

Water 2016 Information Request EDP - Energias de Portugal S.A.

# **Module: Introduction**

**Page: W0. Introduction** 

W0.1

Introduction

Please give a general description and introduction to your organization.

EDP – Energias de Portugal, S.A. is a listed company ("sociedade aberta"), whose ordinary shares are publicly traded in the "Eurolist by NYSE Euronext Lisbon, Mercado de Cotações Oficiais".

EDP is established in Portugal, organized under the laws of Portugal and registered with the Commercial Registry Office of Lisbon, under no. 500.697.256. Its registered head office is located at Avenida 24 de Julho, nr. 12, 1249-300 Lisboa, Portugal. EDP was initially incorporated as a public enterprise ("empresa pública") in 1976 pursuant to Decree- Law no. 502/76, of 30 June, as a result of the nationalisation and merger of the main Portuguese companies in the electricity sector in mainland Portugal. Subsequently, EDP was transformed into a limited liability company ("sociedade anónima") pursuant to Decree-Law no. 7/91, of 8 January, and Decree-Law no. 78-A/97, of 7 April.

EDP – Energias de Portugal, S.A. is a vertically integrated utility company. It is the largest generator, distributor and supplier of electricity in Portugal, the third largest electricity generation company in the Iberian Peninsula and one of the largest gas distributors in the Iberian Peninsula.

EDP is one of the largest wind power operator worldwide with windfarms for energy generation in the Iberian Peninsula, the United States, Canada, Brazil, France, Belgium, Italy, Poland and Romania, has capacity under construction in Mexico and is developing wind projects in the United Kingdom.

Additionally, EDP generates solar photovoltaic energy in Portugal, Romania and the United States. In Brazil, EDP in the fifth largest private operator in electricity generation, has 2 electricity distribution concessions and is the third largest private supplier in the liberalised market.

EDP has a relevant presence in the world energy landscape, being present in 14 countries, with 9.7 million electricity customers, 1.4 million gas customers and more than 12 thousand employees around the world. On December 31, 2015, EDP had an installed capacity of 24 GW and generated 64TWh during 2015, of which 58% from renewable sources. In 2015, had a Gross Operating Profit of 3,9 M€. EDP addresses the issue of water from a strategic and operational point of view. At strategic level, EDP published its Water Management Policy in November 2012 and since 2010 EDP responds to the Water Disclosure Project. From an operational standpoint, EDP monitors its most relevant consumption in order to optimise water use.

For any additional information, please feel free to give us your feedback on any issue (pedro.paes@edp.pt).

W0.2

Reporting year

Please state the start and end date of the year for which you are reporting data.

Period for which data is reported Thu 01 Jan 2015 - Thu 31 Dec 2015

W0.3

**Reporting boundary** 

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.

Companies, entities or groups over which financial control is exercised

W0.4

Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

No

**Further Information** 

# **Module: Current State**

Page: W1. Context

W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Not very important	Direct use: Freshwater represents 3% of total water withdrawal from EDP's activities (excluding Hydro). However it is an essential resource for EDP operations: - Use on refrigeration circuit; - Use on water-steam circuit; - Other uses: irrigation and

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
			human consumption. The quantity and quality of water used and/or discharged are monitored in accordance with the environmental permits and are subject to reporting and analysis of the competent authority. For hydro generation, water availability is key and EDP is highly dependent on annual precipitation. In Iberia, an Hydrological index exists to characterize the hydrological year as wet (> 1) or dry (<1). Due to multi stakeholder uses, biodiversity impacts and infrastructure's quality needs, EDP monitors its water bodies having monitoring plans ranging from physical-chemical parameters to limnological characteristics and ecological quality indicators. For Indirect use please consult question 3.2f
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital for operations	Not very important	Brackish water for refrigeration system in thermal power plants represent 97% of total water withdrawal in EDP's activities. However, this resource is not considered scarce. EDP monitors water use in these facilities in accordance with the environmental permits. This water is returned to the same water body with a similar quality. Potential thermal impact exists and periodic controls are made to assure that the temperature increase is bellow limit values. For recirculated, reuse or recycled water, EDP has been implementing some initiatives where feasible in order to reduce water withdrawal. However the results of such initiatives do not have any material impact at a corporate level. For Indirect use please consult question 3.2f

# W1.2

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had 90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Water withdrawals- volume by sources	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had

Water aspect	% of sites/facilities/operations	Please explain
		90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Water discharges- total volumes	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had 90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Water discharges- volume by destination	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had 90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Water discharges- volume by treatment method	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had 90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Water discharge quality data- quality by standard effluent parameters	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had

Water aspect	% of sites/facilities/operations	Please explain
		90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published annually by EDP Group in its website.
Water consumption- total volume	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. Under the certification of ISO 14001 and EMAS Registration, when water is a significant aspect, water indicators are monitored and revised periodically. In the end of 2015, the EDP Group had 90% of net installed power generation capacity with an Environmental Management System certified in accordance to ISO 14001 (thermal power- 88%; hydropower- 97%; wind- 86%). In generation facilities, EDP had also 42% of net installed capacity covered by EMAS Registration. The water management indicators are published quarterly by EDP Group in its Annual Report and checked annually by KPMG accredited external entity with reasonable assurance.
Facilities providing fully-functioning WASH services for all workers	76-100	EDP provides access to clean water and suitable sanitation conditions to all employees. EDP assumes this commitment in subscription of Principles of Sustainable Development from United Nations initiative Global Compact. In the countries where EDP operates these conditions are legal mandatory.

# W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	43164	Much higher	Fresh surface water is mainly used in thermal power plants. An increase in thermal generation leads directly to an increase of fresh water. In 2015 the significantly higher water withdraw reflects a low hydrological index in the Iberian Peninsula (0.7) - Dry Year-, forcing higher thermal generation.
Brackish surface water/seawater	1693580	Higher	The brackish surface water is used in thermal powerplants in Portugal and Spain. The increase of 5% in 2015 also reflects the low hydrological index in the Iberian Peninsula (0.7), forcing higher production from thermal power plants.
Rainwater	0	Not applicable	EDP does not have any material withdraws from rainwater, although it has some facilities starting to use it.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Groundwater - renewable	0	Not applicable	EDP does not use this type of water
Groundwater - non- renewable	144	About the same	No significant changes since last year
Produced/process water	0	Not applicable	Not applicable to EDP's activities
Municipal supply	13319	Much higher	In 2015 the water from municipal supply increase significantly due to the entry of Pecém coal-fired power plant (Brazil) into the group's consolidated perimeter (since May 2015). This water is supplied by water concessionaire - Companhia de Água e Esgoto do Ceará - for all types of uses.
Wastewater from another organization	0	Not applicable	EDP does not use wastewater from another organization.
Total	1750206	Higher	In 2015 the total water withdrawal increased due to: - the entry of Pecém coal-fired power plant (Brazil) into the group's consolidated perimeter (since May 2015); - A dry year in Iberia - low hydrological index = 0.7, with a consequent increase of thermal generation, the EDP's activities with significant water withdraws.

# W1.2b

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	11622	Much higher	Most of these water discharges come from thermal generation. Again, the significant change occur when thermal generation changes from the previous year. In 2015 an increase of 58% of water discharge in fresh water was due to a low hydrological index in the Iberian Peninsula (0.7), leading to an increase of thermal generation.
Brackish surface water/seawater	1694911	Higher	The water discharge in brackish surface comes from refrigeration system of thermal powerplants in Spain and in Portugal. Again, the significant change occur when thermal generation changes from the previous year. In 2015 the increase of 5% was due to the low hydrological index in the Iberian

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
			Peninsula (0.7), forcing higher production from thermal power plants.
Groundwater	0	Not applicable	EDP does not have any activity with groundwater discharges.
Municipal/industrial wastewater treatment plant	2533	Much higher	In 2015 this indicator changed significantly due to the entry of Pecém coal-fired power plant (Brazil) into the group's consolidated perimeter (since May 2015). Pecém generates 2 types of effluents: 1- water from the refrigeration systems: directly dispatched for treatment to the state water and sewage service concessionaire (Companhia de Água e Esgoto do Ceará - CAGECE); 2- Industrial effluents: also conducted to CAGECE, although partially previously treated in the Effluent Treatment Station (ETS) which has a capacity of 10m3/h.
Wastewater for another organization	0	Not applicable	EDP does not have any wastewater discharges sent to another organization besides the one reported in the above cell.
Total	1709066	Higher	In 2015 the water discharge increased due to: - the entry of Pecém coal-fired power plant (Brazil) into the group's consolidated perimeter (since May 2015); - a low hydrological index in the Iberian Peninsula (0.7), forcing higher production from thermal power plants.

# W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
41127	Much higher	EDP reviewed the consolidation methodology for this indicator. For EDP "water consumption" is the water evaporated in the closed refrigeration system plus the water which does not return to its original source. In 2015, this indicator is much higher than in the previous year mainly because of the entry of Pecém coal-fired power plant (Brazil) into the Group's consolidated perimeter (since May 2015).

# W1.4

Has your organization experienced any detrimental impacts related to water in the reporting year?

No

# **Further Information**

# Module: Risk Assessment

# Page: W2. Procedures and Requirements

W2.1

#### Does your organization undertake a water-related risk assessment?

Water risks are assessed

# W2.2

#### Please select the options that best describe your procedures with regard to assessing water risks

Risk assessmen t procedure	Covera ge	Scale	Please explain
Comprehen sive company- wide risk assessment	Direct operatio ns	All faciliti es	Water risks are followed in the comprehensive company-wide risk management, in which the Executive Board is responsible for the Risk Management Policy and decides upon risk appetite, overall limits and management. The Corporate Risk Management Office and the Corporate Sustainability Office are responsible for water risk assessment, key indicators, specific water risks evaluation. Recognizing the importance of water risks, EDP published in 2012 the Corporate Water Management Policy, which is applicable to the whole organization and aims contributing to the worldwide goal of promoting access to drinking water. This policy is available on: http://www.edp.pt/en/sustentabilidade/ambiente/agua/Pages/politicade gestaodaagua.aspx . To implement this Policy, EDP had constitute a Corporate Water Management Working Group (WG) involving the business units: Corporate Risk Management, thermal, hydro and renewable generation and electrical distribution. In 2014, EDP updated the global risk map and fully comprised water issues. This map considers internal (examples: compliance, extra costs due to monitoring programs) and external (business, strategic and operational risks.

#### W2.3

# Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Annually	Facility	Up to 1 year	Under the environmental management systems in place, when water aspects are relevant, water is monitored and evaluated periodically.

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Annually	Business unit	3 to 6 years	The business units impacted by water risk, are mainly generation. Risk analyses are reviewed in the short-medium term to measure its impact on the business plan. One of the operational risks annually revised is hydro volatility. In Iberia and Brazil this has a direct impact in EDP's Business Plan.
Sporadically not defined	Region	>6 years	In some cases a narrower risk analysis is made to guarantee the resilience of key assets to water related risks. These are medium/long term risk assessments at a regional scale since the main changes in water availability and quality will tend to occur within this timeframe and has regional characteristics.

#### W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 10 years

#### W2.4a

# Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

Water availability for EDP's operations is key but EDP was also concerned with its potential water impacts on the supply chain. To address these issues EDP:

(1) Published a EDP Corporate Water Management Policy in 2012 applicable to all Group;

(2) Created a Corporate Water Management WG to promote and monitor water management at a business unit level.

(3) Embedded water risks in its Corporate Business Risk Model.

(4) Created a Water Risk Map. This map identifies and quantifies all key water risks. Risks are aggregated taking into account their expected frequency and impact and applying Monte Carlo simulation. It is important to highlight that this risk map takes in account: a) The taxonomy of the water risk for EDP Group, structured around three major families: Business, Operational and Strategic; b) 2 time horizons - Short-Medium Term (ST/MT): 2015 to 2017 and Long Term: adds to ST/MT, future structural impacts that are not expected to have immediate strong impact in the next following years (e.g. climate change or competitive uses)

For other specific analyses, depending of the issue and the scale, EDP uses the frameworks/methods detailed in questions 2.5 and 2.6.

For supply chain, please consult question W3.2f

#### W2.5

#### Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal	The Corporate Risk Office along with the Sustainability Departments continuously
company	follow water related risks, identifying emerging issues, working together in risk
knowledge	assessment and participating in public consultations regarding water issues. (a) EDP
Life Cycle	has developed internal models: Corporate Business Risk Model and Water Map Risk.
Assessment	For more details please see answer to question 2.3. (b) Water Footprint EDP uses the
Regional	Life Cycle Assessment together with the Water Footprint Network Guidelines to
government	calculate its water footprint. (c) Water Stress Analyses EDP uses Aqueduct Water
databases	Risk, developed by World Institute Resources, to do a macro analysis of its assets

# Method

Water Footprint Network WRI water stress definition WRI Aqueduct

# Please explain how these methods are used in your risk assessment

Water Footprint exposed to overall water risks. On a local/operational approach, EDP manages its facilities based on information gathered from National Governmental Agencies.

# W2.6

# Which of the following contextual issues are always factored into your organization's water risk assessments?

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	Current water availability was assessed by: (1) The Corporate Business Risk Model (2) the Corporate Water Management WG (3) Water Stress Analyses. In 2015 EDP consolidates one new facility, located in a water stress area – Pecém I Thermoelectric Plant (720MW installed capacity). This facility is installed at the industrial and Port Complex of Pecém (CIPP) in northeast of Brazil. Pecém coal-fired power plant joined the group's consolidated perimeter in May 2015.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	The current regulation impact is assessed by: (1) the Corporate Risk and Sustainability Departments activity (2) the Corporate Business risk Model (3) Water Risk map (4) Corporate Water Management WG. In Europe one of the key regulatory risks is the implementation of the WFD, where public policies and a huge range of economic activities are involved. EDP addresses this risk, at national and European level, by active participating on public consultations and using a collaborative conduct, in the development of River Basin Management Plans and programs of measures (e.g. environmental flows, fish passages, water quality). In Brazil the main regulatory risks are the environmental protection regulation that can restrain future constructions and operation licenses.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	Stakeholder Management is a key issue for EDP Group. Regarding water, the Corporate Water Management WG assesses this issue and it has identified that the most potential stakeholder conflict is related with competitive uses. For hydropower facilities, water uses are commonly part of the discussion and are dealt at a local level. In the Pécem powerplant, water issues in the region of Ceará are being accompanied periodically through meetings with State entities, like Infra-structure Secretariat, COGERH and with Hydrographic Basin Committee, in order to anticipate future conflicts.
Current implications of water on your key commodities/raw materials	Not relevant, included	See question W3.2f. Purchases from direct suppliers amounts to only 13% of total water consumption, or 5,437,278 m3, and purchased raw materials (Coal, metals, non-metals, limestone, ceramics and concrete) counts for 0.6% of total water consumption, or 232,036 m3.
Current status of ecosystems and habitats at a local level	Relevant, included	This risk is followed in the Corporate Water Management WG and is managed mostly by the generation Business Units. EDP has in place several monitoring plans to assess any material changes on the water biodiversity potentially affected by new facilities mainly hydropower plants, which are the most impactful. It is important to highlight the following plans: • Water quality monitoring of reservoirs, which include biological quality elements, physicochemical and hydromorphological; • Use of limnological information collected under the monitoring of

Issues	Choose option	Please explain
		reservoirs to support the implementation process of environmental flow regimes; • Monitoring programs on water communities and fresh water habitats at the project stage of a new facility, extending them to the following stages: construction and later to the operation stage, in order to better understand the impacts of the project and develop best management practices to control their risks.
Current river basin management plans	Relevant, included	EDP collaborates at the local and national level with the competent authorities in water resource management in development of River Basin Management Plans and programs of measures, addressing issues such as: flood regularization, ecological flows, flow supply for touristic activities, waterbodies continuity, just to name a few.
Current access to fully- functioning WASH services for all employees	Relevant, included	EDP provides access to clean water and suitable sanitation conditions to all employees. EDP assumes this commitment in subscription of Principles of Sustainable Development from United Nations initiative Global Compact. In the countries where EDP operates these conditions are legally mandatory.
Estimates of future changes in water availability at a local level	Relevant, included	This risk is managed by: (1) the Corporate Risk and Sustainability Departments activity (2) the corporate business risk model (3) the Water map risk model (4) The Life Cycle Assessment and Water Footprint Network guidelines (5) Water Stress Analyses (6) the Corporate Water Management WG The corporate business risk model the impact of hydro volatility in EDP Group EBITDA, in the short and long term.
Estimates of future potential regulatory changes at a local level	Relevant, included	This risk is managed by: (1) the Corporate Risk and Sustainability Departments activity (2) the corporate business risk model (3) the Water map risk model (4) The Life Cycle Assessment and Water Footprint Network guidelines (5) Water Stress Analyses (6) the Corporate Water Management WG The corporate business risk model the impact of future potential regulatory changes EDP Group EBITDA, in the short and long term.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	Future Stakeholder conflicts impact is assessed by: (1) the Corporate Risk and Sustainability Departments activity (2) the corporate business risk model (3) the Corporate Water Management WG
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	The future impacts of water on key commodities is managed by: (1) the Corporate Risk and Sustainability Departments activity (2) the corporate business risk model (3) the Water map risk model (4) The Life Cycle Assessment and Water Footprint Network guidelines (5) Water Stress Analyses (6) the Corporate Water Management WG The corporate business risk model the impact of future changes in key commodities in EDP Group EBITDA, in the short and long term.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	This risk is followed in the Corporate Water Management WG and it is managed mostly by the generation Business Units.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	EDP has performed scenario analysis of availability of sufficient quantity and quality of water, with the participation of the Corporate Risk and Sustainability Departments and the generation BU. The scenarios were run in the corporate business risk model. This has allowed the evaluation of the hydro volatility impact in EDP's Group EBITDA, for the short and long term.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	EDP has performed scenario analysis of regulatory and or tariff changes, with the participation of the Corporate Risk and Sustainability Departments and the generation BU. The scenarios were run in the corporate business risk

Issues	Choose option	Please explain
		model. This has allowed the evaluation of the impact of changes in tariffs and regulation in EDP's Group EBITDA, on in the short and long term of changes in tariffs and regulation. The model also evaluated the impact of an extreme Hydro generation index, wet and dry years in the tariff deficit.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	Potential stakeholder conflicts are addressed within the activity of the Corporate Sustainability Department and the generation BU. There is a special Project – edp+perto, that addresses current and future stakeholder conflicts in large projects. The corporate business risk model addresses eventual future stakeholder conflict through competitive uses thus allowing to evaluate its impact in EDP Group EBITDA.
Scenario analysis of implications of water on your key commodities/raw materials	Not relevant, explanation provided	EDP has not developed scenarios on water risk in key commodities because it mitigates this risk by: (1) Using the Achilles database that contains sustainability data such as supplier environmental certification (includes water management) for its 10% key supplier (2) Using an in- house supplier's risk matrix to access sustainability risks, among others: "operation in water stress area" and "emission of polluting liquid effluents" (3) Being part of the Bettercoal initiative that associates 12 European's companies aiming to improve sustainability in coal supply chain. Coal has been identified by utilities as a critical supplier with medium/high ESG's risks manly on water/biodiversity issues and on human rights. 2014 has been the first full working year and the members promoted due diligences and self-assessments directly in coal mines (4) Having a Corporate Water Management WG that is assessing water risk in operations and in the supply chain, among other activities.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, included	EDP is still analyzing what will be the most adequate framework to evaluate potential changes in the status of ecosystems and habitats at a local level.
Other	Not evaluated	

# W2.7

# Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Relevant, included	EDP assesses the water footprint of its products allowing customers to fully acknowledge the direct and indirect impacts of EDP's product's consumption.
Employees	Relevant, included	EDP has an internal project ongoing called - Econnosco - targeting employees, which aims raising awareness and promotes ecoefficiency on the use of resources. Water is one of the theme. During 2015 this project was implemented in Brazil. Important reductions on water consumption were obtained with this project.
Investors	Relevant, included	EDP reports water performance and water risks mainly in the Annual Report and in the Water Disclosure Project. Furthermore, EDP is frequently summoned to respond to investors requests about sustainability, including water issues.
Local communities	Relevant, included	Local communities are always involved mostly on issues linked with Hydropower facilities, which have multipurpose reservoirs. Local

Stakeholder	Choose option	Please explain
		stakeholders are also involved whenever a new facility is being constructed (mainly hydro and thermal generation).
NGOs	Relevant, included	EDP has been collaborating with some NGO's whose positions are always taken into consideration in new projects. This has led to several joint projects on nature conservation. The most recent project collaboration with NGO is the voluntary support of Olhos d'Água Project in EDP Brazil. The aim of this partnership is to recover and protect 13 springs located in small rural properties close to the Guandu River through the reforestation of the surrounding areas. The project involves local farmers through awareness raising and training for more sustainable production patterns.
Other water users at a local level	Relevant, included	Local water users of the same reservoirs are always taken into very high consideration. In Portugal some of EDP's reservoirs are multipurpose. This situation is demanding to EDP and the company works on a daily basis to balance the water uses with minimum impact on revenues, for example, the Castelo de Bode dam in Portugal that provides water for the Lisbon water utility. Recreation is also a common issue discussed and taken in consideration by EDP in frequent dialogues with local users.
Regulators	Relevant, included	Water regulation issues are very closely followed at a corporate level and at a Business Unit Level. In the last year EDP collaborated with: 1. Eurelectric Hydro Group and Environmental Protection WG; 2. Portuguese Environmental Authorities, in Portugal; 3. Consejo Nacional del Agua (Spain National Water Council) and UNESA meetings, in Spain.
River basin management authorities	Relevant, included	Water regulation issues are very closely followed at a corporate level and at a Business Unit Level. EDP works with the Portuguese Environmental Authorities, namely in Public Water Bodies Programs, in ecological flows regimes, in Flood Risk Management Plans, in the Portuguese Commission on Reservoirs Management (Comissão de Gestão de Albufeiras) and in the River Basin Councils.
Statutory special interest groups at a local level	Relevant, included	The Statutory special interest groups at a local level are always taken into very high consideration. In Portugal some of EDP's reservoirs are multipurpose. For example, in Caniçada Hydropower plant, EDP agreed to operate its hydropower plant having in consideration a water level that allows, simultaneously, recreational activities. Another example is in the Castelo de Bode dam, in Portugal, where EDP provides water for nautical sports such as kayaking, adjusting its flows to guarantee these activities when needed.
Suppliers	Relevant, included	During 2015 an extensive characterization study of EDP's purchases, was developed aiming a deeper knowledge about the economic, social and environmental impacts of EDP's supply chain. Based on this study EDP knows the water footprint of its purchases by purchase category and country. The total water consumption originated by EDP's purchases is equal to 41,825,220 m3. However, purchases from direct suppliers amounts to only 13% of total water consumption, or 5,437,278 m3. EDP's supply chain is mostly based on services that are very geographically decentralized, polarized and independent from water sources. For raw materials supply, EDP works with a vast range of alternative suppliers thus being independent from any supplier failure. The EDP purchases are not dependent on any factory or geography for supply of its materials and services. EDP is also a Member of Bettercoal initiative that associates 12 European companies aiming to improve sustainability in coal supply chain. Coal has been identified by utilities as a critical supplier with medium/high ESG's risks. Water is an issue considered significant for extractive sectors.
Water utilities/suppliers at a local level	Relevant, included	The water utilities at a local level are always taken into very high consideration In Portugal some of EDP's reservoirs are multipurpose including for municipal supply. This situation is

Stakeholder	Choose option	Please explain		
		demanding to EDP and the company works on a daily basis to balance the water uses with minimum impact on revenues, for example the Castelo de Bode dam in Portugal that provides water for the Lisbon water utility.		
Other				

# **Module: Implications**

#### Page: W3. Water Risks

#### W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations only

#### W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

A substantive change is one that:

- (1) surpasses 40-50M€, (1%) in EBITDA
- (2) Creates a reputation impact at least at a local level
- (3) Affects at least one strategic facility

# W3.2a

Please provide the number of facilities\* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion this represents of total operations company-wide

Country	River basin	Number of facilities exposed to water risk	Proportion of total operations (%)	Comment
Portugal	Other: Cávado- Lima	18	6-10	The facilities listed correspond to hydro power plants. These plants do not consume water but use water in large quantities. Therefore, water scarcity or change in quality will impact the operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Portugal	Douro	15	11-20	The facilities listed correspond to hydro power plants. These plants do not consume water but use water in large quantities. Therefore, water scarcity or change in quality will impact the

Country	River basin	Number of facilities exposed to water risk	Proportion of total operations (%)	Comment
				operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Portugal	Tejo	10	6-10	The facilities listed correspond to hydro power plants. These plants do not consume water but use water in large quantities. Therefore, water scarcity or change in quality will impact the operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Brazil	Other: Bacia Hidrográfica do Atlântico Nordeste Oriental	1	1-5	Pecém is a Thermal power plant, located in a region where water is scarce. This is a facility which depends on water, threfore water management efficiency is key for long term normal operation, along with an open channel with local stakeholders, as described in previous questions.

# W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
Portugal	Other: Cávado- Lima	% global production volume	6-10	The facilities listed correspond to hydro power plants. These do not consume water but use water in large quantities. So, water scarcity or change in quality will impact the operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Portugal	Douro	% global production volume	11-20	The facilities listed correspond to hydro power plants. These do not consume water but use water in large quantities. So, water scarcity or change in quality will impact the operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Portugal	Тејо	% global production volume	6-10	The facilities listed correspond to hydro power plants. These do not consume water but use water in large quantities. So, water scarcity or change in quality will impact the operations. The facilities impact on water is due to its reservoir that transforms the running water river from a lotic to a lentic system.
Brazil	Other: Bacia Hidrográfica do Atlântico	% generation capacity	1-5	Pecém is a Thermal power plant, located in a region where water is scarce. This is a facility which depends on water, so water management

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
	Nordeste Oriental			efficiency is key for long term normal operation, along with an open channel with local stakehodlers, as described in previous questions.

W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Cou ntry	River basin	Risk driver	Pote ntial impa ct	Descri ption of impact	Timefr ame	Likeli hood	Magni tude of potent ial financ ial impac t	Respo nse strateg y	Costs of respon se strateg y	Details of strategy and costs
Port ugal	Douro	Physica I- Climate change Physica I- Drought Physica I- Floodin g Reputat ional- Negativ e media coverag e	Redu ction in reven ue	A hypothe tical trend to increas e extrem e weather events could lead to signific ant change s in inter season ality precipit ation, which may increas e downstr eam flooding . In these situatio ns, reputati on damag e exists linked to	>6 years	Highly proba ble	Low- mediu m	Develo p flood emerge ncy plans Promot e best practice and awaren ess Use of risk transfer instrum ents Other: New upstrea m dam constru cted with a reservoi r to better control water manag ement downstr eam (Baixo Sabor)	excludi ng CAPEX on the new Baixo Sabor Dam, emerge ncy plans are embed ded on our annual OPEX.	EDP operates several hydropo wer plants in Portugal, allowing an optimizat ion of the electricit y dispatch process, though nullifying potential decreas e on revenue s.

Cou ntry	River basin	Risk driver	Pote ntial impa ct	Descri ption of impact	Timefr ame	Likeli hood	Magni tude of potent ial financ ial impac t	Respo nse strateg y	Costs of respon se strateg y	Details of strategy and costs
				media coverag e, as well as tempor ary constrai ns on power generat ion activitie s. Higher temper atures and reduce d precipit ation also leads to the reductio n on power generat ion ion in this watersh ed.						
Port ugal	Тејо	Physica I- Ecosyst em vulnera bility	Highe r opera ting costs	Under the revision of the Waterfr ame Directiv e, EDP has been studyin g and investin g in new ecologi cal flows to upgrad e ecologi cal status	>6 years	Proba ble	Low- mediu m	Infrastr ucture investm ent	EDP has ongoing a 7- year monitori ng ecologi cal downstr eam impacts to confirm the increas e of the ecologi cal status downstr eam and avoid	Periodic reports are made and sent to the national authoriti es. In the end of the 7- year period, a decision from National Authoriti es about the ecologic al flows will be made and EDP

Cou ntry	River basin	Risk driver	Pote ntial impa ct	Descri ption of impact	Timefr ame	Likeli hood	Magni tude of potent ial financ ial impac t	Respo nse strateg y	Costs of respon se strateg y	Details of strategy and costs
				downstr eam.					addition al investm ents.	will adjust it, if necessa ry.
Port ugal	Other: Cavad o-Lima	Physica I- Ecosyst em vulnera bility	Highe r opera ting costs	Under the revision of the Waterfr ame Directiv e, EDP has been studyin g and investin g and investin g in new ecologi cal flows to upgrad e ecologi cal status downstr eam	>6 years	Proba ble	Low- mediu m	Infrastr ucture investm ent	EDP has ongoing a 7- year monitori ng ecologi cal downstr eam impacts to confirm the increas e of the ecologi cal status downstr eam and avoid addition al investm ents.	Periodic reports are made and sent to the national authoriti es. In the end of the 7- year period, a decision from National Authoriti es about the ecologic al flows will be made and EDP will adjust it, if necessa ry.
Brazi I	Other: Bacia Hidrogr áfica do Atlântic o Nordes te Orienta I	Physica I- Increas ed water stress	Redu ction in reven ue	On a water stress environ ment, and in a multiple water users context, the compan y could be forced reduce the number of hours authoriz ed to	1-3 years	Unlikel y	Mediu m	Engage ment with commu nity Engage ment with public policy makers Engage ment with other stakeho Iders in the river basin Increas ed	An estimat ed amount of R\$ 1M will be investe d in Pecém in 2016 to improve water manag ement	In 2016, Pecém will invest in a project for cooling towers regardin g the improve ment of the concentr ation cycle, which my contribut e up to 10% water

Cou ntry	River basin	Risk driver	Pote ntial impa ct	Descri ption of impact	Timefr ame	Likeli hood	Magni tude of potent ial financ ial impac t	Respo nse strateg y	Costs of respon se strateg y	Details of strategy and costs
				operate , due to water constrai ns				capital expendi ture		reductio n consum ption, as well a project to reuse waste water in the cooling towers. Meanwhi le, frequentl y, a represen tative of the Plant participa tes of the Plant participa tes of the Plant participa tes of the an entity that manage s the state water resource s, where they accomp any an importan t water manage ment project for Ceara's State, conduct ed by the State Govern ment, concerni ng the transpos ition of the São Francisc

Cou ntry	River basin	Risk driver	Pote ntial impa ct	Descri ption of impact	Timefr ame	Likeli hood	Magni tude of potent ial financ ial impac t	Respo nse strateg y	Costs of respon se strateg y	Details of strategy and costs
										o river. Govern is committ ed to finish the construc tion and commiss ioning on the next couple months.

# W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
Other: Assessed risk but no substantive risk found	During 2015 an extensive characterization study of EDP's purchases was developed aiming a deeper knowledge about the economic, social and environmental impacts of EDP's supply chain. Based on this study EDP knows the water footprint of its purchases by purchase category and country. The total water consumption originated by EDP's purchases is equal to 41,825,220 m3. However, purchases from direct suppliers amounts to only 13% of total water consumption, or 5,437,278 m3, and purchased raw materials. EDP's supply chain is mostly based on services that are very geographically decentralized, polarized and independent from water sources. For raw materials supply, EDP works with a vast range of alternative suppliers thus being independent from any supplier failure. The EDP purchases are not dependent on any factory or geography for supply of its materials and services.

#### **Further Information**

# Page: W4. Water Opportunities

#### W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
Portugal	Climate change adaptation Increased shareholder value	+1,019MW hydro installed capacity to be commissioned in Portugal until 2017	1-3 years	Additional hydro capacity for electricity generation with no CO2 emissions (and other atmospheric pollutants). In Portugal, some of this additional capacity include pumping services, which means storage through water pumping upstream to produce again when demand is higher. One of the main benefits of this additional service is to maximize wind generation, pumping water upstream during low load hours, using this energy to pump water back to the reservoir, and storing that water to generate electricity when needed. Another advantage comes from the fact that some of these new hydro plants have a reservoir upstream several run of river dams. This means improving the resilence of down stream assets, helping to reduce potential long-term climate change impacts.
Brazil	Climate change adaptation Increased shareholder value	Investment on 592 MW hydro installed capacity (50% equity), plus 700MW in hydro generation (33%equity)	1-3 years	New clean electricity generation in a country with an increasing energy demand.

**Further Information** 

# **Module: Accounting**

# Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility referen ce number	Countr y	River basin	Facility name	Total water withdrawals (megaliters/yea r) at this facility	How does the total water withdrawal s at this facility compare to the last reporting year?	Please explain
Facility 1	Portug al	Douro	All hydropower	0	About the same	Hydropower plants do

Facility referen ce number	Countr y	River basin	Facility name	Total water withdrawals (megaliters/yea r) at this facility	How does the total water withdrawal s at this facility compare to the last reporting year?	Please explain
			plants in Douro River basin			not consume water. They use it for generation. Risks linked to these facilities do not come from consumptio n.
Facility 2	Portug al	Тејо	All hydropower plants in Tejo River basin	0	About the same	Hydropower plants do not consume water. They use it for generation. Risks linked to these facilities do not come from consumptio n.
Facility 3	Portug al	Other: Cávado- Lima	All hydropower plants in Cávado-Lima River basin	0	About the same	Hydropower plants do not consume water. They use it for generation. Risks linked to these facilities do not come from consumptio n.
Facility 4	Brazil	Other: Bacia Hidrográfic a do Atlântico Nordeste Oriental	Pecém I Thermoelectr ic Plant	8386	This is our first year of measureme nt	The Pecém is a coal- fired power plant located in São Gonçalo do Amarante, Ceará State, Brazil. Since May 2015, this facility entered into the EDP

Facility referen ce number	Countr y	River basin	Facility name	Total water withdrawals (megaliters/yea r) at this facility	How does the total water withdrawal s at this facility compare to the last reporting year?	Please explain
						Group consolidatio n perimeter, which justifies why there is no comparison with the previous year.

# Page: W5. Facility Level Water Accounting (II)

# W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facili ty refere nce numb er	Fres h surf ace wat er	Brackish surface water/se awater	Rainw ater	Ground water (renewa ble)	Ground water (non- renewa ble)	Produced/ process water	Muni cipal water	Waste water from another organiz ation	Comment
Facilit y 1	0	0	0	0	0	0	0	0	Hydropow erplants do not withdraw water.
Facilit y 2	0	0	0	0	0	0	0	0	Hydropow erplants do not withdraw water.
Facilit y 3	0	0	0	0	0	0	0	0	Hydropow erplants do not withdraw water.
Facilit y 4	0	0	0	0	0	0	8686	0	The water used by this power plant is provided by the concession aire -

Facili ty refere nce numb er	Fres h surf ace wat er	Brackish surface water/se awater	Rainw ater	Ground water (renewa ble)	Ground water (non- renewa ble)	Produced/ process water	Muni cipal water	Waste water from another organiz ation	Comment
									Companhi a de Gestão de Recursos Hídricos (COGERH ). Currently the water is provided by the Gavião dam.

# W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 1	0	About the same	Hydropowerplants do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 2	0	About the same	Hydropowerplants do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 3	0	About the same	Hydropowerplants do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 4	2524	This is our first year of measurement	The Pecém is a coal-fired power plant located in São Gonçalo do Amarante, Ceará State, Brazil. Since May 2015, this facility entered into the EDP group consolidation perimeter, the reason why there is no comparison with the previous year.

# W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility referenc e	Fresh surfac e	Municipal/industri al wastewater	Seawate	Groundwate r	Wastewater for another organizatio	Comment
number Facility 1	water 0	0	<b>r</b>	0	<b>n</b>	Hydropowerplant s do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 2	0	0	0	0	0	Hydropowerplant s do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 3	0	0	0	0	0	Hydropowerplant s do not discharge water. Discharged water exist only from supporting facilities and do not have any materiality (facilities telecontroled).
Facility 4	0	2524	0	0	0	Pecém generates 2 types of effluents: 1- Refrigeration system: dispatched to the discharge point of state water and sewage service concessionaire for treatment (Companhia de Água e Esgoto do Ceará); 2- Industrial effluent: treated in the Effluent Treatment Station (ETS) which has a capacity of 10m3/h. Then, it is conducted to CAGECE discharge point. Pécem has the need to treat a

Facility referenc e number	Fresh surfac e water	Municipal/industri al wastewater treatment plant	Seawate r	Groundwate r	Wastewater for another organizatio n	Comment
						higher amount of effluents that are not ensured by the ETS. These are also being forwarded to the discharge point.

#### W5.3

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 1	0	About the same	Hydropower plants, either reservoir or run-of- river (no retention capacity), do not consume water. They use it for electricity generation.
Facility 2	0	About the same	Hydropower plants, either reservoir or run-of- river (no retention capacity), do not consume water. They use it for electricity generation.
Facility 3	0	About the same	Hydropower plants, either reservoir or run-of- river (no retention capacity), do not consume water. They use it for electricity generation.
Facility 4	8845	This is our first year of measurement	The Pecém is a coal-fired power plant located in São Gonçalo do Amarante, Ceará State, Brazil. Since May 2015, this facility entered into the EDP group consolidation perimeter, the reason why there is no comparison with the previous year. EDP considers the water consumption as the water evaporated in the closed refrigeration system plus the water that does not turn back to its original source.

# W5.4

# For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verificat ion	What standard and methodology was used?
Water withdraw als- total volumes	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water withdraw als- volume	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter, (page 426 of EDP's Annual Report:

Water aspect	% verificat ion	What standard and methodology was used?
by sources		www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water discharge s- total volumes	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter, (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water discharge s- volume by destinatio n	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter; (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water discharge s- volume by treatment method	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter, (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water discharge quality data- quality by standard effluent paramete rs	76-100	EDP monitors these indicators according with the environmental permits and other legal requirements. These are verified with a limited assurance by KPMG, on an annual basis, (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf
Water consumpt ion- total volume	76-100	EDP monitors these indicators according with the environmental permit and other legal requirements. The water management indicators are published annually by EDP Group in its Annual Report and checked by KPMG accredited external entity with reasonable assurance for all facilities included in consolidation perimeter, (page 426 of EDP's Annual Report: www.edp.pt/en/Investidores/publicacoes/relatorioecontas/2015/Company%20Re ports%202015/RC2015_EN.pdf

# Module: Response

# Page: W6. Governance and Strategy

# W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Board of individuals/Sub-set of the Board or other committee appointed by the Board	Scheduled- quarterly	Rui Teixeira is a member of EDP's Corporate Executive Board, who has the responsibility for sustainability issues that includes water management.

# W6.2

Is water management integrated into your business strategy?

Yes

# W6.2a

Please choose the option(s) below that best explain how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Establishment of a clear water strategy	The EDP Corporate Water Management Strategy published by EDP in 2012 has allowed the company to align processes and people towards a more sustainable water management.
Establishment of sustainability goals	EDP assumed its commitments in the Water Management Policy and Strategy published in 2012. Annually, under the Corporate Environmental Management System, EDP defines the goals and analyses the performance. The goals have permitted EDP to operate more efficiently, reducing costs and exposure to water risks.
Water resource considerations are factored into location planning for new operations	All EDP new investments go through a detailed analysis in which all key sustainability factors are integrated. Regarding water management, EDP considers the exposure to water-related risks, analysing aspects such as physical quantity, quality and regulatory & reputational risk categories.
Publicly demonstrated our commitment to water	EDP discloses the commitment with water management to all of its stakeholders through the Water Management Policy and its strategy (2012) and in the Annual Report. The stakeholder engagement is a strategic priority for maintaining an open and transparent dialogue with all those with whom the Group establishes relations.
Tighter operational performance standards	At operational level, EDP establishes improvement actions in order to reduce its exposure to the risks of water (such as environmental fees and water stress). In facilities, where water is a significant environmental issue, EDP carries out new initiatives aiming to achieve continuous improvement beyond legal requirements.

# W6.2b

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

Influence of water on business strategy	Please explain
Other: Severe drought	Currently EDP has a high (cyclical) risk associated with the (reduced) hydro production in Brazil, due to the extreme drought context of recent years (2014 drought considered the worst in over 80 years), which forces power producers to meet their short positions through purchases at high market spot prices. It is relevant to note that EDP Brasil has joined the hydro risk renegotiation deal (with retroactive effects to

Influence of water on business strategy	Please explain
	January 2015) proposed by the Brazilian regulator, which materially limits the level of risk associated to the volatility in hydro generation in this geography.

#### W6.3

#### Does your organization have a water policy that sets out clear goals and guidelines for action?

Yes

# W6.3a

# Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Publicly available Company-wide Performance standards for direct operations Incorporated within group environmental, sustainabiilty or EHS policy Acknowledges the human right to water, sanitation and hygiene	The aim of the EDP Group's Water Management Policy is to contribute to the worldwide goal of promoting access to drinking water. The scope of this policy covers all business units. The commitments set out in the policy are incorporated in EDP's Sustainable Development Principles and Environmental Policy. In addition, this policy is integrated in the scope of environmental management systems. EDP's Corporate Water Policy is public and shared with all stakeholders in several media. EDP's processes aim to improve the water management towards an efficient use of all EDP's facilities without significant impact on their surroundings.

#### W6.4

# How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting year compare to the previous reporting year?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
-42	+2.6	CAPEX mainly linked to hydropower plants under construction. During 2015 most of the works reduced significantly, as the construction period is almost concluded. Variation on OPEX is not material.

**Further Information** 

### Page: W7. Compliance

#### W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

# Page: W8. Targets and Initiatives

# W8.1

# Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, targets and goals

# W8.1a

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base- line year	Target year	Proportion of target achieved, % value
Absolute reduction of water withdrawals	Water stewardship	In Portugal, EDP sets a target to not exceed an absolute value of withdrawal (more than 1511,1 millions m3 of water). It should be noted that the thermoelectric power plants are the EDP facilities with a more relevant water consumption.	Other: Not exceed an absolute value (m3)		2015	100%
Reduction in consumptive volumes	Water stewardship	In Portugal, EDP sets a target to not exceed an absolute value of raw water consumption (3 Mm3). After the use of water for cooling systems, the raw water is the most important use.	Other: Not exceed an absolute value (m3)		2015	100%
Reduction in wastewater	Recommended sector best practice	In Spain, EDP promoted initiatives in order to reduce the volume of wastewater: - 5% compared with 2013 in CCTC Soto; - 20% compared with 2014 in Castejón.	Other: % Wastewater reduction	2013	2015	100%
Water pollution prevention	Water stewardship	In Spain, EDP implemented initiatives in order to reduce the concentration of	% reduction in concentration of contaminants per discharge volume	2014	2015	100%

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base- line year	Target year	Proportion of target achieved, % value
		contaminants in the discharge wastewater 5% of chloride concentration compared with 2014 in CTCC Soto - 20% oil concentration compared with 2014 in Castejón.				
Reduction in consumptive volumes	Risk mitigation	Pecém increased the evaporation cycle in cooling towers 3.5 to 5 times with chemical adjustments required to operate under normal conditions. This measure reduces water consumption applying the method of continuous blowdowns. In the operating conditions of the cooling towers with 360 MWh, the water consumption of blowdowns reduced from 286,68 m3/h to 177,60 m3/h in each tower.	% increase in recycling/reuse per facility	2014	2015	100%

#### W8.1b

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Watershed remediation and habitat restoration, ecosystem preservation	Risk mitigation	In Spain, EDP promoted initiatives in order to minimise the risk of: - Improving security system in order to avoid leaks of hydrocarbon/ chemical product to watercourses (Castejón); - Replacement of 100% of mineral oil from risky equipment that can discharge to river.	The progress of the diferent goals are: - Completed - Replace 90% of mineral oil
Watershed remediation and habitat restoration, ecosystem preservation	Risk mitigation	In Spain, EDP did works for connection to municipal sewer in Proaza Hydro Plant.	Installation changes completed. Allowances obtained.

#### **Further Information**

# Module: Linkages/Tradeoff

# Page: W9. Managing trade-offs between water and other environmental issues

## W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

#### W9.1a

#### Please describe the linkages or trade-offs and the related management policy or action

Environ mental issues	Link age or trade -off	Policy or action
GHG Emission s	Linka ge	Hydro generation is a way of generating electricity without CO2 emissions, thus contributing to fight climate change. EDP's new business plan focus growth mainly on new renewable capacity, part of it in new hydro power capacity. See question W4.1a
Natural watershe ds conserva ncy	Trad e-off	Hydro generation requires land flooding, as well as it changes the river's natural freshwater systems from lotic to lentic. Although it depends on specific local conditions, frequently these situations have significant negative impacts on local biodiversity. For this reason, EDP has several initiative to mitigate and compensate those impacts. A Biodiversity Report is published every two years with the Biodiversity projects ongonig as well as its results (www.edp.pt/pt/sustentabilidade/PublicacoesRelatorios/relatorios/Relatrios%20Sust entabilidade/relatorio_biodiversidade_VF.pdf). As an example, the new Baixo Sabor Dam, built in Portugal, became a Long-term Ecological Research Site, to help science better understand the long term impacts of such an infrastructure (www.lterportugal.net/#!sabor/c1ar2), and help future decision making.

## **Further Information**

# Module: Sign Off

#### Page: Sign Off

#### W10.1

# Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Rui Teixeira	<b>Executive Director</b>	Board/Executive board

# W10.2

Please select if your organization would like CDP to transfer your publicly disclosed response strategy from questions W1.4a, W3.2c and W3.2d to the CEO Water Mandate Water Action Hub.

CDP: [D][-,-][D2]