shape, EDP is already assessing the business case/strategy for offsetting residual emissions in line with the SBTi Net Zero Standard, to ensure that the use of carbon credits is done in compliance with the credibility and additionality requirements.

Acknowledging that it can never replace mitigation efforts, EDP recognises that investments in technology and nature-based carbon removal must accelerate. According to IPCC "The deployment of carbon dioxide removals to counterbalance hard-to-abate residual emissions is unavoidable if Net Zero CO<sub>2</sub> or GHG emissions are to be achieved." As such, until 2040, any action taken by EDP will be following SBTi's recommendations and other best practices to go beyond value chain mitigation and focus on harder to abate emissions sources, such as the ones associated to business travels.

For other dimensions of action towards a nature positive impact detailed information can be found in the [Biodiversity Report 2020-2022](#) published in 2023, detailing initiatives on

going, indicators and practices and also on Section 3.4.4. Biodiversity and ecosystems of 2023 [Integrated Annual Report](#).

### 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.

### 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 3,500 new hires by 2026.

Overall, in 2023, the EDP's group impacted more than 32,000 people through more than 140 initiatives and strong positioning on its main social networks, which resulted in more than 400 people-related content. This attractiveness strategy gave rise to a high level of applications in EDP's different markets (over 50.000), resulting in 1,425 new hires and 677 internships.

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.

The EDP group's total training volume in 2023 resulted in more than 375,000 hours of training, reinforced by worldwide access to on-demand content, currently with 72% coverage. According to the organisational climate survey results, 76% of employees believe EDP provides learning opportunities, experiences, and tools to do their jobs in the best possible way.

### 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.

The company has a set of policies and procedures that frame the entire sustainable procurement process across the Group:

- [Supplier Code of Conduct](#) that feeds into the purchasing and contract negotiation processes with suppliers to ensure the alignment of critical suppliers with the company's ethics and sustainability commitments
- [Sustainable Supply Chain Policy](#) that establishes the principles and commitments to sustainability that are transferred to the purchasing process
- Sustainable Procurement Protocol that defines the company's action protocol and due diligence process in processes related to the supply chain, including the identification of the criticality of suppliers based on their activity with EDP.

For further details on supply chain engagement efforts and challenges see section 3.4.7. Supply Chain of the [2023 Integrated Annual Report](#).

### Local and Vulnerable Communities

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.

Social investment projects developed in the countries where EDP is present are communicated to the various stakeholders through the [edp YES | edp.com](#), ensuring an integrated narrative about the EDP group's social investment. 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.

Global investment in vulnerable and local communities amounts to over €26.2 M in 2023. For more details consult section 3.4.9.1. Voluntary investment in the community of the [2023 Integrated Annual Report](#).

In 2023 EDP approved its new [Local Stakeholder Engagement Policy](#), with an extensive list of Procedures compulsory throughout the Group. The premise is to map and deeply engage with the communities before starting a new project, and to deeply diagnose, through

independent external studies, the real impacts business will have on the new energy landscape. It's the safest path to build shared value, supporting communities before construction begins and earning a Social License to Operate.

The established procedures in place ensured that, throughout 2023, 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 (further details in section 3.4.9.3. of [2023 Integrated Report Annual](#)).

#### One example in LATAM region

- In the surroundings of [São Manoel Hydroelectric Power Station](#), in Pará, Brazil, EDP is proactively managing the impacts arising from interference in the territories that are historically inhabited 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. Built in June 2014 and operating since May 2018, a set of mitigation measures and environmental compensation are still ongoing today for the benefit of these peoples, prepared by respecting the specificities/particularities of each indigenous people, in a long participatory process of dialogue that was monitored and approved by Brazilian governmental protection agency for Amerindian interests and their culture (FUNAI) at all stages of development. During 2023, several basic Indigenous Health Unit, Meeting Sheds, Community Kitchens and Photovoltaic Energy Systems were developed and delivered.

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.

Other examples, in the APAC region:

- in North Singapore, deploying solar DG on the [Pulau Ubin](#) island is a visible incentive, since there was no business interest in the region, but rather the opportunity to implement the energy transition in a flagship locality. Ubin is a deeply respected natural sanctuary, but operating on a diesel fuel PowerGrid, now partially transformed into solar DG - the enhanced microgrid system is powered by 328 kWp of solar energy, equipped with a 1MWh Vanadium flow redox battery energy storage system, creating an electrical



ecosystem that powers the island with non-intermittent renewable energy, capable of meeting at least 95% of the key business and residential needs. Today, more than 30 households and businesses enjoy 24/7 non-intermittent renewable energy, thereby reducing the island's reliance on diesel by more than 100,000 litres per annum, avoiding 268,000 kg of CO<sub>2</sub> emissions. With the use of solar power, it also stabilizes the electricity pricing for residents, as they are no longer subjected to the price fluctuations of diesel.

- in Vietnam the strategy to a Just Transition is rooted on seeding a solid educational bases to the whole population on EDP's Group operation areas – EDPR invested on the education facilities and tools for populations around operation areas of **Xuan Thien Thuan Bac and Xuan Thien Ninh Thuan Solar farms** – the back-to-school operation covered over one thousand households, also endorsing economically fragile families, and further developing local institutional relations with the authorities. This long-term investment on education, deeply knowing the population and transparently engaging, gave EDPR the opportunity and recognition as the first project awarded with the [Fast Infra Label Assessment](#).

## Just Transition

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.

To ensure that social impacts are reduced or even avoided in all locations where thermal power plants previously existed, EDP is developing several Hydrogen and Storage Hubs in Iberia on the sites of its existing and former coal power plants, aiming to supply nearby industries with renewable hydrogen. These hubs leverage on the infrastructure existing on these sites (land, electrical, water, effluents, etc.), the proximity to deep water ports and the integration within industrial clusters to create economic activity aligned with the energy transition in regions that have been dependent on fossil fuels.

In addition, the reskilling of workers from the thermal power plants creates an opportunity to train human resources while ensuring that no one is left behind.

This commitment is showcased at Sines, where one of the largest coal power plants in Portugal operated with a 1,256 MW capacity, from 1985 until 2021. Sines former coal power plant is already in the process of decommission with plans to become an H2 hub reference in Portugal. Social impact program [Futuro Ativo Sines](#), (featured by the World Economic

Forum in its [coal to renewables toolkit](#)), specifically addressed the needs of the subcontractor's workers, as well as the local community at large.

Again, in Spain, the EDP Suma+ program has been developed in the council of Carreño, the municipality where the Aboño power plant is located, and involves all EDP stakeholders in the area. The program was launched already in 2019 (see details in Case study Abonõ in this report).

To make these technologies a reality, in 2023, EDP has been closely collaborating with several entities to secure European funding. Some successful initiatives have been acknowledged as pioneering:

- the Aboño hydrogen project stands as a remarkable demonstration of synergies and complementarity among different funding programs
- the Los Barrios hydrogen project was granted two national incentives from the *Pioneros* program and has also been recognized with the Important Project of Common European Interest (IPCEI) seal
- the Soto de Ribera hydrogen project was also recognized by the *Pioneros* program; at this site, the construction of the REDOX pilot plant began, and the environmental, administrative and construction license for hydrogen phase 1 (5MW) was initiated and the dismantling of Soto 2 continued
- the Sines project in Portugal has received recognition from the European Commission by being awarded through the competitive Innovation Fund.

## Business Plan 2023–2026

In 2023, EDP's gross investment reached €6,139 million, 8% less than in 2022.

Expansion Investments, including Expansion Capex and Financial Investments, reached €5,491 million, -9% vs. 2022. Expansion Investment represented 89% of total investment and was mostly dedicated to new renewables capacity and electricity networks (~95%). Regarding new renewable capacity it amounted to 4.7 billion (-9% vs. 2022), distributed by North America (60%), Europe (22%), APAC (3%) and LATAM (15%).

In Brazil, Expansion Capex in transmission investments increased by 28% while in distribution it increased by 10% vs. 2022, namely due to grid expansion and improving quality of service in distribution.

Finally, EDP maintained a strong asset rotation execution in 2023, with €460 million gains for 0.7 GW capacity, and a positive outlook for 2024, awaiting the closing of 4 transactions.

## Sustainable financing

Sustainable financing is key to accelerating the transition to a carbon-neutral society. The proceeds of green bonds, green loans, and sustainability-linked loans contribute substantially to the implementation of EDP's [Climate Transition Plan](#) and to reach our objectives of becoming to be coal-free by 2025, all green by 2030 and net zero by 2040.

In the end of 2023, sustainable finance amounted to €18.5 billion: (1) €11.1 billion in green bonds; (2) €6.7 billion in sustainability-linked loans and (3) 0.7 billions in green loans. The green financing represented 58% of the nominal debt.



# Why we choose sun

Pereira Barreto Solar Park, Brazil

# Because We Choose Earth

## Index

### Approaching climate transition

- TCFD alignment
- Governance model
- Climate resilience strategy and risk management
- Climate-related targets and KPI
- Climate policy & advocacy





# Approaching climate transition

## TCFD alignment

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.

The adoption of the recommendations is a process of continuous improvement that EDP continues with the objective of further progress in reporting. These recommendations are embedded in the [Integrated Annual Report](#) and detailed in Annex 6.3. TCFD alignment.

## 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 (CGSS). It meets with the Executive Board of Directors (EBD) on ESG issues three to four times per year. In 2023 the agendas of the CGSS were:

- i. February 2023 - Net Zero by 2040 target presented together with the [Climate Transition Plan](#) ahead of its presentation to the Annual General Meeting
- ii. May 2023 –Sustainability Internal Governance
- iii. September 2023 - Corporate Sustainability Reporting Directive and its consequences for EDP
- iv. December 2023 - DJSI and other relevant indexes results; [Business Plan 2023-26](#) ESG targets execution and Sustainability Internal Governance

The 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 Council whose function is to advise the EBD delivering opinions and recommendations on key ESG issues on environment and sustainability matters, with climate issues being a top priority. In 2023 the Environment and Sustainability Council was convened twice with the following agendas:

- July 2023: Water management - EDP's experience and Challenges, addressing Climate Risks integrated in EDP's Global Risk Management Process and Water management in the electricity market
- November 2023: E-Redes (Distribution system operator in Portugal) contribution to wildfire risk management & biodiversity protection, addressing Climate change risks identification (TCFD exercise), Adaptation action plan and Wild vegetation management and biodiversity protection. EDP's positioning ahead of UNFCCC COP28 was also discussed.

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.




## Climate resilience strategy and risk management

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.

Over the course of 2023, EDP implemented three new climate scenarios in the Climate Risk Management Process that gather the transition and physical scenarios, as seen bellow.

	<u>Transition scenario</u>	<u>Physical scenario</u>
 <b>As green as it gets (AGG)</b>	Net Zero Scenario (IEA)	RCP 2.6 (IPCC)
 <b>A bit greener than today (BGT)</b>	Base case scenario (resulting from several international sources), assuming that of market prices changes will not be significant between the two scenarios, due to short/ mid term nature of transition risks	RCP 4.5 (IPCC)
 <b>Slow move towards transition (SMT)</b>		RCP 8.5 (IPCC)
<b>Time periods assessed</b>	<ul style="list-style-type: none"> <li>• 2025</li> <li>• 2030</li> <li>• 2050</li> </ul>	<ul style="list-style-type: none"> <li>• 2025</li> <li>• 2030</li> <li>• 2050</li> </ul>

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 (2022), 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 (5 to 10 years, specifically 2025 and 2030) is mainly related to transition risks, namely energy market design, prices, regulatory framework, and technological developments.

Long-term risk (10 to 30 years, specifically 2030 and 2050) is mainly related to physical risks that may affect EDP's asset portfolio, namely regarding extreme temperatures, extreme wind and rain events, and structural changes in physical parameters.

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.

Further information on other aspects of climate governance model and resilience strategy can be found in [Climate Transition Plan](#) and Disclosures in chapter 2.3. Risk Management of the [2023 Integrated Annual Report](#).

### 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>2</sub>e emissions, or avoided CO<sub>2</sub>e, 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.

To report against the Net Zero target this document details disaggregated indicators for scope 1, 2 and 3 emissions adding a new specific indicator – S1+S3C3 (All sold electricity). The emissions intensity is calculated by dividing the sum of generation-related emissions in scope 1 and scope 3 category 3 by total electricity, which is the sum of electricity generation in the organizational boundary and electricity purchased to be sold to customers.



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)</li> <li>• Fugitive emissions: e.g., SF<sub>6</sub></li> <li>• Gas consumption in administrative building</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' commuting</li> <li>• Waste from operations</li> <li>• Use of sold products (e.g., natural gas)</li> <li>• 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 scopes 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 GR</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 & advocacy

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.

In 2023 EDP publicly updated its [UN Energy Compact](#) “All Green Generation by 2030” restating its commitments to 100% renewable energy by 2030 and coal free by 2025, while promoting access to energy and decarbonizing its value chain with the commitment to be Net Zero by 2040.

EDP continued to work pro-actively and constructively with different stakeholders, to advocate for sound climate policy and action that contributes to the goals of the Paris Agreement in all the geographies where the EDP Group operates.

EDP joined the WEF based CEO Climate Leaders Alliance, a CEOs led initiative across sectors scaling ambition on climate action to encourage policy makers to support bold climate action by setting ambitious targets, taking collective action, reducing own emissions, and inspiring others to do the same.

In 2023 the collective positioning ahead of [COP28](#) stands out where EDP was actively pushing for collective corporate ambition across key international networks (Global Renewables Alliance, WEF, WBCSD, We Mean Business Coalition) and advocating for adequate policies in support to a global goal to Renewable energy capacity, the fossil fuels phase out aims and securing 1.5°C Paris ambition:

- support to Global Renewables Alliance, joining the major renewable associations to bring one single stronger voice from renewable sector through joint call to “#3xRenewables” together with over 250 entities and sponsorship of Renewables Hub at COP28
- signature of COP28 Open letter by CEO Climate Leaders Alliance to call on global policymakers and the business community to act on climate change in the run-up COP28, to accelerate the transition by implementing the right policies, financing frameworks and partnerships to move at speed and scale
- support to “Fossil to Clean” campaign mobilized by We Mean Business Coalition, together with over 200 businesses EDP signed a joint letter urging national governments to set clear targets and timelines for phasing down and out unabated fossil fuels,

alongside policies enabling the tripling of renewable electricity and doubling of energy efficiency

- as COP28 entered its second week, EDP joined over 1,400 signatories from across business, finance, philanthropy, politics, academia and civil society joined forces to call on COP28 Presidency and all Parties to deliver a 1.5°C aligned outcome in response to the Global Stocktake – a statement drafted by the B Team and Christiana Figueres, former Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC).

EDP also joined global alliances to accelerate renewables in a decarbonization pathway:

- **Industrial Transition Accelerator (ITA)** – mobilized by COP28 Presidency to tackle downstream decarbonization in hard to abate sectors.
- **Utilities for Net Zero Alliance (UNEZA)** – facilitated by IRENA, together with 25 major global utilities and power companies, to make a significant joint commitment towards promoting electrification, renewable energy-ready grids, and clean energy deployment, in line with the 2030 Breakthrough goals and aims to achieve a net zero future by 2050 promoted by UN Climate Change High-Level Champions.

In the [InfluenceMap](#) report Corporate Climate Policy Engagement Leaders, 2023, that provides an updated analysis of the global landscape for climate policy influence, setting a ranking for positive and active climate advocacy, EDP is featured among the Global Leaders list of 27 companies, ranking in #5 position and as #3 among Energy Utilities after holding a score of A List of Climate Policy report in previous reports.

Further details on policy engagement are disclosed in section 3.4.12. Business conduct, 3.4.12.3. Responsible political involvement of the [2023 Integrated Annual Report](#).



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