Welcome to your CDP Climate Change Questionnaire 2020

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

EDP – Energias de Portugal, S.A. (EDP) is a listed, vertically integrated utility company, whose ordinary shares are publicly traded in the Euronext Lisbon. The company is established and headquartered in Portugal, being organized under Portuguese laws.
Throughout its more than 40 years of history, EDP has been building a relevant presence in the world energy scene, being present in 19 countries in 4 continents. EDP has around 11,700 employees and is present throughout the electricity value chain and in the gas commercialization activity: power generation, distribution and supply of electricity in Portugal, Spain and Brazil, electricity transmission in Brazil and gas supply in Portugal and Spain.
Through its subsidiary EDP Renewables, EDP is also one of the largest wind power operators worldwide, with on-shore wind farms in Europe (Iberian Peninsula, France, Belgium, Italy, Poland , Romania), North America (United States of America, Canada and Mexico) and South America (Brazil), and developing off-shore wind projects in Portugal, UK, France and the USA. Additionally, EDP generates power from photovoltaic plants in Portugal, Romania and the USA.
EDP supplies electricity to 9.8 million customers and gas to 1.6 million customers. In 2019, the company generated about 67 TWh of electricity worldwide, of which 66% from renewable energy sources and, by year end, had an installed capacity of 27 GW (74% renewable).
EDP's vision is to be a global energy company, leading the energy transition to create superior value . Our values are Innovation, Sustainability and Humanization and our commitments are towards results, sustainability, customers and people. The company assumes the power sector's key role in the transition to a low-carbon economy and sets a strategic agenda based on organic growth focused on renewables and low exposure to CO2 and sustainability risks.
EDP publishes detailed information on its financial and sustainability performance and governance practices in its Annual Report and Sustainability Report, available on www.edp.com.
Key financial figures in 2019:
Turnover: EUR 14,333 million
EBITDA: EUR 3,706 million
Net profit: EUR 512 million
Net investment: EUR 1,606 million
Net debt: EUR 13,827 million
Total assets: EUR 42,362 million
ISIN: PTEDP0AM0009
SEDOL: 4103596

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2019	December 31, 2019	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Belgium
Brazil
Canada
France
Italy
Mexico
Poland
Portugal
Romania
Spain
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Transmission
Distribution

Other divisions

Smart grids / demand response

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Director on board	A Director on EDP's Corporate Executive Board has formal responsibility over sustainability issues (CSO), including climate change. The Director currently in charge is assigned with all the company's cross-cutting critical themes, namely risk management and sustainability. This Director is responsible for: submitting to Board's approval the company's climate targets, policies and actions; ensuring inclusion of climate risks (e.g. impact of transition risks in EDP's business as well as acute and chronic physical risks in electricity generation and distribution assets) in the company's risk profile; integrating climate-related issues into Business Plan development and investment/divestment analysis (e.g. forecast of carbon price impact on new generation assets profitability); reporting on climate-related issues to EDP's General and Supervisory Board (GSB), the highest-level corporate body below the General Shareholders Meeting, which includes a Corporate Governance and Sustainability Committee, headed by the GSB chairman.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain

Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Executive Board of Directors, in the person of the Director responsible for sustainability (CSO), is briefed monthly by the company's Corporate Sustainability Office – coordinating, whenever needed, with the Corporate Risk Management Office and the company's Business Units – on sustainability issues, including climate change. Reports include: i) regular updates on the implementation of the company's climate-related policies, actions and targets (e.g. performance against CO2/kWh targets in electricity generation business unit; performance against client energy savings from energy services in electricity supply business unit); ii) results of in-depth climate risk analysis (e.g. extensive exercise, conducted in 2017, of emerging risks mapping, highlighting climate change transition and physical risks); iii) inputs for analysis of investments/divestments on electricity generation, impacting business plans and annual budgets (e.g. impact of changing CO2 prices); iv) proposal for new climate policies, actions and targets, aligned with EDP's corporate sustainability strategy. The Executive Director in charge of sustainability regularly takes the most relevant climate-related issues to the Executive Board meetings. The Executive Director also reports on climate to EDP's General and Supervisory Board, oversees the Corporate Sustainability and Risk Management Offices and chairs the Sustainability Committee, where the top management of the most relevant business units discuss the Group's environmental performance and its annual Operational Environment and Sustainability Plan. Additionally, The CEO and CSO chair the Environment and Sustainability Board, an external advisory Board dependent on the Executive Board of Directors and comprised by 5 experts elected at the general shareholders' meeting. This corporate body is periodically consulted for advising and supporting corporate sustainability strategy, with Climate being a constant issue for debate.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify Head of Corporate Sustainability Office	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Highest-level management position (i.e below Executive Board level) for climate-related issues lies with the Head of EDP's Corporate Sustainability Department. Corporate departments are structures of EDP Corporate Centre, headed by the company's most senior managers, who report directly to the company's Executive Board of Directors. The Head of the Corporate Sustainability Department is responsible for assisting the Executive Board in defining corporate sustainability policies, actions and targets, including those related to climate, and for monitoring their implementation at Business Unit level. He is also the Head of the company's Corporate Risk Management Office, thus facilitating the integration of climate-related transition and physical risks into the company's risk profile and risk management procedures (assessment, integrated analyses of return-risk, mitigation strategies and monitoring). The Head of the Corporate Sustainability Department reports directly, at least monthly, to the company's Executive Board Director in charge of sustainability. Reports include updates on the implementation of climate-related policies, actions and targets (e.g. corporate target of reduction in CO2/kWh in 2030 from 2005 levels); results of in-depth climate risk analysis (e.g. value at risk from climate change-induced structural change in water and/or wind volumes, affecting the operation of renewable electricity generation assets); climate-related inputs for analysis of investments/divestments; and proposal for new climate policies, actions and targets, namely the new 2030 ambition targets, approved and presented to the market through the EDP Strategic Update 19-22. Another important organizational structure is the Environment and Sustainability Board (ESB), an external advisory Board dependent on the Executive Board of Directors. The ESB comprises 5 experts elected at the general shareholders' meeting. This corporate body is periodically consulted for advising and supporting corporate sustainability strategy, including climate action.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Board/Executive board	Monetary reward	Company performance against a climate-related sustainability index	CEO and other members of EDP's Executive Board of Directors (EBD), in accordance with EDP's policy of remuneration for EBD members, have the company's sustainability performance factored into their annual and multi-annual variable remuneration. The sustainability index performance applied to EDP Group - DJSI - supports the business strategy for climate change, one of the most material subjects for EDP and its stakeholders, which includes the attainment of the explicit CO2 emissions reduction targets set by the company. This target is sensationalized through the increasing investment in renewable energies installed capacity, directly linked to the total kWh generated from renewable sources.
Business unit manager	Monetary reward	Emissions reduction target	Top managers of EDP Group's Business Units have emissions reduction KPIs, based on the company's 2020 Business Plan and Sustainability Targets, factored into their annual variable remuneration. The commitment of CO2 reduction target is integrated into the variable remuneration of the generation companies' Board of Directors, through the volume of investment in new energy generation projects. EDP Renováveis Executive Committee have a KPI for renewable capacity built (MW), contributing to the emissions intensity reduction target. Top managers in EDP Brasil have specific KPI associated to the company performance in ISE Sustainability Index. Board members of other business units have KPIs depending on the specificity of their activities (generation, transmission, supply, support activities): a) Fleet electrification (EV + Hybrid plug-in) and installation of charging points for electric vehicles in EDP buildings. b) Climate change adaptation plans. c) Revenues of energy efficiency product and

			services, including distributed solar generation. d) Smart meters deployment targets and distribution technical losses reduction.
All employees	Monetary reward	Emissions reduction target	At Business Unit level, team level and individual level, all employees have KPIs based on the company's 2020 Business Plan and Sustainability Targets factored into their variable remuneration. Climate-related KPIs are integrated into the variable remuneration of employees of the different business units. These KPIs depend on the specificity of their activities (generation, transmission, supply, support activities) and include: a) Fleet electrification (EV + Hybrid plug-in) and installation of charging points for electric vehicles in EDP buildings. b) Climate change adaptation plans. c) Revenues of energy efficiency product and services, including distributed solar generation. d) Smart meters deployment targets and distribution technical losses reduction.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Focus is on the budget of the year. Timeframe allows foresight of the most immediate consequences of possible regulatory/ technological/ other transitional triggers.
Medium-term	1	5	Focus is on the Business Plan exercise. Timeframe allows foresight of possible transition risks and a prospective analysis of structural changes cause by physical risks, with an impact on the company's strategy.

Long-term	5	50	Focus is on the long-term company strategy. It foresees the consequences of structural changes in climate patterns, as such chronic physical impacts are not immediate and can only be assessed in the long-term.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Climate-related risks are fully integrated into EDP's periodic risk identification, assessment and management process. They are identified across different categories of EDP's risk taxonomy and are a relevant input to assess the impact on strategic development, business planning, investment decisions and operations management. The climate-related risks quantification process considers expected loss (average scenario) and maximum loss (worst case scenario), which allows for the prioritization of risks according to their materiality.

Climate-related strategic physical risks (e.g. structural reduction of hydro productivity, impact of extreme vents) and transition risks (e.g. change in renewables support regulation; changes in CO2 trading schemes; technological breakthroughs) are assessed at Group level. At operational level, risks related to generation and distribution asset losses and damages from increased frequency of extreme weather events are also assessed. It is assumed that a substantial financial impact will be over 5M€, which refers to the dimension of the impact assessed by BUs and/ or Group. At Group level, it is also defined a scale of impact, from insignificant to catastrophic, being the 5M€, the low limit of a moderate/ significant risk impact.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Description of process

Risk Report and Risk Dashboard – reports developed fortnightly and every 6-months (respectively) by the Risk Management Department. The aim is to follow up on more

volatile risks and update EDP's exposure to the key sources of risk (strategic, markets, regulatory, financial and operational). There is a follow up on climatic conditions by addressing physical and transition risks. The physical risks, namely chronic shifts, are evaluated, for example, in hydro volume production which is impacted by precipitation and inflows, and in wind volume production which depends on the wind intensity and frequency, allowing to identify possible changes in structural patterns. Another physical risk is the evolution in terms of frequency and severity of incidents covered by insurance that are climate related (acute events) that results from extreme weather events, such as cyclones and floods. Additionally, transition risks are also considered by stating relevant climate-regulated regulatory developments, namely emerging regulation that includes, for example, changes in renewable energy generation support schemes.

Value chain stage(s) covered

Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Description of process

Prices and Volumes report – follow up on climate conditions (current and prospected) to assess the impact on prices and volumes of energy, regulatory pressure, among others. The report is produced monthly, with a specific committee to discuss the key matters quarterly with top-management.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term

Description of process

Risk map (Group and Business Unit-level) – identification and categorization of risks (incl. strategy, business, financial, and operational) and their mapping according to expect loss (average scenario) and maximum loss (worst case scenario). This allows for the prioritization of risks according to their materiality and for the setting of a risk agenda focused on relevant topics. Climate-related strategic physical risks (e.g. structural reduction of hydro productivity) and transition risks (e.g. change in renewables support regulation; changes in CO2 trading schemes; technological breakthroughs) are assessed at Group level. At operational level, risks related to generation and distribution asset losses and damages from increased frequency of extreme weather events are also assessed.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term

Description of process

Budget – annual exercise that identifies possible transition risks for the next year with impact on EDP's results through sensitivity and stochastic analysis to several indicators (e.g., impact of hydro coefficient variation under several scenarios).

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Every two years

Time horizon(s) covered

Medium-term

Description of process

Business Plan – bi-annual prospective exercise of the company's activity for the next 4 years, taking into account risks that may affect EDP's results, including climate-related risks. Strategic decisions, business plans and targets are defined after a structured reflection about market conditions that considers historical and prospected evolution of, among others: regulation and policies; costs of technologies; physical parameters (incl. renewable volumes). Sensitivity and stochastic analysis to EBITDA@Risk and CF@Risk according to different scenarios assumed is also performed.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Medium-term
Long-term

Description of process

Energy outlook scenario analysis – annual exercise performed by EDP's corporate energy planning department, based on World Energy Outlook scenarios, that prospects transition risks/opportunities impact for the medium term. It sets scenarios according to different decarbonisation paths and defines different evolution trends for demand, fuels and CO2 prices, capacities, among others, forecasting different generation mixes, RES generation shares and capacity changes.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Every three years or more

Time horizon(s) covered

Long-term

Description of process

Emerging risks survey – exercise developed every 3 years to assess main concerns of EDP Group top management for the next 10 years of the company. The first exercise was focused on identifying all the key trends and define a framework, based on a benchmark of several sources (internal and external), that focus on 6 dimensions: geopolitics, economic, social, technological, environmental and sectorial. In 2019 the first cyclical process for emerging risks assessment was launched, which consisted of interviews and survey to the top management, followed by the consolidation of results and comparison with external sources, and finally a definition of an action plan. Climate risks/opportunities (physical and transition) are present in several dimensions, namely increase of frequency and severity of extreme weather events such as cyclones and floods, and a structural reduction of precipitation (physical risks), as well as rise of political and regulatory pressures for decarbonization (transition risk).

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Not defined

Time horizon(s) covered

Medium-term

Description of process

Deep dive analysis – Specific deep dive analysis, performed whenever necessary. Examples include: a) EDP Water Risk Map, developed in 2015, where EDP characterized strategic risks associated with structural changes in precipitation patterns (reduction of hydro generated production) and operational risks associated with the increase in global temperature (reduction of thermal power plant cooling systems efficiency) and extreme weather events (damage to physical generation and distribution assets); b) Extensive exercise, conducted in 2017, to identify of key emerging trends (global and utility-related), highlighting climate change transition and physical risks.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain

Current regulation	Relevant, always included	Climate and energy related regulation – at international, European Union and national levels – can have a significant financial impact on EDP's electricity generation, distribution and retail businesses (reduced revenues and margins, increased operating costs). Examples include regulation on renewables support schemes, emissions trading mechanisms or carbon pricing. The regulatory context of the different markets where EDP operates and the corresponding developments are closely analysed by a dedicated corporate department, the Regulation Department. Together with the Energy Planning Department and the Risk Management Department, the Regulation Department quantifies potential impacts on the company of changes to the different regulatory contexts, according to different scenarios. Regulatory framework related with climate is a priority concern and is part of several analysis namely, investment analysis, budget and business plan.
Emerging regulation	Relevant, always included	The creation of additional regulatory measures by policy makers, in order to achieve a carbon-free economy, may create pressure on the business-as-usual and (possibly) demands operational and strategic adjustments. Similarly to the current regulation risk type previously mentioned, new climate and energy related regulations may materialize at international, European Union and national levels and can also have a significant financial impact on EDP's electricity generation, distribution and retail businesses (reduced revenues and margins, increased operating costs). Examples include additional requirements to carbon-intensive technologies (coal), or in the worst-case scenario the early decommissioning of thermal plants. Follow-up on possible changes to the regulatory context of the different markets where EDP operates is conducted by a dedicated corporate department, the Regulation Department (including the participation in several forums of discussion with experts, scientists & academics and policy-makers). Together with the Energy Planning Department and the Risk Management Department, the Regulation Department quantifies potential impacts on the company of additional requirements to the different regulatory contexts, according to different scenarios, from business-as-usual to scenarios aligned with the Paris Agreement transition needs.
Technology	Relevant, sometimes included	Technological breakthroughs (e.g. advances in smart grids, decentralized generation, energy storage or electric vehicles, trends in renewables' levelized cost of electricity) are key to the implementation of EDP's low carbon transition plan and climate targets. For example, the failure to anticipate and integrate advances in smart grids can compromise the company's performance, leading to competitive disadvantages. EDP Innovation Business Unit and EDP Corporate Energy Planning Department closely follow-up technological developments that can impact EDP low carbon strategy. Emerging

		technology studies are carried out by the Innovation Business Unit, where technological risks and opportunities are accounted for, such as the development of storage technologies, different sources of mobility, particularly the evolution of electric mobility, as well as the evolution of LCOEs of renewables that are analysed and incorporated in the different scenarios. Additionally, the recurrent Energy Outlook scenarios analysis exercise is performed by the Energy Planning Department.
Legal	Relevant, sometimes included	Climate-related legal risks (penalties, compensations, agreements) can arise from non-compliance with associated laws and regulation, or future compliance costs (e.g. decommissioning of thermal power plants). Legal risks are analysed and followed up by EDP Legal Department with a view to ensure compliance and monitor on-going contingencies of different natures, including environmental and climate change related contingencies. Together with the Risk Management department, sensitivity analysis is performed to assess different scenario for legal losses. EDP constitutes provisions for decommissioning of power plants.
Market	Relevant, always included	Volatility in commodity prices (e.g. fuel; CO2), in generation volumes of renewables (especially hydro and wind), and in energy consumption (including energy efficiency) are market risks that can be influenced by climate change. Examples include the spill-over effect of new emissions trading schemes on CO2 prices or the reduction in electricity demand brought upon by new energy efficiency regulations and public policy targets. These risks can have a negative impact on EDP's results. These variables are always included in the company's climate risks analysis, as they are a key driver of EDP's results. Assessment is performed through sensitivities analysis of several market indicators, assuming different global energy scenarios with different underlying decarbonisation paths.
Reputation	Relevant, always included	The energy sector, including electric utilities, is at the forefront of societal awareness on climate change and the role of the private sector. Failure to commit to ambitious targets on climate change mitigation and adaptation and to deliver on these commitments can cause reputational damages leading to the reduction of EDP brand value and investor interest and loss of market competitiveness. EDP Group sees reputation as an impact instead of a risk, which means that all climate risks have a potential impact on EDP's reputation. For that reason, reputation is always included in risk analysis, along with economic, environmental and personnel impacts' assessment. To assess the reputation impact, EDP follows a qualitative scale from reduced to very high, depending on the level of media diffusion.

Acute physical	Relevant, always included	Increase in the frequency and severity of extreme weather events, foreseen by IPCC scenarios, represents an operational risk to EDP's activities, in particular to electricity distribution. Damage to assets in operation (overhead lines, poles and substations) and service disruption can have a negative financial impact, namely in investment and insurance costs. Acute climate-related physical risks (e. g. precipitation extremes, floods, storms) are the object of corporate-level deep-dive analysis of emerging risks, using IPCC scenarios, and Business Unit level analysis by prevention teams in order to create preventive measures for asset management and service assurance.
Chronic physical	Relevant, always included	Chronic physical risks are also analysed, in particular the structural decrease in precipitation that is foreseen for the Iberian Peninsula, both by IPCC and the European Environment Agency scenarios. This is a major long-term risk for EDP's hydro electricity generation activities (32% of total installed capacity by the end of 2018), most of which (82%) is concentrated in this geography. Chronic physical risks are accounted in medium/ long term analysis, namely regarding water availability in Iberia and the potential impact in hydro generation, taking into account historical data of the worst Hydroelectric Capability Index consecutive years, water estimates for coming years using different IPCC scenarios, and quantifying potential impact on the Group's EBITDA.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Other, please specify

Decreased revenues due to changes in renewable energy generation support schemes

Company-specific description

Changes in renewable energy generation support schemes. EDP's renewables (EDPR) business segment is currently present in 14 countries, namely EU countries, North America and Latin America, with a portfolio of ~20 GW worldwide, exposed to different regulatory frameworks. These support schemes - feed-in tariffs, tax credits, green certificates or capital incentives –are subject to revisions and changes in those markets, both due to budget constraints resulting from economic stress, and/ or to structural factors related with the maturity cycle of many technologies (e.g., wind or solar). Estimated potential reduction in EDPR's revenues for the 2019-2022 period, across all markets, is about EUR 88 million.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

22,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Estimated potential accumulated reduction in EDPR's yearly revenues for the 2019-2022 period, across all markets. This figure takes into account a possible drop in Green Certificates prices as a consequence of a market oversupply, specially in Poland and Romania .

Cost of response to risk

1,037,500,000

Description of response and explanation of cost calculation

Risk is mitigated through an active strategy of diversification across multiple technologies, geographies, asset maturity and markets regulatory design, as well as through a close follow up of regulatory bodies and governments. EDP accumulated expansion investment for the period of 2019-2022 in renewables is c. EUR 4.15 bn, i.e.,

1.0375 bn/year, distributed across diversified markets and technologies. EDP's Business Plan 2019-2022 projects an addition of 7.2 GW in renewables (25% solar, 73% wind on-shore and offshore, and 2% hydro), 60% of which in North America, 25% in EU and 15% in Latin America. EDP is also increasing direct renewable electricity sales to large corporate clients through long-term Power Purchase Agreement (PPA), firstly in USA and more recently in Mexico, Spain, Brazil, Colombia and Italy. This contractual model is interesting in terms of the predictability of cash flows it guarantees and contributes to the mitigation of risks arising from uncertainty regarding regulatory support schemes. Several examples in 2019 include secured long-term PPA to sell the energy produced by wind farms and solar parks in Colombia, Brazil, USA, Mexico, Portugal and Italy.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Changes in precipitation patterns and extreme variability in weather patterns

Primary potential financial impact

Other, please specify

Decreased revenues due to a structural decrease in hydro generation productivity

Company-specific description

Structural decrease in hydro generation productivity. Both IPCC (Intergovernmental Panel on Climate Change) and EEA (European Environment Agency) long-term scenarios forecast a relevant decrease in average annual precipitation in the Iberian Peninsula (10% decrease for the region where the main portfolio is located). Hydro generation is an important source of value for EDP, mainly in Portugal and Brazil. In 2017, severe drought occurred in the Iberian Peninsula, with a hydropower index (IPH) more than 53% below the average hydrological year. In Portugal, the company's hydropower production dropped by around 9 TWh compared to 2016- this corresponds to approximately 13% of EDP's total production and 44% of hydroelectric production in 2016. A structural decrease in precipitation, affecting hydro generation, will likely negatively impact EDP's revenues.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

40,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Considering EDP current portfolio, the estimated yearly decrease in EDP hydro generation revenues in Iberia, in a long-term perspective, is about EUR 60 million per year. This figure assumes a structural decrease of 10% in hydro productivity in the long-term, yearly production of 12 TWh and a pool price of 50€/MWh. Nonetheless, this impact will be reduced to 40M€/year with the hydro assets sale in Portugal announced in late 2019.

Cost of response to risk

1,037,500,000

Description of response and explanation of cost calculation

EDP manages this risk through a diversified generation portfolio in terms of technologies and geographies. EDP accumulated expansion investment for the period of 2019-2022 in renewables is ~ EUR 4.15 bn, i.e. ~EUR 1.0375 bn per year, distributed across diversified markets and technologies. EDP's Business Plan 2019-2022 investments in new generation capacity are also diversified: addition of 7.2 GW (25% solar, 73% wind on-shore and offshore, and 2% hydro) 60% of which in North America, 25% in EU and 15% in Latin America. Geographic diversification significantly reduces the risk, as structural reduction in precipitation is not likely to occur in all geographies and with same magnitude.

EDP developed a specific Water Risk Map (initial scope Iberia, currently being expanded to all geographies) and conducts a periodic assessment of generation assets exposure to water stress areas, using high level mapping tools such as the WRI Aqueduct and local level analysis (site specific data from local authorities and information on assets specific operating conditions from local company staff). All new power plant project valuation considers sensitivities to lower inflows scenarios, thus enabling informed decision making.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased direct costs

Company-specific description

Operational disruption of electricity distribution activities. Extreme weather events, such as floods, wildfires and landslides – frequently associated also with extreme winds – can have a negative impact in several EDP business activities, in particular electricity distribution, resulting in damage to assets in operation (overhead lines, poles and substations). To a lesser extent, damage can also occur during the company's hydro power plant construction phase, as cofferdams may be insufficient to hold large water inflows, causing flooding in some elements of the work. According to IPCC scenarios, the frequency and intensity of these extreme weather events is likely to increase due to climate change, thus increasing the risk of disruption in EDP's energy distribution and/or supply activities, as well as increasing the operational and capital cost from damage recovery.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

15,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Maximum financial impact of damage to distribution networks under operation in Portugal is, in the worst-case scenario (before insurance) is c. 15 M€. Estimate is based on the impact of the worst storm already experienced (Gong). No detailed evaluation of financial implications is currently available for EDP's distribution activities in Spain and Brazil.

Cost of response to risk

16,000,000

Description of response and explanation of cost calculation

Risk is firstly mitigated by the operational areas of BUs, who propose and implement best practice (e.g. regular inspections and preventive maintenance) and have specific plans for catastrophic events' crisis management and business continuity. Yearly cost of risk transfer through insurance and costs associated with the company's Business Continuity Plan and structures is equivalent to 0.4% of EBITDA (c. 16 million euros in 2019), including specialized outsourced services. EDP has Business Continuity Departments in strategic company areas and, in 2015, revised its crisis management and business continuity policies, in line with international best practice. A significant part of the remaining risk is mitigated through a comprehensive range of insurance policies (property damage and civil and environmental responsibility) that mitigate the financial impact of large-scale events (e.g., associated with extreme and comprehensive weather phenomena, non-availability of revenue generating assets or significant compensation to third parties) as well as much less frequent incidents with catastrophic impact (e.g., earthquakes). In Spain, EDP takes part of the Compensation Insurance Consortium, a State-run initiative targeted at extreme events risk mitigation for the electricity sector. In Brazil, EDP developed ClimaGrid to manage the physical risks of the grid, a system that automatically detects thunder storms, allowing real time intervention in the prevention of future grid shutdowns.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Other, please specify

Decreased revenues due to energy efficiency improvement

Company-specific description

Reduced demand driven by energy efficiency. In developed markets, gains in energy efficiency – further strengthened by climate-related policy targets - are expected to dictate a slow recovery in electricity consumption. In Europe, in particular, in response to the competitiveness challenges faced by industry and climate regulation, the economy is specializing in low-energy-intensive sectors. The new package of measures under the Clean Energy for All Europeans' programme, is an example on how EU intends to facilitate the transition to a more efficient and low carbon economy. Among the several legislative frameworks reloaded, the new Energy Efficiency Directive reinforces the implementation of energy saving measures, either voluntary or mandatory. This policy framework induces a shift in consumption patterns - either regulation driven or behavioral driven – which can negatively impact revenues from EDP's energy supply activities in the Iberian Peninsula and Brazil.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

5,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Potential financial impact of inherent risk (reduced revenues across EDP's electricity supply markets), in a worst-case scenario. Assumes a 1% reduction of electricity demand in Iberia, EDP's market share in these geographies, with conjugated effects in retail, distribution and generation.

Cost of response to risk

25,000,000

Description of response and explanation of cost calculation

Risk is managed through the development and marketing of specific energy services and customer efficiency solutions (e.g. fuel switching, load optimization, decentralized renewable generation). For the period of 2019-2022 EDP will invest ~EUR 5 bn, 2% of which, i.e. 100 million euros (or EUR 25 million/year) will be dedicated to client solutions & energy management. EDP has set a target to provide customers with ongoing access

to energy efficiency products and services to reduce overall consumption by more than 5 TWh in accumulated energy savings in the period 2015-2022. In Brazil, EDP Soluções em Energia also provides energy efficiency services mainly for businesses in the liberalised market. By the end of 2019, through energy efficiency services and solutions in decentralised renewable generation, EDP had already induced accumulated client savings of over 3 TWh since 2015 and avoided c. 1.2 MtCO2.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of supportive policy incentives

Primary potential financial impact

Company-specific description

Investment opportunities in new renewable generation capacity, in line with the electricity sector's crucial role in the transition to a decarbonized economy. Higher regulatory visibility in the US, as well as European Union's Climate-Energy 2030 policy commitments represent a major investment opportunity. EDP has a key competitive advantage in seizing renewables growth opportunities, given its large pipeline of projects in North America, Latin America and the EU. Planned investment in new generation capacity in EDP's 2019-2022 Business Plan is entirely based on renewables, keeping the USA and wind onshore at the core of the growing strategy.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The EBITDA is expected to grow 17% in this timeframe, mainly caused by new investment in new renewable installed capacity. We expect a financial positive implication (additional EBITDA) of about EUR 400 million in the 2019-2022 period, i.e., EUR 100 million per year on average.

Cost to realize opportunity

1,037,500,000

Strategy to realize opportunity and explanation of cost calculation

EDP's renewables business segment will invest EUR ~5 bn in visible growth opportunities, i.e., c. EUR 4.15 bn or EUR 1.0375 bn/year on average, installing a total of 7.2 GW new capacity (25% solar, 73% wind on-shore and offshore, and 2% hydro).

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Increased electricity demand for operation of HVAC equipment. Higher temperatures during summer and lower temperatures in winter may lead to an increase in electricity demand as the result of intensive use of HVAC equipment in these periods, thus increasing EDP revenues from its electricity supply business (Portugal, Spain and Brazil). EDP electricity supply business units in the above-mentioned geographies will benefit from a competitive advantage in supplying this increase in electricity demand given the progressive lower carbon content of the electricity generated by the Group, which accounted in 2019 for about 66% of total supply. Furthermore, EDP committed to reduce its emissions intensity from power generation by 90% in 2030 from 2005 levels.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

EDP carried out an internal study for estimating the potential increase in electricity demand driven by temperature extremes. The main outcome of this study, recently updated, shows the excess demand to be in the order of 2 GWh/day for each ºC decrease in Winter and 1.5 GWh/day for each ºC increase in Summer. The potential financial impact figure assumes average temperature extreme increases of +/- 2ºC in the Iberian Peninsula and the current EDP's market share, with conjugated effects in retail, distribution and generation.

Cost to realize opportunity

212,500,000

Strategy to realize opportunity and explanation of cost calculation

In addition to the strong focus on generation capacity expansion, 25% of total expansion investment included in EDP’s Business Plan 2019-2022 (c. EUR 5 bn) will be channeled

to distribution networks and client solutions & energy management, thus strengthening the company's capacity to respond to peak electricity demand and capture this market opportunity. This investment corresponds to c. EUR 850 million or EUR 212.5 million/year on average.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Other, please specify

Increased revenues resulting from new energy efficiency solutions

Company-specific description

Business opportunity in new energy efficiency solutions. Implementation of the Paris Climate Agreement objectives is expected to lead to profound changes in the electricity sector: 50% of the Intended National Determined Contributions (INDCs) include energy related targets, 40% include quantified objectives for renewable production and more than 30% include energy efficiency targets. Electricity will be crucial to decarbonise the world economy and the sector is set to undergo a major transformation towards renewables, decentralized generation and smart consumption. This structural change in energy production and consumption patterns brings about new growth opportunities for EDP, especially in energy services (smart buildings and industry), renewable distributed generation and electric mobility. EDP will benefit from a competitive advantage in seizing the opportunity for this new demand pattern, given its early investment in new energy solutions and the progressive decarbonisation of the electricity it generates (-90% CO2/kWh in 2030 from 2005 levels).

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Financial impact corresponds to the mean annual revenue from energy efficiency products and services foreseen for the current business plan period (2019-2022). It takes into account the historic increasing rate of the revenues (+15%/year).

Cost to realize opportunity

212,500,000

Strategy to realize opportunity and explanation of cost calculation

According to the company's Business Plan 2019-2022, EDP will invest a total of EUR 5 bn, 17% of which in distribution networks and client solutions & energy management, i.e., c. EUR 0.85 bn or EUR 212.5 million/year on average. Anticipating the new electricity sector paradigm (development of infrastructure and applications of smart grids focused on customers and operations, distributed generation, prosumers), EDP provides a range of energy solutions intended to respond to the specific needs of different customer segments, through a diversified offering of sustainable products and services that avoid emissions in final energy consumption. In order to foster the Brazilian market potential for energy services, EDP Brasil, through EDP Soluções em Energia - EDP Energy Solutions, is extending its presence in energy efficiency services as well as in the photovoltaic distributed generation market through a new company EDP Solar. EDP has set a target to provide customers with ongoing access to energy efficiency products and services to reduce overall consumption by more than 5 TWh in accumulated energy savings in the period 2015-2022. It has also committed to expand the installation of smart grids Iberia, covering 100%, by 2030, and to invest EUR 200 million in innovation projects by 2020 (R&D on clean energy technologies, energy efficiency and smart grids), which was already achieved

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.1b

(C3.1b) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
RCP 2.6 RCP 4.5 RCP 6 RCP 8.5	EDP uses IPCC scenarios to assess climate-related physical risks, taking into account forecasts for the long-term evolution of precipitation patterns and temperature. We use IPCC's RCP 8.5 Scenario (business as usual), as well as RCP 6.0, 4.5 and 2.6 Scenarios (aggressive CO2 emission reductions), to identify the most relevant chronic and acute risks and evaluate potential impacts on our electricity generation and distribution activities from present time until 2050, as physical risks require a long-term analysis to identify any structural change in their pattern or frequency/severity of occurrence. Results highlighted two key risks: structural reduction of precipitation in Iberia, affecting the productivity of our hydroelectric generation assets in Portugal and Spain (chronic physical risk); and increased occurrence and severity of extreme weather events (precipitation extremes, floods, wildfires, landslides and extreme winds), causing damage to our electricity distribution assets (acute physical risk). Our business strategy is shaped in order to mitigate chronic risk through a diversified generation portfolio in terms of technologies and geographies. Geographic diversification significantly reduces the risk, as structural reduction in precipitation is not likely to occur in all geographies and with the same magnitude. Example of this is the investment in other renewable sources besides hydro (i.e., solar and wind) in different markets (European markets, North America and Brazil). We have also developed a specific Water Risk Map (initial scope Iberia, currently being expanded to all geographies) and conduct a periodic assessment of generation assets exposure to water stress areas, using high level mapping

	tools, such as the WRI Aqueduct, and local level analysis (site specific data from local authorities and information on assets specific operating conditions from local company staff). To manage the acute risk, EDP has strengthened its business continuity and crisis management capabilities, implemented a set of preventive measures and defined a comprehensive range of insurance policies (property damage and civil and environmental responsibility).
IEA 450 IEA NPS IEA CPS	EDP uses IEA scenarios to assess climate-related transition risks, taking into consideration forecasts for demand, energy capacity additions (renewable), commodity prices and technology realized prices evolution. We integrate IEA's 450 Scenario, CPS (Current Policy Scenario) and NPS (New Policy Scenario) into our energy planning exercises and evaluate impacts on our entire business portfolio up to 2030, taking into account EDP Group Business Plan. In this case, as the focus is on transition risks, the time horizon must be from medium to long term (up to 2030), since it is difficult to predict regulation scenarios for longer periods. Internal assumptions are used regarding demand forecast and taxation and scenario analysis and stress tests are performed against current OTC (Over the Counter) scenario. Results show that a CO2 price increase does not have a significant negative effect on EDP operational results, given the decreasing importance of thermal generation in our overall electricity generation portfolio. Our business strategy in aligned with a low carbon energy system and has proven resilient under the different scenarios analysis. By the end of 2019, 74% of our electricity generation installed capacity was based on renewable sources and our strategic agenda is based on organic growth focused on renewables. Additionally, new downstream retail focus on energy services (e.g. energy management solutions, Re:dy) and decentralized production (e.g., micro-generation solar PV), contribute to capturing the opportunity in transition. One good example is the Save to Compete programme that EDP has developed to supports businesses in implementing integrated energy efficiency products.
Other, please specify IEA B2DS	EDP used IEA B2DS Scenario for setting its GHG reduction science-based target (SBT). EDP's SBT was formally approved by the Science Based Target Initiative in early 2017 and updated in 2019 through the voluntary target ambition update process. An intensity reduction pathway for our entire business portfolio up to 2030 was derived from the application of the Sectoral Decarbonization Approach (SDA) to the power sector. The trajectory was based on the power sector B2DS scenario. We used the assumptions of EDP Group Business Plan (electricity demand, installed capacity and electricity output per generation technology) to test the alignment of our global portfolio carbon intensity (scope 1 and 2 CO2e/kWh)

	against the SDA intensity reduction pathway. Our target has proven aligned with the well below 2ºC trajectory.
Other, please specify IPCC SRES	EDP uses IPCC SRES (Special Report on Emissions Scenarios, 2012, 2014) scenarios to quantify financial impacts from extreme events, namely extreme temperatures, wildfires in southern Europe and increase storms frequency.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	EDP continues to promote new products and services and smart and efficient energy management solutions. In 2019, 26% of customers in the liberalized market had value-added services, such as energy efficiency, sustainable mobility or decentralized solar services. The goal is to ensure that 30% of those customers have value-added services by 2022 and 50% by 2030. In the residential segment, EDP reinforced its energy efficiency strategy in Iberia by introducing large efficient appliances within its range of equipment, a highly competitive market with a major impact on energy consumption. In the corporate segment, EDP supports companies in implementing integrated energy efficiency services, through the Save to Compete programme, also extended to SMEs. This programme identifies measures to reduce energy consumption, promoting its implementation and costing through the savings generated. The company's strategy for electric mobility involves reinforcing the number of customers with electric mobility solutions, and strengthening the electrical vehicle charging infrastructure, both in terms of the number of charging points and in terms of their geographical spread, so that electric mobility can increasingly reach more people. Foreseeing the future in which generation will be increasingly decentralized, EDP offers distributed generation solutions from renewable sources adapted to customers and local characteristics. In Spain, it is worth noting the creation of EDP Solar at the end of 2019, and the availability of a solar calculator through which it is possible to obtain a personalized quote based on location and consumption habits. In Brazil, EDP Smart was established

		in 2019, a brand that brings together the entire portfolio for business and residential customers in the liberalized market, including the photovoltaic solar energy segment. This business segment includes distributed generation solutions installed at the customer's premises or remotely on solar farms. Improving energy efficiency, together with the promotion of renewable energies, is critical for the decarbonisation of the electricity sector. EDP, focusing in generating economic value by investing in decarbonization, has defined a set of 2022 goals, namely ~78% renewable capacity, >1 GW centralised and distributed solar capacity, >70% of smart meters in Iberia and 5 TWh of saved energy (aggregated).
Supply chain and/or value chain	Yes	Improving energy efficiency, together with the promotion of renewable energies, is critical for the decarbonisation of the electricity sector. EDP promotes energy efficiency throughout the value chain, both internally, from the generation of electricity, to distribution and consumption, and externally, providing its customers with low carbon products and services. This contributes to the reduction of primary energy upstream, and to greater efficiency in the end use of energy downstream, for customers in the various activity sectors. Supply chain-related risks and opportunities are considered of low impact for EDP's business. The largest risk is related to fossil fuel sourcing (natural gas and coal), which could be subject to disruption caused by extreme weather events (acute risks) and by reduced water availability (chronic risk). Exposure to such risks is limited, given that: i) EDP's current generation portfolio (74% installed capacity is renewable - wind, hydro and solar PV); ii) EDP business strategy focused on continued organic growth from renewables, which will further reduce portfolio exposure (e.g. installed capacity in coal will be reduced from current 11% to become coal free in 2030); iv) fuel procurement based on a vast range of alternative suppliers in different geographies; v) for coal, 90% of current sourcing from mines in low water stress areas (WRI Baseline Water Stress <10%) and only 1% from mines located in high stress areas. However, the risk persists in natural gas with the sourcing of CCGTs and retail. Downstream value chain (client-related) opportunities are addressed in the above category (products and

		services).
Investment in R&D	Yes	R&D and innovation (RDi)are a priority for the EDP Group and are strongly rooted in its DNA, its vision and its culture, enabling it to anticipate the new challenges of the energy sector. In a context of transition for the sector, with the challenges of climate change, EDP has reinforced the need to adopt innovative strategies and technologies. EDP has been promoting and developing new technologies, products, services or business models, with the aim of providing the Group with competitive advantages and contributing to EDP's image as a leader in the development and implementation of innovative and creative solutions for value creation. Innovation at EDP is in line with the Company's strategy, with a focus on areas essential to the decarbonization of the economy, such as renewable energies, smart grids, customer focused efficient solutions, storage and digitalization as an area encompassing the entire innovation process. EDP continues to focus on partnerships and the balance between its own financing and competitive public financing for its RDi activity, In 2015, EDP committed to invest in RDi projects EUR 200 million, accumulated until 2020, an amount that was exceeded in 2018. Only in 2019, the EDP Group's total investment in RDi amounted to EUR 162 million. Technological RDi activities and projects are structured in five areas: Cleaner Energies, to boost the renewable energy business; Smarter Grids, which develop solutions for a more intelligent management of electrical grids; Customer-Centred Solutions, which promotes consumer electrification solutions, improved energy efficiency and distributed generation; Digital Innovation (Data Leap), which aims to place the latest advances in information technologies - Internet of Things (IoT), artificial intelligence and Big Data technologies - at the service of business and customers; and, finally, Energy Storage and flexibility, which tests new storage technologies, flexibility management and identifies new business models.
Operations	Yes	Climate-related physical risks, both chronic (structural reduction in precipitation) and acute (increased frequency and severity of extreme weather events) are expected to impact EDP's operations, causing a reduction in electricity output of our hydro generation assets and damage to electricity distribution networks, respectively. Impact is expected to be intensified in the long-term and have a

		medium-high impact on EDP's revenues from electricity generation as well as operational and capital cost from damage recovery. Ensuring the resilience of electricity generation and distribution infrastructures is a natural concern within EDP. With the effect of climate change beginning to be felt, it is essential to carry out an internal and ongoing analyse of the physical risks to which the infrastructures may be subject. EDP has set a goal to have Adaptation Plans in place in its Business Units by 2022 which ensure the resilience of infrastructures that may be exposed to extreme events of higher intensity and frequency

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	1- Revenues: i) negative impact - reduction in hydro volume influenced by a structural reduction of precipitation, leading to a reduction in hydro electricity production. The magnitude of the impact on company revenues, associated with risk 2 identified in C2.2a (Changes in precipitation patterns and extreme variability in weather patterns), is medium, given that the reduction of hydro production is partially compensated by the increased value of such production; ii) positive impact - CO2 price increase favours hydro and wind, due to a favourable regulatory framework benefiting renewable sources. The magnitude of the impact, associated with opportunity 1 identified in C2.3a (Investment opportunities in new renewable generation capacity), is high. This positive impact is further strengthened by the forecasted increase in the electrification of final energy consumption which is also driven by the enabling effect of electricity in the decarbonisation of energy consumption in other sectors. 2- Operation (direct and indirect) costs: i) negative impact - reduced margins due to regulatory/policy penalization of carbon intensive fuels, leading to reduced thermal power plant margins; ii) positive impact – renewable portfolio optimization resulting from higher CO2 prices, associated with opportunity 1 described in C2.3a (Investment opportunities in new renewable generation capacity). Renewables currently represent 74% of EDP’s total electricity generation

		portfolio. The net balance between the above-mentioned positive and negative impacts is positive and the overall magnitude is medium to high. 3-Capital expenditures/ allocation: i) negative impact - investment on additional features of the electricity distribution grid to increase resilience to extreme weather events, has described in risk 3 identified in C2.2a (Operational disruption of electricity distribution activities). The magnitude of this negative impact is low; ii) positive impact - focus on generation portfolio, leveraging current portfolio mix of the Group and internal know-how, motivated by renewable favorable regulatory frameworks. The magnitude of this positive impact, associated with opportunity 1 identified in C2.3a (Investment opportunities in new renewable generation capacity), is high. 4- Acquisitions and divestments: Identified climate-related opportunities have the potential to impact EDP's acquisitions decisions, namely wind/solar generation pipeline projects as well as the acquisition of downstream businesses (energy efficiency, decentralized renewable generation). The magnitude of this impact, associated with opportunity 1 (Investment opportunities in new renewable generation capacity) and opportunity 3 (Business opportunity in new energy efficiency solutions) identified in C2.3a, is high. 5- Access to capital: Identified climate-related risks and opportunities (e.g. related to changing consumer behavior and/or investor interest) can, depending on positive or negative impacts on EBITDA and operational results (e.g., renewable volumes, regulation, extreme events), have an impact on capital structure and liquidity (improve/deteriorate) impacting cost of capital. These impacts cover a range of identified risks and opportunities, and therefore their magnitude can range from medium to high. 6- Assets: Identified climate-related transition and physical risks can impact EDP's assets by causing damage to facilities, loss of value or impairment resulting from changing consumer behaviour or climate-related regulation. These impacts cover a range of identified risks (e.g., risk 1 - Changes in renewable energy generation support schemes -, 3 - Operational disruption of electricity distribution activities - and 4 - Reduced demand driven by energy efficiency - described in C2.2a). The most exposed assets to damage are distribution assets. Additional regulatory requirements on thermal generation impact is considered low, given the high average life cycle stage of EDP’s thermal generation assets. 7- Liabilities: Identified climate-related risks can, depending on positive or negative impacts on EBITDA and operational results (e.g., renewable volumes, regulation, extreme events), have an impact (increase/decrease) on EDP's debt levels. These impacts cover a range of identified risks and opportunities, but the impact is mostly indirect, and the magnitude is

		considered low. The time horizon covered by revenues, operation costs (direct and indirect) and liabilities is the business plan horizon, i.e. from 1 to 5 years, while capital expenditures and capital allocation, acquisitions and divestments, access to capital and assets are covered for a longer and undetermined time.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

1. Climate-related issues are embedded in the priorities of EDP's current business strategy (Strategic Update 2019-2022):
a) organic growth with strong focus on CO2-free technologies, mainly wind, solar and hydro (international expansion, 40% of which in North America, 35% in Europe and 25% in South America). Target is to reach at least 78% of installed capacity on renewables by 2022 and 85% by 2030; and
b) low exposure to CO2 and other environmental risks, through low-carbon electricity generation, management of CO2 portfolio and sustainability leadership. Target is to reduce CO2/kWh levels (scope 1 emissions from electricity generation) by 65% in 2022 and by 90% in 2030 versus 2005 levels.
EDP further publicly committed to the following medium/long term operational objectives:
a) Accelerate the roll-out of smart meters in the Iberian Peninsula, covering 100% at EDP's low-voltage delivery points by 2030;
b) Provide customers with ongoing energy efficiency products and services, delivering more than 5 TWh in accumulated savings from 2015 to 2022;
c) Achieve carbon neutrality in EDP's office buildings by 2022
d) Promote the acquisition of electric vehicles for EDP's light-duty fleet, reaching 30% of the total fleet by 2022 and 100% by 2030.
e) Investing EUR 200 million in innovative clean energy, energy efficiency and smart grids projects by by 2020 - target already achieved in 2018.
f) 3 GW of centralised solar PV installed capacity and 1 GW of distributed PV on customers
g) Become coal-free before 2030.

2. Our business priorities are explicitly linked to an emissions reduction target and to a renewable energy target. Both are corporate-wide strategic commitments and performance is regularly reported to the market (e.g. annual investor presentations, corporate annual reports, sustainability report). The emissions reduction target is fully aligned with EDP's science-based target, formally approved by the Science Based Target Initiative in early 2017 and updated in 2019: to reduce direct (scope 1) and indirect (scope 2) emissions from electricity production 75% per TWh by 2030, from 2015 levels. The company also commits to reduce absolute indirect emissions (scope 3) by 40% over the same time period.

3. In March 2019, EDP announced an expansion investment of EUR 5 bn for the 2019-2022 period, 83% of which in new renewable generation installed capacity, 15% in networks and 2% in client solutions and energy management. In 2022, EDP foresees its specific CO2 emissions

will be 36% below 2015 levels, on track with the science-based target, thus contributing both to climate change mitigation (reduction of scope 1 emissions) and reduction of climate regulatory risks exposure. The company will also make a strong investment in low carbon client solutions (energy efficiency services, sustainable mobility and renewable micro-generation) and in distribution grids. This will contribute both to climate mitigation (reduction of scope 2 and scope 3 emissions) and adaptation (increased asset resilience). In 2019, EDP marketed energy efficiency services that delivered client savings of 3 TWh, avoided 1.2 Mt of CO2 emissions and generated EUR 158 million in revenues.

4. EDP's business strategy has been influenced by the need to: a) Mitigate climate change – Reduce CO2 emissions from electricity generation; b) Adapt to climate change – Increase resilience of generation and distribution assets; c) Reduce exposure to climate-related regulatory and market risks – Reduce specific CO2 emissions, manage CO2 allowances and credits portfolio; d) Seize opportunities to develop new products and services – Deliver low carbon energy, decentralized renewable energy solutions and tailored energy efficiency services.

5. This strategy has gained EDP strategic advantages over the competitors through:
a) Profitability and reduced risk exposure – carbonized generation portfolio (74% renewable installed capacity by the end of 2019) and low exposure to CO2 regulatory risks (long term target to reduce CO2/kWh in line with climate science);
b) Commercial differentiation – products (low carbon electricity) and services (energy efficiency services) that meet growing customers demand for low carbon solutions (total accumulated client savings of 3 TWh since 2015, avoiding 1.2 Mt CO2);
c) Increased internal efficiency – Consistently increasing wind turbine load capacity (30%) and availability (>97%) and differentiation in wind farm development; reduction of technical and commercial electricity losses in distribution networks.

6. EDP' vision and business strategy are fully aligned with the Paris Agreement. The company committed to a 2030 science based GHG reduction target, approved by the Science Based Targets Initiative and aligned with the well below 2ºC pathway (IEA B2DS Scenario). EDP is also actively involved in the promotion of the vital role of renewable energy in the attainment of the 1.5ºC objective; joined the UN Global Compact *Business Ambition for 1.5* °C; is a member of the Low Carbon Technology Partnership Initiative (LCTPi), a collaborative initiative led by the World Business Council for Sustainable Development that produced in-depth analysis demonstrating that the potential of existent business solutions can deliver 65% of the needs to achieve the Paris Agreement objective. EDP, along with 15 electricity utilities, signed an action plan whose implementation enables the installation of 1,5 TW renewable energy capacity worldwide, over the next 10 years.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Both absolute and intensity targets

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2016

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based)

Base year
2015

Covered emissions in base year (metric tons CO2e)
22,532,018

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
100

Target year
2030

Targeted reduction from base year (%)
71.1

Covered emissions in target year (metric tons CO2e) [auto-calculated]
6,511,753.202

Covered emissions in reporting year (metric tons CO2e)
15,208,878

% of target achieved [auto-calculated]
45.7117288156

Target status in reporting year
Underway

Is this a science-based target?

Yes, this target has been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)

Target officially approved by SBTi (emissions intensity), but expressed in absolute terms, assuming average hydro and wind conditions.

Group-wide reduction target for combined scope 1 and scope 2 emissions, for all GHGs, set using the Sectoral Decarbonization Approach - Power Sector and IEA B2DS Scenario. Applies to all geographies and is fully aligned with our public commitment, announced in March 2019, to reduced specific CO2 emissions from electricity generation by 90% in 2030, compared with 2005 levels. This is part of EDP's Strategic Update 2019-2022.

Target achievement is supported by the strategic focus on renewable generation growth (scope 1 emissions reduction), phase-out of the coal -fired power plants before 2030 and continued investment in distribution grids, thus reducing electricity losses (scope 2 emissions reduction).

EDP has also committed to Eurelectric's pledge to achieve a carbon-neutral power supply in Europe well before 2050.

Target reference number

Abs 2

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 3 (upstream & downstream)

Base year

2015

Covered emissions in base year (metric tons CO2e)

14,622,760

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

99.6

Target year

2030

Targeted reduction from base year (%)
40

Covered emissions in target year (metric tons CO2e) [auto-calculated]
8,773,656

Covered emissions in reporting year (metric tons CO2e)
11,729,995

% of target achieved [auto-calculated]
49.4565492424

Target status in reporting year
Underway

Is this a science-based target?
Yes, this target has been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)
Absolute target officially approved by SBTi.

Group-wide reduction target for the company's relevant upstream and downstream scope 3 emissions categories: C1 (purchased goods and services); C2 (capital goods), C3 (fuel and energy related activities); C4 (upstream transportation and distribution); C6 (business travel) and C11 (use of sold products). Together, these categories represented 99,6% of total scope 3 emissions in base year.
Target achievement is supported by the reduction of the Group's activities in the coal and gas sectors and by supplier engagement activities focused on supply chain indirect emissions reduction.

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Year target was set
2019

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based)

Intensity metric

Metric tons CO2e per megawatt hour (MWh)

Base year

2015

Intensity figure in base year (metric tons CO2e per unit of activity)

0.361

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

75

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.09025

% change anticipated in absolute Scope 1+2 emissions

71.1

% change anticipated in absolute Scope 3 emissions

40

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.23

% of target achieved [auto-calculated]

48.3841181902

Target status in reporting year

Underway

Is this a science-based target?

Yes, this target has been approved as science-based by the Science Based Targets initiative

Please explain (including target coverage)

Intensity target officially approved by SBTi.

Group-wide reduction target for combined scope 1 and scope 2 emissions, for all GHGs, set using the Sectoral Decarbonization Approach - Power Sector and IEA B2DS Scenario. Applies to all geographies and is fully aligned with our public commitment, to reduced specific CO2 emissions from electricity generation by 90% in 2030, compared with 2005 levels. This is part of EDP's Strategic Update 2019-2022.

Target achievement is supported by the strategic focus on renewable generation growth (scope 1 emissions reduction), phase-out of the coal -fired power plants before 2030 and continued investment in distribution grids, thus reducing electricity losses (scope 2 emissions reduction).

EDP has also committed to Eurelectric's pledge to achieve a carbon-neutral power supply in Europe well before 2050.

In 2019, despite of the decline in hydropower production, there was an inversion in the order of merit from coal-fired power plants to combined cycle natural gas turbine power plants (CCGT), in the Iberian Peninsula, from the second half of 2019. As a result, GHG Scope 1+2 emissions declined 20% and carbon intensity of electricity generation 14% compared to 2018.

Absolute emissions reduction in target year were calculated assuming average hydro and wind conditions. We anticipate a reduction of at least 40% in absolute scope 3 emissions, which is the reduction target formally approved by the SBTi (Abs2).

Target reference number

Int 2

Year target was set

2015

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Metric tons CO2e per megawatt hour (MWh)

Base year

2005

Intensity figure in base year (metric tons CO2e per unit of activity)

0.628

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

99.9

Target year

2030

Targeted reduction from base year (%)

90

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.0628

% change anticipated in absolute Scope 1+2 emissions

71.1

% change anticipated in absolute Scope 3 emissions

40

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.216

% of target achieved [auto-calculated]

72.8945506016

Target status in reporting year

Revised

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain (including target coverage)

Group-wide reduction target for GHG emissions from stationary combustion in the company's electricity generation assets.

Applies to all geographies and generation activities and is embedded in EDP's Strategic Update 2019-2022. Target is fully aligned with our Int1 target, which is a science-based target.

Absolute emissions reduction in target year were calculated assuming average hydro and wind conditions. We anticipate a reduction of 40% in absolute scope 3 emissions, which is the reduction target formally approved by the SBTi (Abs2).

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2019

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

Target type: energy carrier
Electricity

Target type: activity
Production

Target type: energy source
Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)
MWh

Target denominator (intensity targets only)
megawatt hour (MWh)

Base year
2019

Figure or percentage in base year
74

Target year
2030

Figure or percentage in target year
85

Figure or percentage in reporting year
74

% of target achieved [auto-calculated]
0

Target status in reporting year
New

Is this target part of an emissions target?

Target is not formally part of an emissions reduction target but EDP's strategic focus on renewable growth is essential for the achievement of our emissions reduction targets.

Is this target part of an overarching initiative?

Other, please specify

LCTPI - Low-Carbon Technology Partnerships initiative

Please explain (including target coverage)

This is one EDP's 2019-2022 Strategic Update targets: to ensure at least 85% of renewable installed capacity by 2030. It is a corporate-wide target and applies to all geographies where the Group operates. EDP joined the REscale LCTPi initiative, contributing to accelerate the deployment of renewables and the transition to a low-carbon electricity system, aiming at achieving an additional 1.5 TW of deployment by 2025.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	46	
To be implemented*	11	1,184,000
Implementation commenced*	10	1,442,600
Implemented*	13	1,384,000
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

1,361,321

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

128,038,000

Investment required (unit currency – as specified in C0.4)

1,267,500,000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

Several wind farms in USA, Portugal, Spain, France and Italy, totaling 749 MW installed capacity. Assumptions made:
- CO2 savings based on avoided thermal generation and respective 2019 emission intensity by geography.
- Monetary savings based on avoided thermal generation costs (coal and gas), assuming average renewables load factors over the past 5 years and on avoided CO2 emissions, assuming EU-ETS spot price as of Dec. 31st 2019, i.e., 24.67 €/tCO2.
- Investment based on real or typical values of CAPEX for wind farms

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Distribution losses and power plant self-consumption reduction

Estimated annual CO2e savings (metric tonnes CO2e)

22,658

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

13,985,000

Investment required (unit currency – as specified in C0.4)

36,600,000

Payback period

1-3 years

Estimated lifetime of the initiative

21-30 years

Comment

Energy efficiency program – distribution grids loss reduction initiatives implemented in 2019; backfeed power reduction in wind farms; self-consumption hydropower reduction; PV in office buildings. Assumptions made:
- CO2 savings based on global (grid) emission factors by geography
- Monetary savings based on retail electricity prices and avoided CO2 emissions, assuming EU-ETS spot price as of Dec. 31st 2019, i.e., 24.67 €/tCO2.
- Investment related to distribution grid losses reduction activities

Initiative category & Initiative type

Low-carbon energy consumption
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

168

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

101,000

Investment required (unit currency – as specified in C0.4)

643,000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

429 kWp photovoltaic power systems installed in office buildings in Portugal (self-consumption regime), likely to generate around 643 MWh/year and avoid around 170 tCO2e/year.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Focus on renewable generation allows for the reduction of exposure to risk of further regulatory restrictions on CO2 emissions.
Dedicated budget for low-carbon product R&D	EDP has a dedicated budget for R&D that is allocated to 5 main areas: (1) Clean Energy; (2) Smart Grids; (3) Customer-Focused Solutions; (4) Energy Storage and Flexibility; and (5) Digital Innovation. In 2019, R&D expenditure amounted to EUR 162 million.
Internal price on carbon	EDP uses internal price of carbon to assess the impact of current and future carbon regulation on energy prices and volumes, existing assets' value and to evaluate capital investments in new electricity generation assets.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Renewable electricity. EDP's strategic focus on renewable generation growth led to a progressive decarbonization of the company' electricity generation portfolio. In 2019, EDP's installed capacity worldwide was 74% renewable and the share of renewables to the total electricity generation was 67% , thus delivering electricity with an average low carbon content. In addition, 100% certified renewable electricity is also part of EDP's product portfolio. In 2022, EDP foresees its generation portfolio to be, at least, 78% renewable based and its emissions intensity to be 65% below 2005 levels and 36% below 2015 level, putting the company well on track to meet its 2030 reduction commitment (-90% CO2 per TWh, compared to 2005, according to the new strategic goals) and science-based target (-75% scope 1 and 2 CO2 per TWh, compared to 2015).

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Low-Carbon Investment (LCI) Registry Taxonomy

% revenue from low carbon product(s) in the reporting year

19

Comment

Under its Strategic Update 2019-2022, EDP will invest c. € 4.15 bn in renewables (expansion CAPEX), increasing 17% its installed capacity in 2022 from 2018 level. EDP had committed to exceeding 78% of renewables in its overall installed capacity by 2022 and further committed to reduce CO2 specific emissions by 65% in 2022 and by 90% before 2030 (compared to 2005 levels).

Level of aggregation

Group of products

Description of product/Group of products

Energy efficiency services and low carbon client solutions.
EDP has a diversified portfolio of energy efficiency services targeted at the specific needs of different customer segments in Portugal, Spain and Brazil, which increases efficiency and avoids emissions in final energy consumption. This portfolio includes: distributed generation (solar PV micro and mini-generation solutions), home storage systems, smart appliances, heat pumps, LED lighting, energy management devices, fuel switching projects, energy audits, electric mobility solutions, education projects and awareness campaigns. For SMEs and large corporate customers in Iberia, the Save To Compete (S2C) programme identifies energy savings measures and funds its implementation through the induced savings. By the end of 2019, S2C had induced accumulated savings of of around 321 GWh, avoiding 116 ktCO2.
In Brazil, through Soluções em Energia, the energy efficiency and distributed generation projects carried out in 2019 represented 35 GWh savings and a reduction of 33 ktCO2.
EDP also offers solar photovoltaic (PV) generation solutions for different clients' segments, allowing for 100% renewable electricity self-consumption: by the end of 2019, c. 100 MW of PV capacity had been installed in our customer's premises. EDP is also promoting sustainable mobility by offering attractive packages combining special prices for electricity, home EV charging stations and partnerships with electric car manufacturers. For light duty vehicles and average yearly mileage, electric mobility delivers annual savings of 1,2 t CO2 compared to conventional mobility.
Total accumulated savings provided to our customers since 2015, have now reached 3 TWh, avoiding 1.2 Mt of CO2 emissions. This means EDP is well on track to meet the target set for 2022: to improve our customer's energy efficiency by inducing up to 5 TWh accumulated savings from 2015. This target includes the measures carried out by EDP under the PPEC programme in Portugal – Plan for Promoting Efficiency in Electricity Consumption (PPEC), promoted by the Portuguese Regulator - which have already

generated accumulated savings, since the start of the programme in 2007, of 4.6 TWh, with 1.7 Mt of CO2 emissions avoided.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Low-Carbon Investment (LCI) Registry Taxonomy

% revenue from low carbon product(s) in the reporting year

1

Comment

EDP committed to provide customers with ongoing energy efficiency products and services, delivering up to 5 TWh in accumulated savings in the period 2015-2022 and avoiding more than 1.5 MtCO2 in the same period.

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

Methane emissions are not relevant to EDP's operation. In 2017, EDP sold its gas distribution assets in Portugal and Spain and is currently active only in the supply segment of the gas business. Therefore, leaks in gas distribution networks, the only previous material source of methane emissions, are no longer associated with EDP Group. However, there are areas in which we estimate and manage our methane emissions.

Stationary combustion in thermal power plants accounts for 99,87% of EDP's total scope 1 GHG emissions. The company monitors GHG emissions from its thermal generation assets according to the European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations. These guidelines do not contemplate CH4 emissions, as they are immaterial in thermal electricity generation. According to official data from the Portuguese Environmental Agency, CH4 emissions from fuel combustion in electricity generation account for 0,08% of total GHG emissions (expressed in CO2e) from that activity. (Source: Portugal National Inventory Report 2017. CRF Table 1.s1 - 1.a - Public Electricity and Heating. Five-year average for the most recent available years).

Mobile combustion in the company fleet represents less than 0,1% of EDP's total scope 1 GHG emissions and the company accounts for the immaterial methane emissions associated with this source. EDP is implementing a plan to renew its company fleet to more efficient vehicles, including electric and hybrid vehicles, having committed to achieve electrification of 100% of its light-duty fleet segment by 2030. Since 2010, the number of electric vehicles has grown more than 20-fold representing, by the end of 2019, 10% of the total light-duty fleet of about 2400 vehicles; fleet primary energy consumption decreased by 22% and GHG emissions (including small quantities of methane) by 27%. Methane emissions are incorporated into our absolute

(Abs 1) and intensity (Int 1) GHG emissions reduction Science Based Targets, as they pertain only to our scope 1 and scope 2 emissions, including all GHGs.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2008

Base year end

December 31, 2008

Base year emissions (metric tons CO2e)

19,813,643

Comment

Base year data refers to our first Group-wide complete GHG inventory (scope 1, 2 and 3 emissions). Nevertheless, base year for our active reduction targets are 2005 (scope 1 target) and 2015 (science-based target for scope 1, scope 2 and scope 3).

Scope 2 (location-based)

Base year start

January 1, 2008

Base year end

December 31, 2008

Base year emissions (metric tons CO2e)

1,571,028

Comment

Base year data refers to our first Group-wide complete GHG inventory (scope 1, 2 and 3 emissions). Base year for our active reduction targets are 2005 (scope 1 target) and 2015 (Science Based Target for scope 1, scope 2 and scope 3).

Scope 2 emission results are the same for location-based and market-based methods because almost all electricity consumed by EDP and included in this scope (electricity consumption in office buildings, renewable power stations self-consumption and electricity losses in distribution networks) was generated and supplied by the EDP Group and therefore emissions are accounted for under scope 1. Exceptions are markets where EDP distributes more electricity than it generates (Portugal and Brazil) and markets where EDP does not have supply activities and, therefore, consumes

electricity supplied by third parties (North America and European countries other than Portugal and Spain).

In Portugal and Brazil no country-wide Guarantees of Origin system is currently in place, therefore residual mix figures, used to calculate our scope 2 emissions in these markets according to the market-based method, are very similar to average grid emission factors, used in the location-based method. Markets where we don't distribute or supply electricity (North America and Rest of Europe) contribute only marginally to our electricity consumption and, therefore, even if we use RECs to certify 100% of our North America consumption, scope 2 global figures are the same calculated with the two methods.

Scope 2 (market-based)

Base year start

January 1, 2008

Base year end

December 31, 2008

Base year emissions (metric tons CO2e)

1,571,028

Comment

Base year data refers to our first Group-wide complete GHG inventory (scope 1, 2 and 3 emissions). Base year for our active reduction targets are 2005 (scope 1 target) and 2015 (Science Based Target for scope 1, scope 2 and scope 3).

Scope 2 emission results are the same for location-based and market-based methods because almost all electricity consumed by EDP and included in this scope (electricity consumption in office buildings, renewable power stations self-consumption and electricity losses in distribution networks) was generated and supplied by the EDP Group and therefore emissions are accounted for under scope 1. Exceptions are markets where EDP distributes more electricity than it generates (Portugal and Brazil) and markets where EDP does not have supply activities and, therefore, consumes electricity supplied by third parties (North America and European countries other than Portugal and Spain).

In Portugal and Brazil no country-wide Guarantees of Origin system is currently in place, therefore residual mix figures, used to calculate our scope 2 emissions in these markets according to the market-based method, are very similar to average grid emission factors, used in the location-based method. Markets where we don't distribute or supply electricity (North America and Rest of Europe) contribute only marginally to our electricity consumption and, therefore, even if we use RECs to certify 100% of our North America consumption, scope 2 global figures are the same calculated with the two methods.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

14,362,658

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Almost all electricity consumed by EDP and included in this scope (electricity consumption in office buildings, renewable power plants self-consumption and electricity losses in distribution networks) was generated and supplied by the EDP Group and therefore emissions are accounted for under scope 1. Exceptions are markets where EDP distributes more electricity than it generates (Portugal and Brazil) and markets where EDP does not have supply activities and, therefore, consumes electricity supplied by third parties (North America and European countries other than Portugal and Spain).

In Portugal, the Guarantees of Origin (GoO) system is not yet in place, therefore

residual mix figures, used to calculate our scope 2 emissions according to the market-based method, are very similar to average grid emission factors, used in the location-based method. Markets where we don't distribute or supply electricity (North America and Rest of Europe) contribute only marginally to our electricity consumption. The total compensation of emissions through schemes like Renewable Energy Certificates (RECs) or GoO, in the USA, Spain and Brazil, result in a slight improvement of scope 2 emissions (-2%) calculated with the market-based method.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

846,220

Scope 2, market-based (if applicable)

829,319

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

27,944

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source:

calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Purchase of chemicals products and use of municipality water. Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP, are considered not relevant.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

349,025

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

20

Please explain

Facilities construction (power plant and buildings) and equipment acquisition.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

6,783,633

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Scope 2 emissions calculated according to location-based method. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from

published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Production (extraction and processing) of fuels (coal, natural gas, fuel oil and diesel) used by EDP for electricity generation. Generation/processing of electricity and natural gas purchased for retail.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

611,305

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from published data (national energy authorities, GHG Protocol Transport tool and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Transportation of fuels (coal, natural gas, fuel oil and diesel oil) used by EDP for electricity generation.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

22,300

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source:

calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Transport and disposal of waste generated in EDP's activities (mainly gypsum and ashes from coal power plants). Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

7,493

Emissions calculation methodology

Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP. Emission factors source: calculated from published data (national energy authorities or default data from GHG Protocol Transport tool). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

EDP employee business travel (air, train and road travel). Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

4,477

Emissions calculation methodology

Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP. Emission factors source: calculated from published data (national energy authorities or default data from GHG Protocol Transport tool). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

EDP employee commuting. Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

33,997

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Use of rented assets (especially machinery) in construction activities. Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Downstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

712

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Support activities (offices and stores) associated with electricity and gas retail. Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

This category is not applicable to EDP. EDP's products (electricity and gas) are supplied in their final consuming form, therefore they do not require further processing.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

3,950,594

Emissions calculation methodology

Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP. Emission factors source: calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Use of natural gas sold by EDP to clients.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

This category is not applicable to EDP. EDP's sold products (electricity and gas) do not generate waste, therefore no end of life treatment is required.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

EDP did not use downstream leased assets in the reporting year.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

EDP did not have franchised activities in the reporting year.

Investments

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

4,127

Emissions calculation methodology

Life Cycle Assessment (LCA) study performed with Simapro software. Scope and emissions categorization defined to comply with the requirements of The GHG Protocol Value Chain (Scope 3) Accounting and Reporting Standard. Activity data sources: EDP; Ecoinvent database when primary data was not available. Emission factors source: calculated from published data (national energy authorities and LCA studies). GWP source: IPCC Assessment Report 5 (2014).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

10

Please explain

Emissions from EDP's participated companies (minority interests). Categories that account for less than 1% of total scope 3 emissions or are not applicable to EDP are considered not relevant.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

EDP had no emissions from upstream or downstream activities other than the ones reported in categories C1 to C15.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

EDP had no emissions from upstream or downstream activities other than the ones reported in categories C1 to C15.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00106

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

15,191,977

Metric denominator

unit total revenue

Metric denominator: Unit total

14,333,008,747

Scope 2 figure used

Market-based

% change from previous year

14.8

Direction of change

Decreased

Reason for change

Despite a slight decrease in the total revenue (-6%), the global combined scope 1 and 2 emissions decreased 20% from previous year, due to higher wind generation and less fossil fuels use, specially coal, which explains the 15% decrease of this intensity figure in 2019 compared with the previous year. This is linked with the strategic decision to

reduce the electricity generation from coal and to anticipate the shutdown of the coal power plants in the Iberian Peninsula.

Intensity figure

0.229

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

15,191,977

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

66,231,396

Scope 2 figure used

Market-based

% change from previous year

13.6

Direction of change

Decreased

Reason for change

Despite a 7.5% decrease in the electricity generated, the global combined scope 1 and 2 emissions decreased 20% from previous year, due to higher wind generation and less fossil fuels use, specially coal, which explains the c. 14% decrease of this intensity figure in 2019 compared with the previous year. This is linked with the strategic decision to reduce the electricity generation from coal and to anticipate the shutdown of the coal power plants in the Iberian Peninsula.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	14,353,136	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	35	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	222	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	9,265	IPCC Fifth Assessment Report (AR5 – 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	0.394	9,265	Corresponds to SF6 fugitive emissions in gas insulated switchgears and transformers from generation and distribution activities
Combustion (Electric utilities)	14,338,181	0	0	14,338,181	CO2 emissions from thermal power plants, calculated according with the European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations. These guidelines do not contemplate the calculation of CH4 emissions, as they are immaterial in thermal electricity generation. According to official data from the Portuguese Environmental Agency, CH4

					emissions from fuel combustion in electricity generation account for 0,08% of total GHG emissions (expressed in CO2e) from that activity.
Combustion (Gas utilities)	0	0	0	0	There are no combustion emissions associated with EDP's gas business. In 2017, EDP sold its gas distribution assets in Portugal and Spain, alienating its gas distribution networks and solely maintaining the gas supply activity.
Combustion (Other)	14,995.4	1.249		15,212	Emissions from stationary (natural gas consumption in office buildings) and mobile (company fleet) combustion in support activities. Gross scope 1 emissions include 222 tCO2e corresponding to N2O emissions from fleet.
Emissions not elsewhere classified	0	0	0	0	All gross scope 1 emissions are accounted for in the previous categories.

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Portugal	6,027,601
Spain	3,872,298
Brazil	4,461,010
North America [1]	1,483
Other, please specify Rest of Europe (FR, BE, IT, PL, RO, UK)	266

[1] North America includes activities in the USA, Canada and Mexico

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion in thermal power plants	14,338,181
Fugitive emissions	9,265
Mobile combustion in company fleet	15,173
Natural gas consumption (office buildings)	39

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	14,347,446	Total refers to EDP's scope 1 emissions from stationary combustion of fossil fuels in our thermal power plants and to SF6 fugitive emissions from electricity generation and distribution equipment. Together, these sources represent 99.9% of our total scope 1 GHG emissions. The remaining 0.1% (excluded from this figure but reported in C6.1) refer to mobile combustion in the company fleet and to natural gas consumption in office buildings. Outside the electricity sector, EDP has only gas supply activities, with no material scope 1 emissions.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based	Scope 2, market-based	Purchased and consumed electricity, heat,	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2

	(metric tons CO2e)	(metric tons CO2e)	steam or cooling (MWh)	market-based approach (MWh)
Portugal	654,867	654,867	1,990,335	0
Spain	0	0	45,635	45,635
Brazil	169,241	169,241	23,411	0
North America	16,901	0	41,134	41,134
Other, please specify Rest of Europe (FR, BE, IT, PL, RO, UK)	5,211	5,211	14,505	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity consumption in office buildings	799	107
Electricity self-consumption in power plants	21,313	5,104
Distribution grid losses	824,108	824,108

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions	Direction of change	Emissions value (percentage)	Please explain calculation

	(metric tons CO2e)			
Change in renewable energy consumption	0	No change	0	No material change in combined scope 1 and scope 2 emissions from previous year resulting from change in renewable energy consumption.
Other emissions reduction activities	368,475	Decreased	1.9	Emissions reduction initiatives impacting scope 1 and 2: new renewable generation capacity (wind in USA and Italy), grid loss reduction, power plant self-consumption reduction and distributed PV in office buildings. These initiatives amounted to emissions reduction of about 368,000 tCO2, which represents around 2% decrease in EDP's combined S1 + S2 emissions from 2018: (368,475/19,014,468)*100 = 1.94%.
Divestment	62,000	Increased	0.3	As part of its asset rotation strategy, in 2019 EDP sold several wind farms in Portugal Spain, France and Belgium, totaling 920 MW, which would have produced about 126 GWh. This loss of production from wind power plants corresponds to an increase of about 484 kt CO2, given the thermal emission factors of those countries, i.e., a 2% increase in EDP's combined S1 + S2 emissions from 2018: (62,000/19,014,468)*100= 0.3%.
Acquisitions	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from acquisitions.
Mergers	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from mergers.
Change in output	4,072,000	Decreased	21.4	The combined effect of reduced generation from coal power plants (-6.62 TWh) and increased generation from CCGT (+4.85 TWW) resulted in a significant decrease in CO2 emissions of about 4 million tCO2, i.e, - 21% in EDP's combined S1 + S2 emissions from 2018: (4,072,000/19,014,468)*100= 21.4%.

Change in methodology	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from change in methodology
Change in boundary	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from change in boundary
Change in physical operating conditions	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from change in physical operating conditions.
Unidentified	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from unidentified reasons
Other	0	No change	0	No change in combined scope 1 and scope 2 emissions from previous year resulting from unidentified reasons

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 80% but less than or equal to 85%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes

Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	4,302	51,355,096	51,359,398
Consumption of purchased or acquired electricity		1,935,835	2,166,121	4,101,956
Consumption of self-generated non-fuel renewable energy		44,137,383		44,137,383
Total energy consumption		46,077,520	53,521,217	99,598,737

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No

Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Bituminous Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
28,198,299

MWh fuel consumed for self-generation of electricity
28,198,299

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration
0

Emission factor
94.6

Unit
kg CO2 per GJ

Emissions factor source
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment
Default emission factor

Fuels (excluding feedstocks)
Natural Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
19,672,998

MWh fuel consumed for self-generation of electricity
18,851,779

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration
821,220

Emission factor
56.1

Unit
kg CO2 per GJ

Emissions factor source
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment
Default emission factor

Fuels (excluding feedstocks)
Gas Oil

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
47,974

MWh fuel consumed for self-generation of electricity
47,974

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration
0

Emission factor
74.1

Unit
kg CO2 per GJ

Emissions factor source
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment
Default emission factor

Fuels (excluding feedstocks)

Other, please specify

Fuel oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

93,685

MWh fuel consumed for self-generation of electricity

93,685

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

77.4

Unit

kg CO2 per GJ

Emissions factor source

2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment

Default emission factor

Fuels (excluding feedstocks)

Blast Furnace Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2,836,968

MWh fuel consumed for self-generation of electricity

2,836,968

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

260

Unit

kg CO2 per GJ

Emissions factor source

2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment

Default emission factor

Fuels (excluding feedstocks)

Coke Oven Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

171,235

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

171,235

Emission factor

44.4

Unit

kg CO2 per GJ

Emissions factor source

2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment

Default emission factor

Fuels (excluding feedstocks)

Other, please specify

Oxygen Steel Furnace Gas

Heating value

Total fuel MWh consumed by the organization
279,552

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration
279,552

Emission factor
182

Unit
kg CO2 per GJ

Emissions factor source
2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment
Default emission factor

Fuels (excluding feedstocks)
Other, please specify
Fuels for mobile combustion (Gasoline, diesel oil, alcohol, LNG)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
58,688

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration
58,688

Emission factor
74.1

Unit

kg CO2e per GJ

Emissions factor source

2006 IPCC Guidelines for National Greenhouse Gas Inventories

Comment

The emission factor disclosed was obtained from the weighted average of the emission factors of the fuels used for mobile combustion (gasoline, gas/diesel oil, natural gas liquids and biofuels)

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	66,125,268	2,114,438	44,354,941	1,179,610
Heat	0	0	0	0
Steam	846,624	0	0	0
Cooling	0	0	0	0

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

3,124.2

Gross electricity generation (GWh)

11,894.91

Net electricity generation (GWh)

10,861.32

Absolute scope 1 emissions (metric tons CO2e)

10,391,933

Scope 1 emissions intensity (metric tons CO2e per GWh)

956.78

Comment

Figures refer to coal power plants in Portugal, Spain and Brazil.

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own lignite-fired power plants.

Oil

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own oil-fired power plants.

Gas

Nameplate capacity (MW)

3,729

Gross electricity generation (GWh)

10,445.31

Net electricity generation (GWh)

10,184.09

Absolute scope 1 emissions (metric tons CO2e)

3,781,564

Scope 1 emissions intensity (metric tons CO2e per GWh)

371.32

Comment

Figures refer to CCGT power plants in Portugal and Spain.

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not owns biomass power plants.

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not owns waste power plants.

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP, through Iberenegia, S.A.U., a subsidiary company of EDP España S.A.U., holds a 15.5% stake in the Trillo nuclear power plant. EDP is a minor shareholder and has no operational or financial control over this power plant, which is outside our reporting boundary.

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own fossil-fuel plants fitted with CCS.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own geothermal power plants.

Hydropower

Nameplate capacity (MW)

8,784.8

Gross electricity generation (GWh)

14,263.16

Net electricity generation (GWh)

14,096.26

Absolute scope 1 emissions (metric tons CO2e)

357

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.03

Comment

Figures refer to large and mini-hydro power plants in Portugal, Spain and Brazil. Scope 1 emissions in hydroelectric power plants are related to SF6 fugitive emissions.

Wind

Nameplate capacity (MW)

10,666.9

Gross electricity generation (GWh)

29,816.8

Net electricity generation (GWh)

29,767.63

Absolute scope 1 emissions (metric tons CO2e)

234

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.01

Comment

Figures refer to wind farms in Portugal, Spain, Brazil, North America and several European countries. Scope 1 emissions in wind farms are related to SF6 fugitive emissions.

Solar

Nameplate capacity (MW)

145.2

Gross electricity generation (GWh)

274.98

Net electricity generation (GWh)

272.89

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Figures refer to solar parks in Portugal, Romania and USA.

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own marine or other renewable power plants besides hydro, wind and solar.

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

EDP does not own other renewable power plants besides hydro, wind and solar.

Other non-renewable

Nameplate capacity (MW)

49.2

Gross electricity generation (GWh)

276.73

Net electricity generation (GWh)

270.09

Absolute scope 1 emissions (metric tons CO2e)

165,053

Scope 1 emissions intensity (metric tons CO2e per GWh)

156.42

Comment

Figures refer to gas-fired CHP (including natural gas, LDG and coke oven gas). Denominator includes steam generation (785.1 GWh).

Total

Nameplate capacity (MW)

26,499.3

Gross electricity generation (GWh)

66,971.9

Net electricity generation (GWh)

65,452.3

Absolute scope 1 emissions (metric tons CO2e)

14,339,139.8

Scope 1 emissions intensity (metric tons CO2e per GWh)

216.5

Comment

The reported absolute scope 1 emissions emissions refer only to EDP's energy generation activity, which represents 99.8% of the total scope 1 emissions. Scope 1 emissions intensity includes 785.1 GWh from steam generation.

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Unbundled energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Wind

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Spain

MWh consumed accounted for at a zero emission factor

45,635

Comment

Power supplied to EDP office buildings and wind farms backfeed power in Spain

Sourcing method

Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

Country/region of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

41,134

Comment

Power supplied to EDP Renewables office buildings and wind farms backfeed power in the USA

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

Brazil

Voltage level

Distribution (low voltage)

Annual load (GWh)

25,591.22

Annual energy losses (% of annual load)

9.9

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

169,240.62

Length of network (km)

93,268

Number of connections

3,524,115

Area covered (km2)

50,800

Comment

EDP, through their distribution companies EDP S. Paulo and EDP Espírito Santo, holds concession contracts for electricity distribution in the Brazilian States of S. Paulo and Espírito Santo

Country/Region

Portugal

Voltage level
Distribution (low voltage)

Annual load (GWh)
45,666.47

Annual energy losses (% of annual load)
9.6

Scope where emissions from energy losses are accounted for
Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)
65,486,757

Length of network (km)
226,823

Number of connections
6,277,358

Area covered (km2)
89,102

Comment
EDP, through its distribution company EDP Distribuição, holds concession contracts for electricity distribution in Portugal mainland. EDP Distribuição is also the Portuguese DSO (Distribution System Operator), holding the High and Medium Voltage networks. Data disclosed includes all the networks.

Country/Region
Spain

Voltage level
Distribution (low voltage)

Annual load (GWh)
826,158

Annual energy losses (% of annual load)
3.6

Scope where emissions from energy losses are accounted for
Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)
0

Length of network (km)

20,766

Number of connections

668,494

Area covered (km2)

10,056

Comment

EDP España, through its distribution company, holds concession contracts for electricity distribution in Asturias, Madrid, Comunidad Valenciana, Aragón and Cataluña

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify

Renewable generation installed capacity

Metric value

0.74

Metric numerator

Renewable installed capacity in 2019: 19,597 MW

Metric denominator (intensity metric only)

Total installed capacity in 2019: 26,525 MW

% change from previous year

0.74

Direction of change

Decreased

Please explain

Under the current Strategic Update 2019-2022 presented in March 2019 in London, EDP committed to increase its renewable installed capacity up to 78% of the total installed capacity by 2022. Nevertheless, in 2019 the renewable installed capacity decreased slightly (-0.7%) due to the renewable asset rotation strategy established in our current business plan. This strategy allows for a continuous portfolio optimization and the disposal of non-strategic assets, while accelerating organic growth and the crystallization of value. In 2019, EDP reduced its installed capacity in wind farms by 489 MW through the asset rotation strategy: adding 431 MW in the USA and Italy and selling 920 MW in Portugal, Spain, France and Belgium.

Description

Other, please specify

% of Smart meter installed in Iberia

Metric value

0.46

Metric numerator

Smart meters installed by the end 2019: 3,244,645

Metric denominator (intensity metric only)

Number of delivery points: 6,945,852

% change from previous year

22.5

Direction of change

Increased

Please explain

EDP continued the roll-out of smart meters in the Iberian Peninsula. The target publicly committed is to have 90% smart meters installed in 2022 and 100% before 2030.

Description

Other, please specify

Induced clients' savings (accumulated in the period 2015-2019)

Metric value

3.04

Metric numerator

Accumulated clients’ savings since 2015: 3.04 TWh

Metric denominator (intensity metric only)

No metric denominator, this is an absolute target

% change from previous year

19

Direction of change

Increased

Please explain

EDP publicly committed to provide customers with ongoing energy efficiency products and services delivering more 5 TWh in accumulated savings in the period 2015-2022.

Description

Other, please specify

R&D and innovation expenses in cleantech

Metric value

298,547,489

Metric numerator

R&Di expenditure since 2015: EUR 298,547,489

Metric denominator (intensity metric only)

No metric denominator, this is an absolute target

% change from previous year

40.9

Direction of change

Increased

Please explain

EDP publicly committed to Invest EUR 200 million in innovative clean energy, energy efficiency and smart grids projects from 2015 to 2020. This target has already been reached.

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Coal – hard	115,178,000	1.4	2022	Figures refer to CAPEX planned for the remaining period of the current EDP Business Plan 2019-2022
Gas	52,218,000	0.6	2022	Figures refer to CAPEX planned for the remaining period of the current EDP Business Plan 2019-2022
Hydropower	478,312,000	5.8	2022	Figures refer to CAPEX planned for the remaining period of the current EDP Business Plan 2019-2022
Wind	6,538,750,000	79.1	2022	Figures refer to CAPEX planned for the remaining

				period of the current EDP Business Plan 2019-2022
Solar	1,079,017,000	13.1	2022	Figures refer to CAPEX planned for the remaining period of the current EDP Business Plan 2019-2022

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Smart grid	Investment in smart grids in Portugal, Spain and Brazil, including roll-out of smart meters in the low voltage delivery points in Iberia	750,000,000	88.2	2022
Other, please specify Energy end-use efficiency product and services	EDP has a diversified portfolio of energy efficiency products and services targeted at the specific needs of the different customer segments in Portugal, Spain and Brazil,. This portfolio includes: distributed generation (solar PV generation solutions), prosumer services, home storage systems, smart appliances, heat pumps, compact smart energy management devices, integrated energy management solutions, fuel switching projects, energy audits, electric mobility solutions, education projects and awareness campaigns. For SMEs and large corporate customers in Iberia, we highlight the “Save To Compete” programme that identifies energy savings measures and funds its implementation through the induced savings. Since its launch in Portugal (2012) and Spain (2013), the programme has led to accumulated savings of around 321	100,000,000	11.8	2022

	GWh and avoiding approximately 116 thousand tonnes of CO2. Regarding distributed solar power, in 2019 more than 90,000 PV modules were installed in residential and business customers in Portugal, generating about 25 GWh of solar energy. This business is also being leveraging in Spain through the creation of EDP Solar by the end of 2019. In Brazil, EDP Smart was established in 2019, a brand that brings together the entire portfolio for business and residential customers in the liberalized market, including the photovoltaic solar energy segment. EDP is also promoting sustainable mobility by offering commercially attractive packages combining special prices for electricity, home charging stations and partnerships with electric car manufacturers. Total accumulated savings provided to our customers since 2015 have now reached 3.04 TWh, avoiding 406 kt of CO2 emissions.			

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment	R&D investment figure in the reporting	Comment

		over the last 3 years	year (optional)	
Renewable energy	Pilot demonstration	≤20%	55,219,944	Distributed generation, PV floating System, Windfloat
Energy storage	Applied research and development	≤20%	553,010	Stocare project, storage and mobility lab
Smart grids	Applied research and development	21-40%	11,005,350	European and Brazilian R&D projects, Cotesa, Red Marte, Smartlab SAS, DotGis, Flash BT, Net2Grid
Digital technology	Full/commercial-scale demonstration	41-60%	66,209,340	IT innovative projects along EDP value chain (generation, distribution, supply, digital global unit and support activities), start-up investments (Amperio, Jungle.Ai, Green Eagle, Drivit, Sterblue, Presenso, Sepio, Defined Crowd, DotGis, Energyworkx, LOQR, Hyperlabs)
Other, please specify Energy efficiency	Small scale commercial deployment	≤20%	1,781,664	Investment in start-ups (Arquiled, Egg, Fuelsave, Drivit/Bahub), efficient lighting systems, building energy management systems
Other, please specify Operacional	Applied research and development	≤20%	11,635,653	Operational costs to support RDi activities, New downstream and CNET (Centre for New Energy Technologies) structures
Other, please specify Sustainable mobility	Full/commercial-scale demonstration	≤20%	4,692,222	Installation of several EV charging stations under different public and private partnerships
Demand side response programs	Small scale commercial deployment	≤20%	7,710,739	Save2Compete programme, new functionalities for the Re:dy device (smart home energy management system), GridBeyond project

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

External Assurance RS19.pdf

Pages 37_264_EDP Sustainability Report 2019-2.pdf

Page/ section reference

Please see EDP's Sustainability Report 2019, pages 249 and 256 - 258 (or pp. 220-222 of the pdf file)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

External Assurance RS19.pdf

Pages 37_264_EDP Sustainability Report 2019-2.pdf

Page/ section reference

Please see EDP's Sustainability Report 2019, pages 249 and 256 - 258 (or pp. 220-222 of the pdf file)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

External Assurance RS19.pdf

Pages 37_264_EDP Sustainability Report 2019-2.pdf

Page/ section reference

Please see EDP's Sustainability Report 2019, pages 249 and 256 - 258 (or pp. 220-222 of the pdf file)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3 (upstream & downstream)

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

External Assurance RS19.pdf

Pages 37_264_EDP Sustainability Report 2019-2.pdf

Page/section reference

Please see EDP's Sustainability Report 2019, pages 249 and 256 - 258 (or pp. 220-222 of the pdf file)

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Year on year change in emissions (Scope 1)	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C6.1 – Scope 1 emissions. 1
C6. Emissions data	Year on year change in emissions (Scope 2)	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C6.3 – Scope 2 emissions. 1
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C6.5 – Scope 3 emissions. 1
C6. Emissions data	Year on year emissions intensity figure	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C6.10 – Scope 1 + Scope 2 emissions per total revenue and MWh. 1
C9. Additional metrics	Renewable energy products	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C9.1 – % of renewable electricity generation installed capacity. 1
C4. Targets and performance	Financial or other base year data points used to set a science-based target	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C4.1b – Emissions and electricity generation data used in setting EDP Science-

			based Target and reporting year % of achievement. 1
C4. Targets and performance	Emissions reduction activities	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C4.3 - GHG reduction from emissions reductions initiatives in the reporting year. 1
C8. Energy	Energy consumption	ISAE3000	Verification under third party independent assurance of EDP Sustainability Report 2019. Annual verification of corporate-wide data. C8.2a – Energy consumption totals. C8.2c – Energy consumption by fuel type. 1

[1]Pages 37_264_EDP Sustainability Report 2019-2.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

69

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2019

Period end date

December 31, 2019

Allowances allocated

Allowances purchased

Verified Scope 1 emissions in metric tons CO2e

9,884,950

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Includes only the facilities we own and operate in Europe (Portugal and Spain). In Brazil, there are no emissions trading systems in place so far.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

EDP's compliance strategy for the EU-ETS is based on emission reduction as well as in allowances purchase. The allocation of emissions allowances for the 2013-2020 period is made partially in auction, in accordance with Directive 2009/29/EC, which regulates the 3rd phase of the EU ETS - European Emission Trading Scheme. EDP's carbon credit management follows a hedging strategy, as in previous years, aiming at minimizing its exposure to market risk. The purchase of allowances is made on the secondary market and through over-the-counter transactions. In 2019, only one CHP plant in Portugal got allowances allocated for free (~72 kt). The power plants covered by the EU ETS emitted about 9.9 Mton of CO2 in 2019. To comply with EU-ETS, EDP has used allocated allowances, allowances purchased and banked allowances (allowances that EDP did not use in the past years).

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Agrocortex REDD project: its main objective is to prevent illegal deforestation of 186,219 ha, 100% of which is an Amazon biome. The project is located on the border between the states of Acre and Amazonas, southwest of the Amazon, within the frontier of the agribusiness expansion. The company in charge of managing the carbon credits developed a Sustainable Management Plan certified by the Forest Stewardship Council (FSC), which is considered an important tool for the preservation of the Forest and reduction of deforestation in the project region. In addition, the project seeks to promote alternative sources of income for local communities, and thus contribute to the sustainable development of the region.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

7,148

Number of credits (metric tonnes CO2e): Risk adjusted volume

0

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Stakeholder expectations

Change internal behavior

Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1

Application

A carbon price is used company-wide to assess the impact of current and future carbon regulation—namely ETS 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. 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 well before 2050.

Actual price(s) used (Currency /metric ton)

27

Variance of price(s) used

Price ranges are set by the Energy Planning Department and are updated yearly. Price forecasts currently range from €10 to €50 per ton of CO2, depending on the scenario, year and geography. For the timeframe 2019 to 2030, the average price for the base scenario is in the range €25 to €30 per ton of CO2.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

EDP uses internal shadow and implicit carbon prices to assess the impact of regulation on energy prices, energy volumes and existing asset's value, as well as to evaluate capital investments.
GHG regulation considered include the EU-ETS, which applies to our thermal power generation assets in Europe (Portugal and Spain), as well as possible future ETS in the only other geography where we currently own thermal power plants (Brazil).
Use of internal carbon price in investment evaluation is applied on building or acquiring new electricity generation assets in all geographies where we currently operate, taking into account the specifics of the markets, namely in what concerns regulation.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Compliance & onboarding

Details of engagement

Included climate change in supplier selection / management mechanism
Code of conduct featuring climate change KPIs
Climate change is integrated into supplier evaluation processes

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% of supplier-related Scope 3 emissions as reported in C6.5

63

Rationale for the coverage of your engagement

For the sustainable management of EDP's supply chain, the number of suppliers under scope is the total number of ongoing suppliers that were procured. As for the Procurement Function, the number of suppliers is 1,625 representing about 94.7% of total purchase spend. Every supplier under procurement, i.e. under a tender process, is invited to answer a climate change questionnaire, which is mandatory for tenders with potential or real environmental impacts. Tenders for supplies of services or products that are (internationally, by law or by performance) identified as having environmental impacts or that are exposed to environmental risks are classified as Environmental Critical. Therefore the tender includes an environmental threshold criteria that any bidding supplier must accomplish in order to be included in the negotiation stage. These tenders are environmentally segmented: emissions, waste, dangerous waste, dangerous chemicals, biodiversity or any combination of these criteria.
As a consequence, applicants must demonstrate:
- That they have a valid Environmental Certification (policies, systems, managers, goals, targets) and the extent of their scope
- What was its performance in the previous 3 years (accidents, fines, emissions, consumption, improvements ...)
- Special criteria/technological devices

Impact of engagement, including measures of success

The general goal of EDP's climate procurement policy is based on the idea that if every supplier commits to environmental certification, then sooner or later they will commit to reduction targets. The specific instrument of EDP's climate procurement policy is the development of tender criteria that are climate favourable.

The impact of this engagement is supported by a KPI system, where some indicators are directly linked to procurement teams annual prizes. For the reporting year (2019), KPIs include:
- % of Suppliers under Procurement obliged by EDP's Code of Conduct for Suppliers: 100%
- % of Suppliers under Procurement engaged on disclosing Environmental Information: 100%
- % of Suppliers under Procurement exposed to Environmental risks with ISO certification: 79%
- % Environmental Critical Suppliers performance annually appraised: 100%
- % Direct coal contracts made in 2019 with Bettercoal clause: 100%

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
1

% total procurement spend (direct and indirect)
35

% of supplier-related Scope 3 emissions as reported in C6.5
49

Rationale for the coverage of your engagement
As mentioned above, EDP collects information from any supplier exposed to Environmental Risks. International companies that are also EDP’s suppliers, are key to leveraging Climate Change combat as they are supply chain integrators. Partnering with those companies, EDP is promoting a higher level of commitment and Climate Change disclosure through promoting CDP methodology and engagement with international organizations such as WBCSD, SEE4ALL, Bettercoal etc.
EDP monitors the success of this approach by evaluating the share of the total procurement spend that is directed to companies that are engaged with CDP.

Impact of engagement, including measures of success
We evaluate the impact of this engagement through the share of the total procurement spend that is directed to companies that respond to CDP Climate Change questionnaire. The % of the total value spend with suppliers engaged with CDP's Climate Change annual assessment increased to 35% in 2019 vs. 33% in 2018.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

33

Please explain the rationale for selecting this group of customers and scope of engagement

Engagement activity applies to all customers in the markets where EDP has electricity and gas supply activities (Portugal, Spain and Brazil). It covers natural gas customers, that account for 33% of our scope 3 emissions. For electricity customers, the promotion of energy efficiency measures only contributes to reducing customer's scope 2 emissions and have no material impact on our scope 3 emissions. EDP actively promotes energy efficiency improvement, demand-side management and distributed generation by developing and offering its gas and electricity customers innovative products and services (P&S), including:
i) Energy efficiency improvement projects: supply of more efficient equipment and lighting (LED bulbs, street lighting, high performance engines, variable speed drives, heat pumps, water heaters, other high efficiency large appliances);
ii) Integrated energy services: e.g. the Save to Compete (S2C) programme in Portugal and Spain, the Cuota Ahorro programme in Spain and the E:ficient programme in Brazil. The S2C programme applies to the business sector in the Iberian Peninsula and consists on identifying measures to reduce energy consumption, promoting its implementation and costing through the savings generated. So far, S2C has led to an accumulated saving of around 321 GWh, avoiding ~116 ktCO2. In line with the S2C concept, through Cuota Ahorro in Spain and E:ficient in Brazil EDP makes a complete facilities' assessment, implements the energy efficiency projects and invests on customers' facilities.
iii) Energy audits, energy certification systems for buildings and energy management systems (e.g., Re:dy);
iv) Distributed generation projects: EDP provides solar energy solutions to all types of consumers - residential, commercial or industrial - through distributed generation and self-consumption PV schemes.

v) Electric mobility: EDP promotes electrification of transports to its customers through commercial solutions, including public and private electric vehicle charging infrastructures, awareness campaigns, simulators, app-based system for monitoring and managing electricity consumption of households and electric vehicle.
vi) Regulatory programs, either voluntary (Plan for the Promotion of Electricity Consumption Efficiency - PPEC – in Portugal), or mandatory (schemes in Spain and Brazil).
vii) EE education and awareness-raising projects in schools

Impact of engagement, including measures of success

In 2019, the product and services made available to our customers in Portugal, Spain and Brazil generated energy savings of 462 GWh and avoided 221 kt of CO2 emissions. Total accumulated savings since 2015 have now reached 3 TWh, avoiding 1.2 Mt of CO2 emissions. This means we are well on track to meet the target set for 2022: to provide customers with continuous access to energy efficiency products and services in order to reduce overall consumption by 5 TWh before 2022 (accumulated since 2015). EDP also carries out regular customer awareness campaigns targeted at energy and GHG reduction on the use of its products and services. Examples of awareness campaigns are available on EDP's supply companies' websites: www.edp.pt (in Portugal, for the liberalised market); www.edpsu.pt (in Portugal, for the regulated market); www.edpenergia.es (in Spain); and www.edp.com.br (in Brazil).
The impact of engaging with our customers is also measured by the number of customers with value-added services, which includes all the above mentioned P&S: energy efficiency, sustainable mobility or decentralized solar energy services. In 2019, 26% of EDP customers in the liberalized market had value-added services. The goal is to ensure that 30% of our customers have value-added services by 2022 and 50% by 2030.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify Clean Energy for	Support with minor exceptions	During 2019, EDP continued engaging with European institutions and European associations to follow the	EDP supported a more ambitious renewable target (35%) and a stable framework that creates a favorable investment environment.

All Europeans Package		evolution of the legislative approval of key proposals of the Clean Energy Package, namely the Renewables Directive, Energy Efficiency Directive and the Electricity Market Regulation and Directive (“Market Design Initiative”).	In the energy efficiency chapter we proposed, in order to speed up electrification and decarbonization, the update of the Primary Energy Factor (PEF) to a lower figure that reflects the energy mix and that is forward looking. On the Market Design, EDP advocated for the setup of market rules that provide the right incentives for all players and limit cross-effects between them, the support of long-term contracts to promote the necessary low-carbon investments and a stable framework that do not allow retroactive regulatory changes.
Other, please specify Clean mobility	Support with minor exceptions	The European Commission proposed, in 2017, the Clean Vehicles Directive recast, setting new targets (-40% until 2030) for the EU fleet wide average CO2 emissions of new passenger cars and vans to help accelerate the transition to low- and zero emission vehicles.	EDP strongly supports this initiative but calls for more ambitious targets, as we believe electric mobility is key to actively contribute to accelerating decarbonisation of transport. EDP, through its membership in Eurelectric, supports the Electro-Mobility Platform (that unites organisations from across civil society, industries, and transport modes to promote electro-mobility across Europe) and is currently a member of the Transport Decarbonisation Alliance, aiming at accelerating the worldwide transformation of the transport sector towards a net-zero emission mobility system before 2050.
Other, please specify A Clean Planet for All (“2050 long-term strategy”)	Support with major exceptions	Following the invitations by the European Parliament and the European Council, the European Commission issued a communication presenting its strategic long-term vision for a competitive and climate-neutral economy by 2050. The communication includes a set of	EDP considers that the communication lacks the necessary instruments to deliver on the 2050 objectives. We support a reassessment of the intermediate decarbonisation targets, currently set at -40% for 2030, the development of a new market design and the set-up of a new fiscal system. The long-term

		scenarios that are in line with the Paris Agreement.	strategy needs to enrich the value proposition of the electrification, ensure the visibility for new investments in carbon-neutral investments and be accomplished with a EU scheme to support the consumer throughout the transition for a climate-neutral economy. EDP participated in a Eurelectric study focused on 2050 decarbonisation scenarios that envisage illustrating the decarbonisation potential of electrifying transports, buildings and industry.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

EURELECTRIC - Union of the Electricity Industry

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Eurelectric's mission is to contribute to the development and competitiveness of the electricity industry, to provide effective representation for the industry in public affairs and to promote the role of a low-carbon electricity mix in the advancement of society. In this regard, Eurelectric's main objectives are:

• Achieving a carbon-neutral electricity mix in Europe well before mid-century

• Ensuring a cost-efficient, reliable supply through an integrated market

• Developing energy efficiency and the electrification of the demand-side to mitigate climate change.

Eurelectric's positions are available at its website www.eurelectric.org/publications/.

How have you influenced, or are you attempting to influence their position?

EDP has one representative in Eurelectric Board of Directors and participates in all the association's committees as well: i) Electrification & Sustainability, ii) Generation and Environment, iii) Markets and Investments, iv) Distribution & Market Facilitation and v) Customers and Retail Services. EDP regularly contributes with specific inputs to the association's common position papers and answers to consultation processes. In 2019, two landmark publications of Eurelectric was the declaration with an updated sector vision for the European electricity industry and a study in relation with the 2050 decarbonization pathway and the role of electricity in decarbonizing transports, buildings and industry. This report feed-up the debate in relation with Europe 2050 Climate Ambitions and the delivery of commitments of the Paris Agreement. EDP was a key actor of both publications.

Trade association

UNESA – Spanish Electricity Industry Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

UNESA is an electric sector organization aiming to represent, promote, manage and defend the general and common interests of its members. The entity was created in 1999 and focuses on various activities of this industry, developing studies and analyses of the various aspects of electrical activity, such as transportation or regulation, pricing and tariffs, economic and financial aspects, international and institutional relations, quality of service, research and social communication. The UNESA represents and coordinates the activities of the sector, developed by representatives of power companies in various international organizations, such as EURELECTRIC.

How have you influenced, or are you attempting to influence their position?

EDP Spain is one of the energy companies that is part of this association and member of the Board of Directors.

Trade association

ELECPOR – Portuguese Electricity Industry Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ELECPOR represents and defends the common interests of its associates, currently the five main national companies in the sector, including EDP. As a business sectoral association, it acts as an intermediary and instrument of such companies in the development and discussion of policies, guidelines and regulation of the electricity sector to the Portuguese and international entities. ELECPOR is a member of EURELECTRIC, whose positions are described above.

How have you influenced, or are you attempting to influence their position?

EDP chairs the Board of Directors.

Trade association

AWEA: American Wind Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

AWEA is a national association in the United States representing the players in the wind power industry. With hundreds of members, ranging from utilities, researchers, parts manufacturers and energy companies, AWEA promotes wind energy as a clean source of electricity for American consumers. The wind force is creating a major impact on combating climate change and reducing greenhouse gases. Through sustainable initiatives, the association hopes to change attitudes and improve the environment.

How have you influenced, or are you attempting to influence their position?

EDP's subsidiary EDP Renewables is one of the partner companies and member of the Board of Directors.

Trade association

WE - Wind Europe

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

WE, formerly European Wind Energy Association, is the voice of the wind industry, actively promoting the use of wind power in Europe and worldwide, and representing the wind sector development before the European Commission.
The association defends wind generation support. EWEA participated in the European Commission stakeholder consultation on the new renewable energy directive (REDII) for the period 2020-2030. EDP supports EWEA's position on climate change legislation.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a leading member of the Board of Directors.

Trade association

WEF - Wind Energy Foundation

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

WEF is a Washington, D.C based, nonprofit organization founded in 2010 by the AWEA association to raise public awareness of the advantages of using wind as a source of energy for domestic use. Through the efforts made with communication, research and education, the foundation was born in order to educate the public about the benefits of wind energy. The foundation is also committed to support research and studies for wind energy growth. Headquartered in Washington, the foundation was established in 2010 and EDP is a partner company supporting the WEF in the legislation on climate change and wind generation support.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is represented in the Foundation's governance bodies.

Trade association

CanWEA - Canadian Wind Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CanWEA is a Canadian wind power industry association that promotes the realization of the country's abundant wind energy potential to build a cleaner, stronger future. It engages in this mission through advocacy, education, communication, partnerships and the promotion of industry best practices. It is a nonprofit organization that is responsible for publicizing the social, economic, health and environmental benefits that this type of energy offers to the communities and companies. Founded in 1984, CanWEA represents the wind energy community - organizations and individuals who are directly involved in the development and application of wind energy technology, products and services. Its members are the wind energy leaders in Canada. Aware of the importance of its role, EDP supports the association and its positions on climate change legislation.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors.

Trade association

APE - Portuguese Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

APE is the Portuguese Association that represents the World Energy Council. APE strongly supports cap and trade schemes, EU-ETS reform, energy efficiency, clean

energy generation and adaptation and resilience. EDP supports APE's position on climate change legislation.

How have you influenced, or are you attempting to influence their position?

EDP is a member of the Board of Directors and chairs the Board.

Trade association

APREN – Portuguese Renewable Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

APREN is a non-profit association, founded in October 1988, that promotes the development of renewable energy generation in Portugal. Its associates are companies holding permits to explore power plants for electricity production from renewable sources, representing more than 90% of all renewable installed capacity in Portugal. APREN develops its work together with official authorities and other similar entities, either national or international, being an important key player in the development of energy policies for Portugal. The Association privileges the coordination and permanent contact with the Portuguese Government, the ministries responsible for energy and environmental issues and their official agencies, as well as a fruitful dialogue with the crucial national stakeholders related to the production of electricity from renewable sources and representatives from the civil society.
APREN has also a strong involvement at European level, through the participation in European projects and through its partnership with several European Associations. This enables the monitoring of European Energy Policy. EDP supports APREN's position on all subjects related to renewable energy.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors (deputy chairman).

Trade association

ABEEOLICA - Associação Brasileira de Energia Eólica

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Established in 2002, ABEEólica, the Brazilian Wind Energy Association, is a non-profit institution that brings together and represents the wind energy in this country. Members come from all links in the wind energy chain. Since it was created, ABEEólica has effectively contributed to the development and recognition of wind energy as a

competitive, clean, renewable, low-impact source of energy, and a strategic element of this country's energy matrix.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors (executive president).

Trade association

SEIA - Solar Energy Industry Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

SEIA is the national trade association for the U.S. solar industry. It embodies the innovation and entrepreneurship that defines solar energy. SEIA represents all organizations that promote, manufacture, install and support the development of solar energy. SEIA works with its 1,000 member companies to build jobs and diversity, champion the use of cost-competitive solar in America, remove market barriers and educate the public on the benefits of solar energy.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors.

Trade association

PWEA

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Polish Wind Energy Association (PWEA) is a non-governmental organisation established in 1999 (previously known as "VIS VENTI Association for Supporting Wind Energy"). It is one of the most effective organisations lobbying for the establishment of a relevant legal framework allowing for the development and operation of renewable energy sources, in particular wind energy, in Poland.

PWEA is an association of the leading companies active on the wind energy market in Poland: investors, developers, turbine and component manufacturers, both from Poland and abroad.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors.

Trade association

RWEA - Romanian Wind Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Romanian Association for Wind Energy or "RWEA" (Romanian Wind Energy Association) was founded in Bucharest in 2008 and is a professional association serving as a non-governmental organization. The association is a voluntary organisation for participants in the wind energy industry in Romania. It exists to promote the proper role of wind energy in the energy mix in Romania and, consequently, to promote clean, safe and effective energy for Romania.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors.

Trade association

AEE - Asociación Empresarial Eólica

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

AEE - Spanish Wind Energy Association - is the voice of the wind sector in Spain. It promotes the use of wind energy in Spain, Europe and worldwide. It represents and defends the interests of the sector. With about 200 member companies, it represents more than 90% of the sector in Spain which includes promoters, wind generator and component manufacturers, national and regional associations, organizations connected with the sector, consultants, lawyers and financial entities, among others. AEE coordinates research into the areas surrounding wind energy and provides services to its members, meeting their different needs. It contributes to the formulation of the normative framework with a view to the sector developing under the best possible conditions. It disseminates the reality of wind energy and endeavours to raise awareness in society.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors (chairman).

Trade association

Scottish Renewables

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Scottish Renewables (SR) is the voice of Scotland's renewable energy industry, whose vision is for a Scotland leading the world in renewable energy. It works to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. The sectors SR represent deliver investment, jobs, social benefits and reduce the carbon emissions which cause climate change. SR members work across all renewable energy technologies, in Scotland, the UK, Europe and around the world. In representing them, SR aims to lead and inform the debate on how the growth of renewable energy can help sustainably heat and power Scotland's homes and businesses.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors (chairman).

Trade association

MAREC - Mid-Atlantic Renewable Energy Coalition

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Mid-Atlantic Renewable Energy Coalition (MAREC) was formed in September 2009 as a non-profit Pennsylvania corporation. Currently MAREC's membership consists of wind developers, solar developers, wind turbine manufacturers, service companies, and non-profit organizations dedicated to the growth of renewable energy technologies to improve our environment, diversify our electric generation portfolio, and boost economic development in the region. Its mission is to improve and enhance the opportunities for renewable energy development in the nine jurisdictions in the Mid-Atlantic region. The primary areas of focus of MAREC are to provide education and expertise on the environmental sustainability of wind and solar energy; offer technical expertise and advice to assist in understanding the operating and environmental impacts of integrating wind and solar into the electrical power system; and promote fair policies, rules and regulations to expand the region's electric transmission system to accommodate the growth of renewable energy generation.

How have you influenced, or are you attempting to influence their position?

EDP Renewables (EDP Group's subsidiary for renewable energy generation) is a member of the Board of Directors (vice-chairman).

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

EDP also engages in climate policy making through its membership of organizations other than trade associations, namely national and international business associations specifically focused on sustainability advocacy. Most relevant in 2018:
- UN Global Compact: EDP is a member and is engaged in its strategy and operations with the 10 principles, concerning human rights, labour, environment and anti-corruption, as well as in taking actions to advance on the UN Sustainable Development Goals. EDP also participates in the Global Compact Brazilian Network, namely in the working group Energy and Climate, promoting a country level discussion on issues such as climate change mitigation and adaptation, carbon pricing, energy efficiency and renewable energy. This group is aligned with the International platform Caring For Climate.
- World Business Council for Sustainable Development (WBCSD): EDP is a member of the WBCSD, actively participating in the association's activities and regularly taking part in some of its high-level projects. In 2018, EDP continued its participation in the Rescale LCTPI - Low Carbon Technology Partnership Initiative, a partnership bringing together over 140 companies that aims to demonstrate the potential of existing business solutions to achieving the 2ºC climate objective. EDP is working on solutions to accelerate the deployment of RES and the transition to a low-carbon electricity system. In 2018, EDP also participated in the Climate and Energy areas and in the Transforming Urban Mobility (TuM) project, aiming to advance solutions with a collaborative approach for accelerating deployment of electric vehicles and solutions for sustainable mobility. Already in 2019, António Mexia, CEO of EDP, signed the WBCSD CEO Guide to Human Rights aiming to reinforce the importance, and promote the respect for the human rights in the organisations, as well as setting clear expectations of suppliers and business partners.
- Business Council for Sustainable Development Portugal: EDP is also a member of BCSD Portugal, part of the WBCSD network. António Mexia, CEO of EDP, has the Presidency of BCSD Portugal, while António Martins da Costa, member of EDP Executive Board, has recently became Vice-President. BCSD Portugal represents 89 companies, from different sectors, which account for 38% of the national GDP. In 2018, EDP participated in various initiatives related to the Carbon Neutrality Roadmap 2050 (RNC2050) from the Portuguese Environment Agency, reflecting the ambition to tackle climate change, one of the main current challenges.
- Transport Decarbonisation Alliance (TDA): EDP joined TDA in 2018 as founder members, reflecting its intention to move forward in transport decarbonisation and improve quality of life in cities. Still in 2018, EDP committed to 100% electrification of the Group's light vehicle fleet.
- EV100 Initiative: EDP has recently joined the EV100 global initiative from The Climate Group, by extending its commitment to electrify its fleet, by also including 50% of vehicles between 3.5t and 7.5t, strongly reinforcing its position in sustainable mobility.
- Sustainable Energy for All (SE4ALL): born within the UN, the SE4ALL initiative is now a formal International NGO with several partners, particularly engaged in advancing and accelerating the Sustainable Development Goal (SDG) #7 - Affordable and Clean Energy.

António Mexia, CEO of EDP, is currently chairman of the Administrative Board. The annual meeting – SEforALL Forum – in 2018 successfully took place in Lisbon, providing leaders from different sectors the opportunity to share their ideas and positive outcomes regarding the SDG #7.
- Task Force on Climate-related Financial Disclosures (TCFD): as part of the TCFD Preparer Forums, in collaboration with WBCSD, EDP joined a group of 6 utilities to collaboratively contribute to push for a better understanding of how these recommendations could be implemented by the power sector.
- In Brazil, EDP was one of the pioneer companies to participate on carbon markets and has adopted stakeholder's engagement practices to raise awareness on the climate change management through the application of the Social Carbon Methodology (created by Brazilian NGO Ecologica Institute).
- "Empresas Pelo Clima" (Businesses for Climate), a Brazilian business platform whose goal is to mobilize, engage and involve corporate leaderships for managing and reducing GHG emissions, managing climate risks, and proposing public policies and positive incentives in the context of climate change. Case studies and sharing of experience are mostly important for the Group discussions, which aims to enable engagement among different sectors and companies and disseminate Best Practices through benchmarking. EDP participates mostly by sharing experience and case studies. The barriers and challenges faced by the Company are also explored , so that common solutions may come up quicker and coherently within different sectors context .

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

For almost a decade, EDPs' corporate strategies targeted mainly renewables, efficiency and innovation, combining the need for competitiveness of its business with one of the world's leading concerns – climate change. The visibility of EDP's climate strategy was further reinforced with: i) the company's direct participation, at CEO level, in COP21 Climate Conference (December 2015) and subsequent COPs; ii) the announcement of five ambitious climate-related targets addressing emissions reduction, renewable electricity generation, smart grids expansion, energy services for clients and clean technologies R&D (December 2015); iii) the announcement of a GHG reduction science based target (set in 2016 and approved by the Science Based Target Initiative in early 2017 and updated in 2019); iv) Update Strategy 2019-2022 presented to investors in March 2019, with new targets aligned with the business plan 2019-22 and also new more ambitious targets for 2030. EDP's 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. Furthermore, EDP has dedicated structures in each geography that manage the relation with the supervisory bodies of the energy sector: - Portugal: Corporate Regulation and Competition Department, Stakeholder Relations Department - Spain: Regulation Management Department - EDP Renewables (Europe and North America): Regulations & Markets, Global Risk Strategy and Investor Relations and Sustainability Departments - Brazil: Regulatory Issues Department, Environmental Department and

Sustainability Department- These structures ensure the overall alignment of EDP's climate policy engagement activities with the corporate climate strategy.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

Pages 1_25_RC_2019_EN-1.pdf
Pages 26_36_RC_2019_EN-2.pdf
Pages 212_452_RC_2019_EN-3.pdf
Pages 37_211_RC_2019_EN.pdf

Page/Section reference

Please see EDP Annual Report 2019: Section 2.2 (Strategic Priorities) pp. 38-43; Section 2.3 (Risk Management) pp. 44-51; section 3.5 (Risk Management in the Year) p. 84-85.

Content elements

Governance
Strategy
Risks & opportunities
Emission targets
Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Pages 1_36_ EDP Sustainability Report 2019.pdf

Pages 37_264_EDP Sustainability Report 2019-2.pdf

Page/Section reference

Please see EDP Sustainability Report 2019: Section 2.1 (Corporate Governance) pp. 39-43; Section 2.5 (Risk Management and Climate Risk Framework in the TCFD), pp. 52-58; section 2.6 (Strategy, Goals and Targets) pp. 59-61; section 3.1 (Leading the Energy Transition) pp. 71-118; Section 3.1.6 (Climate Change) - pp. 98-100; section 3.5 (Performance Indicators) pp. 182-193; GRI Indicators pp. 234-237; TCFD Reporting Recommendations p. 231

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

20190312_edp_strategic_update_2019-22_1.pdf

Page/Section reference

EDP Startegic Update 2019-2022: page 17 (Our vision); pages 18-30 (Our strategy); pages 31-53 (Our platforms); pages 54-59 (Leading the energy transition to create superior value)

Content elements

Strategy
Emission targets
Other metrics

Comment

C15. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Member of EDP Executive Board of Directors with formal responsibility over sustainability, risk and other company's crosscutting critical themes.	Director on board

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms