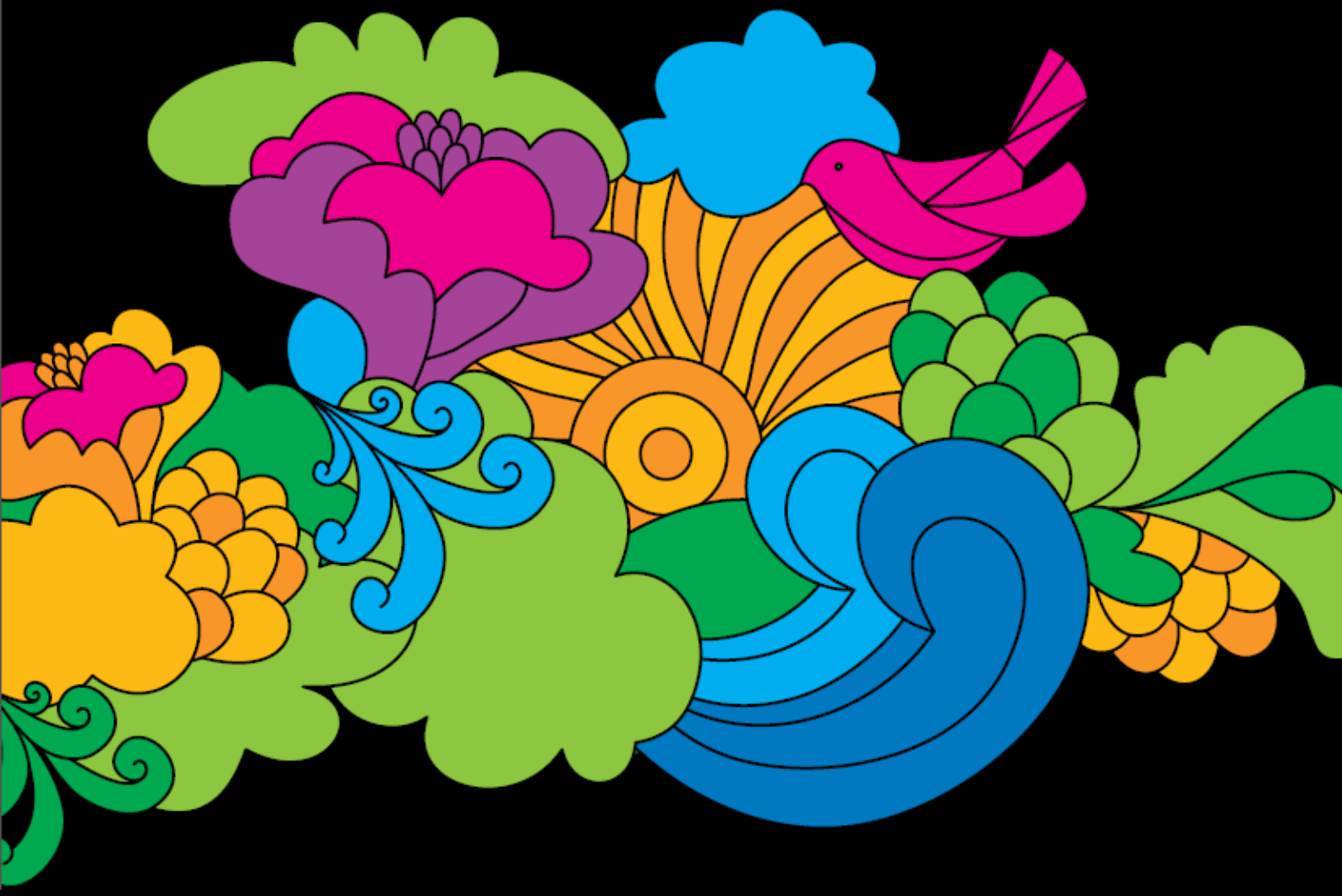
Water Disclosure Project
EDP's Response to CDP 2010



edp

CDP Water Disclosure Project

EDP's Response to Water Disclosure 2010

Following our full disclosure policy, all information about EDP can be accessed in www.edp.pt. We strongly recommend the consultation of our 2009 Annual Report.

EDP is a European utility company, based in Portugal but also present in Spain, Brazil, USA, and seven other countries, with business in electricity and gas, comprising electrical generation and electrical and gas distribution. In generation its assets include fuel, coal, CCGTs and hydro power plants and wind turbines.

2009 IN SHORT FIGURES:

Turnover	EUR 12,198.2 Million
Gross Profit	EUR 5,105 Million
Net profit	EUR 1,023.8 Million
Employees	12,096
Assets	EUR 40,262 Million
Equity	EUR 7,291Million
Liabilities	EUR 30,283 Million
ISIN	PTEDP0AM0009
SEDOL	4103596

WATER MANAGEMENT AND GOVERNANCE

1. WATER MANAGEMENT AND GOVERNANCE

1.1 Does your company have a water policy, strategy or management plan? Please describe it.

Yes, EDP has a corporate environmental policy that is transversal throughout the company and includes all the significant environmental aspects. The policy states "Constantly improve environmental performance", this includes sustainable water management.

Most of the main companies that form EDP have their own environmental policies that always include the environmental management system, with focus on the significant environmental aspects, in which water management is always present.

EDP considers having a significant impact on water resources, namely in the thermal and hydro production assets, so EDP manages water issues in such a way that minimizes this impact. This good management is validated by the ISO 14001 and the EMAS certification, both applying the continuous management improvement approach.

EDP has water management plans in most of its production assets. By the end of June 2010 the ISO 14001 certification, for the whole EDP group, covered 66% of total group net installed capacity, and the EMAS certification covered 18% of total installed power.

In the thermal and hydro production assets, EDP's commitment with resource eco-efficiency – that includes water use – is set into place through the Environmental Management Programs and the procedures regarding the Environmental Management System, implemented and certified by ISO 14001:2004 and by the EMAS. By the end of 2010 the total thermal and hydro production assets will be 99% certified by ISO 14001 and 46% certified by EMAS. The difference between the whole EDP Group assets that are certified versus the thermal and hydro production assets is due to the fact that the renewable business unit has started the certification process later.

1.2 Where is the highest level of responsibility within your company for the policy, strategy or plan?

The ultimate responsible for the environmental and sustainability policy as well as for the environmental performance of the company, that includes water management performance, is the board of directors. For this, the board is assisted by a corporate environmental and sustainability office. The environmental and sustainability manager is responsible for the reinforcement of the environmental and sustainability policy and for the monitoring and reporting of the EDP Group environmental and sustainability performance, that includes water management performance.

The water operational management is delegated in the power plant's directors and the water related risks are followed by the CRO (Chief Risk Officer).

In the thermal and hydro production company – EDP Produção - the environmental policy and its strategic lines are approved by the EDP Produção executive committee. The environmental management programs are annually established and approved by the executive bodies of the thermal and hydro departments that are also responsible for the thermal and hydro assets management. The environmental management programs are monitored throughout the year in daily and quarterly follow-up meetings.

1.3 Does the policy, strategy or plan specify water reduction, quality or efficiency targets or other water-related goals?

Yes.

Type of target/goal	Target/goal	Comments
Water usage	12% industrial water use reduction at Sines Power plant	Environmental Management Program 2010 for Sines power plant
Water usage	35% reduction of the liquid treated effluents at Sines Power plant	Environmental Management Program 2010 for Sines power plant
Water usage	1,5% saving in water use at Sidergas plant	Optimization of the water conditions to the inverse osmosis, at Sidergas plant
Water usage	Reduction to zero of the probability of oil spills in rain water collectors Sidergas plant	Through the installation of new water oils separators, at Sidergas plant
Water usage / Spills	Reduction to zero of the probability of gasoil spills	Through the acquisition of equipment at Sevares plant
Effluent spills	Optimization of the conditions of the effluent delivered to Nestle, Sevares plant	Through the acquisition of equipment at Sevares plant

1.4 What water-related actions has your company taken in respect of its own operations?

EDP has an environmental management system that manages the significant environmental aspects. Water is one of the most important. All situations regarding water are closely followed, from use to spills.

In thermal and hydro production (EDP Produção):

In the thermal and hydro production company EDP develops activities of plant's project, construction, exploration and decommissioning. All these actions are developed in the straight compliance with the law and with all the voluntary commitments assumed by EDP, namely in what regards water use reduction.

For new plants, during project phase EDP incorporates the corporate environmental practices and ensures that the minimization and compensation measures stated by the Environmental Impact declaration (issued by the competent state authorities) are effectively accomplished. In addition, best (voluntary) practices are added to the project guaranteeing that it will have a good environmental performance.

As an example of good voluntarily practices during project phase there is the Lares plant, in which the industrial water supply is a mixture of water from the channel and the reused water from: the final wash of the treatment sand filters and mixed bed exchangers; the recirculation of mixed bed exchangers (when the water does not achieve the minimum requirements to be send to the demiwater tank, namely high conductivity); good quality condensate and boiler blow down water. The first two are sent to the water treatment plant and the last one is sent to the service water tank.

In the exploration phase – during normal operation – there are actions regarding the internal control aiming to demonstrate the respect for legal imposed limits, on surface and ground water withdrawal. These restrictions apply to water used in cooling and/or process, to rejected effluent volume and quality, to the quality of the receptor water. When the receptor is a river its water quality is also monitored with a monthly periodicity.

Depending on each installation characteristics and on the associated infrastructures, the ground water quality is sometimes monitored through piezometers.

An example of good practices during exploration phase is in Setúbal power plant, in which condensate water recovery equipment was installed in the oil heating lines. This equipment collects the residual treated water that is later used in the power plant garden irrigation.

Another action is the replacement at Sines power plant of the boiler slag extraction wet system for a dry one, one of the main objectives of this replacement was water use reduction. The replacement began in 2004 and ended in 2008. The water use associated with this system, 532,000m^3/year, was eliminated. Some other environmental, operational and maintenance advantages of this replacement were: discontinuance of mud production in the liquid effluent treatment installation; discontinuance of product consumption associated with the hopper water treatment (44 ton/year); significant cost reduction associated with the cleaning of the area; economical possibility of selling of the hopper the bottom ash.

Also at the Sines power plant, by the end of 2009, and within the desulphurisation project, conditions were created to allow the reuse of almost all of the chemical effluent treated at the liquid effluent treatment installation.

In November 2009, an internal working group was created to access the impact of the water framework directive on EDP Produção hydro power plants by the EDP Produção board.

In HC Energía - Production and distribution company in northern Spain:

Aboño power plant (Gijon):

- Improvement of the Aboño 1 hopper, through the optimization of valves, the plant uses less treated and potable water,
- Reduction of water use in about 55,000m^3/month in the Aboño 2 desulphurization
- Improvement of water circulation systems for Aboño 1 and 2
- Sea water desalinization
- Recuperation of purge water

Soto de Ribera power plant (Oviedo):

- Reuse of raining water for irrigation
- Continuous chlorine dosage in water cooling, prevents water spills

In Brazil during the hydro plants viability studies phase, an environmental evaluation is made. In this the surface and ground water quality parameters are evaluated. During construction phase the impacts are monitored, and minimization measures are taken, all much focused on water quality. During operation the water quality and quantity are regulated by the plant operating license and are closely monitored.

In Portugal, Spain and Brazil, most of the thermal power plants are ISO 14001 and EMAS certified. The Environmental Management Programs of all of them are approved in yearly basis and include water use objectives.

In distribution, in Portugal, there is a special procedure regarding spills. This obliges not only its communication within 24 hours to the distribution company environmental department but also dictates all the actions to mitigate its impact.

Econnosco program is a initiative for EDP employees. This programme involves reduction in electricity and water consumption in EDP's office buildings, waste management and the creation of a Sustainability Ambassador – a volunteer employee who encourages sustainability measures in his/her workplace. From 2006 till 2009, in Portugal, the program reduced in 32% the water use in buildings.

ACTION COMMENT

1.5 What water-related actions has your company taken in respect of factors beyond its own operations?

Action	Comment
Participation in the WBCSD	A world forum where businesses exchange best practices and concerns regarding sustainability, including water related issues.
Participation in the BCSD Portugal Water working group	A national forum to exchange best practices and concerns regarding water related issues.
Participation in the EURELECTRIC –Environmental Protection sub-group hydro	Portugal is represented by EDP. In this forum the water framework directive is followed, namely its consequences on thermal and hydro power generation.
Participation in the Jacu river basin committee	Forum responsible for the debate on the issues related with the hydro resources of Jacu river basin. Espírito Santo State.
Participation in the Itapemirim river basin committee	Forum responsible for the debate on the issues related with the hydro resources of Itapemirim river basin. Espírito Santo State.
Participation in the Santa Maria da Vitória river basin committee	Forum responsible for the debate on the issues related with the hydro resources of Santa Maria da Vitória river basin. Espírito Santo State.
Participation in the Miranda river basin committee	Forum responsible for the debate on the issues related with the hydro resources of Miranda river basin. Mato Grosso do Sul State.
Participation in the Hydro resources State Council Mato Grosso do Sul State	A normative, deliberative and consultative forum for the Mato Grosso do Sul State
Participation in the Technical Chamber of the Hydro resources State Council Espírito Santo State	Supports the implementation of the State hydro resources Politic instruments.
Participation in the Kakuma Programme – Sustainable and Environmental Solutions in refugee camps	EDP is developing with UNHCR and other partners a programme composed of 10 measures aiming to provide Sustainable and Environmental Solutions in refugee camps. Amongst the 10 measures 3 are directly related with water management. These are: - "Green energy for water supply" – providing water pumping using Solar energy (Photo Voltaic modules) - "Water purifier" – Providing water purifiers to replace the wood used for boiling - "Environmental Sustainability" – Amongst others, creation of a demonstration centre for drip irrigation agriculture

1.6 What water-related actions are you considering taking?

EDP will continue the above mentioned actions and is developing works, in cooperation with the relevant Water Authorities to assess the sustainability of the water basins where it operates and to devise measures to maintain the ecological quality of the water.

1.7 What water-related initiatives does your company participate in and what tools or resources does it use?

Initiative	Comment
WBCSD	Initiative - A world forum to exchange best practices and concerns regarding sustainability, this includes water related issues.
BCSD Portugal Water working group	Initiative – A national forum to exchange best practices and concerns regarding water related issues.
EDP's workgroup on the water framework directive	Initiative - An internal forum aiming to identify the impact of the water framework directive on EDP's business
Global Water Tool	Tool - Used to access which assets are in water-scarcity areas, compares companies water uses, helps to evaluate water consumption and efficiency, helps to evaluate water risks and helps to produce key water GRI indicators.

Risks and Opportunities

RISKS IN OWN OPERATIONS

2. WATER STRESS

2.1 Are you able to identify which of your operations are located in water-stressed regions?

Yes.

2.2 Please state (or estimate) the percentage of your operations located in these regions.

Type of measurement	Percentage
Annual Renewable Water Supply per Person (m^3/person/year) (1995) – Global Water Tool	0%
Annual Renewable Water Supply per Person (m^3/person/year) (Projections for 2025) - Global Water Tool	

2.3 Please specify the method used to characterize water-stressed regions in questions 2.1 and 2.2.

Method	Comments
Global Water Tool	The Global Water Tool is a tool developed by the WBCSD aiming to help companies to access which of its assets are located in water stress areas, in countries that lack access to improved water and sanitation and which of its suppliers are in water stress areas.

3. PHYSICAL RISKS

3.1 Is your company exposed to significant physical risks related to water in its own operations?

EDP is exposed to water risk mainly in two areas: thermal and hydro production.

The current and/or anticipated significant physical risks/ opportunities are:

- Changes in traditional precipitation and runoff patterns, all geographies
- Increase in the frequency and severity of drought and floods, all geographies
- Unexpected rivers' overflow, affects more Portugal and Brazil
- Degradation of water quality by change of water temperatures, change of flows and runoff rates, saltwater intrusion, all geographies
- Water stress
- Multiple use basins

The hydro generation is an important component of EDP's generation assets, especially in Portugal and Brazil. Any change in the precipitation pattern implicating a decrease in rainfall results in less hydropower generation. This decrease may not be balanced by higher energy prices. On the other way extreme precipitation can cause inundations, dam overflow and landslides. In the presence of extreme precipitation, sometimes, the water cannot be turbinated, thus not generating a cash-flow.

Higher temperatures result in increased population's water consumption. When this water is pumped directly from the group's reservoirs to water supply networks, such volumes do not generate energy and it's likely that the company won't be compensated for this. Likewise, droughts may imply extra reservoir water relative expenditure in activities such as irrigation and maintenance of ecological flows, with inherent loss of energy/revenue, when these water flows are not turbinated or when they are released during off-peak hours (lower energy prices).

In thermal power plants the main water related risks are the availability and the quality of the water for the cooling system. Higher temperatures may disturb power plants normal operation, because the cooling source's temperature is sometimes already outside its legally admissible values before its use at the power plant, or it might be outside the legal temperatures after the cooling system thus forcing the power plant to stop. In addition, if the water flow of the cooling source experiences a drastic reduction, per example due to a draught, the plant may also be forced to stop.

In Distribution floods can cause damage to assets and service interruption.

Flooding, due to both local hydrological conditions and rising sea levels may also affect the accessibility or impact the operations of a number of EDP infrastructures such as offices, electricity distribution lines or gas distribution pipelines, namely in Portugal, Spain and Brazil, where operations are mainly located in the vicinity of coast lines.

EDP manages water related risks through risk prevention measures. Examples of this are:

- In a power plant exposed to river overflow – Setúbal - protection walls were constructed
- In a new power plant exposed to river overflow – Ribatejo -the equipments were placed at a superior height
- In a seaside power plant – Sines - subjected to algae explosive growth in the cooling source (due to increase in sea temperature) algae cleaning systems were placed
- In hydro power plants the floodgates circuits were duplicated, in hydro power plants diesel emergency groups were placed in flood protected sites, etc.).

The costs of these actions are evaluated, per example the algae cleaning systems did cost around 1.5 EUR Million.

Furthermore EDP has:

- Access to meteorological previsions,
- A dedicated communication channel with the civil protection authorities
- Annual detailed equipment maintenance plan
- Companies' and sites' emergency plans
- "All risks" insurance
- Environmental liability insurance
- Civil responsibility insurance

The concern with physical risks which include water related risks, affecting EDP is transversal throughout the company. In Portugal, Spain and Brazil, most of the assets are ISO 14001 and EMAS certified thus guaranteeing that risks related with extreme events and water scarcity or excess are identified and mitigated.

In response to physical risks which include water related risks, EDP's hydropower plants are designed to support what is technically named "the flood of the millennium". Also, all plants have emergency plans that are fully operational and address all events that might disrupt normal operation, some of them water related.

Water related risks to assets and losses are mostly covered by a range of insurances for the Group's assets in operation, so the maximum risk cost incurred is mostly transferred out of the EDP Group (except for partial revenue losses). Also, EDP has a captive insurance policy (Energia RE, based in Luxembourg) for sharing Group's small losses (below external insurance deductibles) and to give direct access to reinsurance market.

3.2 Are there financial implications to the identified risks? Please describe them.

Yes.

These risks have two types of cost, one is the cost of the mitigation measures taken to prevent further events. The other is the costs of corrective measures, the reputational damage and the loss of revenue.

As examples of corrective measures we have the actions taken on Portuguese hydro power plants after the flood events (from 200 till 2006), these cost about 45,000 Euro. The cost of the algae cleaning systems were approximately 1.5 EUR Million.

The construction of protection at Setúbal power plant cost about 79,000 Euros.

4. REGULATORY RISKS

4.1 Is your company exposed to significant regulatory risks related to water in its own operations?

The water related regulation affects the operation of hydro and thermal power plants, placing restrictions on water usage and on effluent quality.

The Water Frame-work Directive 2000/60/CE represents one of the main regulatory risks because even now, after its transposition to national legislation, some of the issues are not yet fully defined, per example the definition of the ecological minimal flow, the need of fish ladders, etc.

The Environmental Liability Directive 2004/35/CE is also a main concern in European operations because it establishes the polluter pays principle and the regime related with environmental responsibility applicable to environmental damage prevention and restoration.

Furthermore environmental laws and regulations constrain the location of new power plants and distribution and/or transmission grids, by soil usage limitations in areas prone to suffer from floods or flash floods.

Generally, regulation uncertainty regarding any unforeseen new regulations related to dam and/or thermal power plants water withdrawals will affect electricity generation operations and generate costs in Portugal, Spain and Brazil.

EDP is nowadays managing this risk mainly through prevention, following the main regulatory risks in fora such as EURELECTRIC, WBCSD, BCSD Portugal Water working group and in an internal working group dedicated to the analyses of the Water frame-work directive.

In the hydro power plants, the future regulations might cause profit loss due to non turbinated water for maintenance of the ecological minimum flow. Also there might be some additional costs due to works on the dams to adequate them to the water frame-work directive.

In thermal power plants, the future regulations might cause profit loss due to power plant inactivity caused by restrictions on water use for the cooling system.

Financial impacts may also include fines and investments in new technologies.

The main regulations related to water that impact in EDP's activities are:

- Portuguese law 11/2009, 25th March - Establishes the regime on dam security regulation infractions;
- Portuguese decree-Law 147/2008, 29th July - Establishes the juridical regime for environmental damages, transposition of the Directive 2004/35/CE on Environmental Liability;
- Portuguese decree-Law 97/2008, 11th June - Establishes the economic and finance water resources regime;
- Directive 2007/60/CE of 23 October 2007 – Sets the procedures to the evaluation and management of flood risk;
- Council Regulation (EC) No 1100/2007 establishing measures for the recovery of the stock of European eel;
- Portuguese decree-Law 226-A/2007, 31st May- Establishes the regime for water resource use;
- Portuguese decree-Law 344/2007, 15th October – Approves the dam security regulation;
- Portuguese decree-Law 77/2006, 30th March - Complements the Transposition of the Directive 2000/60/CE, establishes the rules about water characterization in hydrographical regions;
- Portuguese law 50/2006, 29th August – Approves the law on environmental damages;
- Sustainable Water management law 58/2005 – Transposition of the Directive n.º 2000/60/CE of 23rd of October;
- European Directive 2000/60/CE Water framework directive;
- Portuguese decree-Law 236/98, 1st of August – Establishes quality norms, criteria and objectives to protect the aquatic environment;
- Portuguese decree-Law 409/93, 14th December – Approves the small dam regulation;
- Spanish Royal Decree 1514/2009, Of October 2nd - Regulates the protection of subterranean water against contamination and damage;
- Spanish Law ORDEN ARM/1312/2009, 20th May- Establishes how to control water volumes in dams situated in public hydro domain;
- Spanish Law ORDEN MAM/85/2008, 16th January - Establishes technical criteria to valuate damages to the public hydro domain;
- Spanish Royal Decree 9/2008, 11th January, Changes the public hydro domain established in the royal decree 849/1986;

- Spanish Royal Decree 1620/2007, 7th December, Establishes the juridical regime for the reuse of treated water;
- Spanish Royal Decree 907/2007, 6th July, approves the hydrological planning;
- Spanish Royal Decree 4/2007, 13th April, changes the water laws of Royal Decree 1/2001;
- Spanish law 11/2005, 22nd June, changes the law 10/2001, of the hydrological national plan;
- Spanish Law ORDEN MAM/1873/2004, 2nd June, approves the official models to the spill declaration;
- Spanish Royal Decree 995/2000, 2nd June, establishes quality objectives for certain contaminants;
- Brazilian federal law 9.433, of 1997, establishes the national water resources politic and creates the national water resources management system;
- Brazilian federal decree 79.367/37 sets norms for water quality;
- Brazilian federal decree 24643/34, sets the water code;
- Brazilian Resolution CONAMA 357/04, Classifies water zones and sets environmental guidelines
- Brazilian Resolution CONAMA 396/08 – Sets the classification and environmental guidelines for ground water pollution prevention and control;
- Brazilian Resolution CNRH 16, 8th May 2001, establishes the conditions and proceedings for water resource use;
- Brazilian Resolution CNRH 15/01 establishes the National politic on water resources use;
- Brazilian Resolution CNRH 37/04 Federal - establishes guidelines for dam's implementation;
- Brazilian Resolution CNRH 91/08 Federal – Establishes procedures for surface and ground water;
- Brazilian Resolution CNRH 92/08 Federal - Establishes criteria and general procedures for ground water protection;
- Brazilian Resolution CNRH 58/06 Federal – Approves the water resources national plan;
- Brazilian Resolution CNRH 48/05 Federal – Establishes criteria for water resource use payment;
- Brazilian Resolution ANA 131/03 Federal – Sets the procedures for the emission of the declaration of hydro availability reserve;
- Brazilian Resolution ANA 317, 26th August 2003, sets the national water resource users registry;
- Brazilian Resolution ANA 135/02 Federal – Establishes the procedures for the demands for water resources use;
- Brazilian Resolution ANA 219/05 Federal – Sets the guidelines for the analyses and emission of the right to send effluents to water resources.

4.2 Are there financial implications to the identified risks? Please describe them.

Yes. The thermal and hydro assets use a large amount of water and its activity is very much regulated. So any change in water related regulation will surely impact on the company cash flow. Either because it will be more expensive to have water for the process either because investments will most probably be made to allow the plants to cope with more strict regulation.

4.3 Please describe any actions the company has taken or plans to take to manage or adapt to the risks that have been identified, including their impact on operating costs (positive or negative) and CAPEX programs.

All actions aiming a more efficient water use are regulatory risk minimisation measures.

<u>In thermal and hydro production (EDP Produção):</u>

In the thermal and hydro production company EDP develops activities of plant's project, construction, exploration and decommissioning.

For new plants, during project phase EDP incorporates the corporate environmental best practices. In addition, best (voluntary) practices are added to the project guaranteeing that it will have a good environmental performance.

As an example of good voluntarily practices during project phase there is the Lares plant, in which the industrial water supply is a mixture of water from the channel and the reused water from: the final wash of the treatment sand filters and mixed bed exchangers; the recirculation of mixed bed exchangers (when the water does not achieve the minimum requirements to be send to the demiwater tank, namely high conductivity); good quality condensate and boiler blow down water. The first two are sent to the water treatment plant and the last one is sent to the service water tank.

In the exploration phase there are actions aiming to reduce water use. An example of good practices during exploration phase is in Setúbal power plant, in which condensate water recovery equipment was installed in the oil heating lines. This equipment collects the residual treated water that is later used in the power plant garden irrigation.

Another action is the replacement at Sines power plant of the boiler slag extraction wet system for a dry one, one of the main objectives of this replacement was water use reduction. The replacement began in 2004 and ended in 2008. The water use associated with this system, 532,000m^3/year, was eliminated. Some other environmental, operational and maintenance advantages of this replacement were: discontinuance of mud production in the liquid effluent treatment installation; discontinuance of product consumption associated with the hopper water treatment (44 ton/ano); significant cost reduction associated with the cleaning of the area; economical possibility of selling of the hopper the bottom ash.

Also at the Sines power plant, by the end of 2009, and within the desulphurisation project, conditions were created to allow the reuse of almost all of the chemical effluent treated at the liquid effluent treatment installation.

<u>Actions developed in HC Energía - Production and distribution company in northern Spain:</u>

Aboño power plant (Gijon):

- Improvement of the Aboño 1 hopper, through the optimization of valves, the plant uses less treated and potable water;

- Reduction of water use in about 55,000m^3/month in the Aboño 2 desulphurization;
- Improvement of water circulation systems for Aboño 1 and 2;
- Sea water desalinization;
- Recuperation of purge water.

Soto de Ribera power plant (Oviedo):

- Reuse of raining water for irrigation;
- Continuous chlorine dosage in water cooling prevents water spills.

In Brazil during the hydro plants viability studies phase, an environmental evaluation is made. In this the surface and ground water quality parameters are evaluated. During construction phase the impacts are monitored, and minimization measures are taken, all much focused on water quality. During operation the water quality and quantity are regulated by the plant operating license and are closely monitored.

In Portugal, Spain and Brazil, most of the thermal power plants are ISO 14001 and EMAS certified. The Environmental Management Programs of all of them are approved in yearly basis and include water use reduction objectives.

Econnosco program is an initiative for EDP employees. This programme involves reduction in electricity and water consumption in EDP's office buildings, waste management and the creation of a Sustainability Ambassador – a volunteer employee who encourages sustainability measures in his/her workplace. From 2006 till 2009, in Portugal, the program reduced in 32% the water use in buildings.

5. OTHER RISKS

5.1 Is your company exposed to other significant risks (such as product or reputational risks) related to water in its own operations?

Yes.

5.2 Please describe the ways in which the identified risks affect or could affect your own operations.

The current and/or anticipated significant other risks/ opportunities are:

- Reputational risk in relation to dam operation under successive flood situations in Portugal and Brazil and during winter
- Personnel risk related to water related extreme events in all geographies, case of death, illness or injuries, this is a low probability, high impact risk
- Competing water usage in Iberia, where most of EDP's dams are located at international rivers with competing utilities upstream
- Multiple use water basins.

The operations in dam's reservoirs, in successive flood situations, are not always well understood by some stakeholders, such as local communities. This may affect the company's reputation. EDP is more exposed to this risk because it is nowadays constructing in Portugal and in Brazil. In Portugal EDP is constructing five new hydraulic power plants (Bemposta II, Alqueva II, Baixo Sabor, Venda Nova III e Ribeiradio-Ermida) and five more are under legal licensing process (Alvito, Foz-Tua, Fridão, Paradela II and Salamonde II). In Brazil EDP is constructing 500 MW of small and medium hydro plants.

EDP has a project, COMPRO which aims to effectively communicate big projects with all stakeholders. This project sets a methodological approach to communication thus ensuring that all adequate steps are taken in order to guarantee the project acceptance by the stakeholders. This project is currently under developed in Portugal.

There is also a personnel risk related to water related risks, both directly, through death or illness in the event of extreme draught or flood, and indirectly, through epidemics and facilitated disease spreading (ex: after floods), or chaos and disorder (ex: inability to reach working place or leave their home). However, since EDP operates mainly in Europe, USA and Brazil, where resilience to such problems is generally considered to be good, the probability of occurrence of this risk can be considered small. Also EDP's activities are so geographically spread one can say we have a natural hedge: the probability of extreme weather occurring simultaneously in Europe, USA and Brazil is very low.

The actions taken to mitigate/avoid these risks are:

- Emergency and Crisis Plans for personnel risk related to climate changes;
- Insurance for personnel risk as well as for profit losses;
- Asset diversification.

The multiple use water basins is a risk for electricity generation on hydro power plants because this is a situation that can create restrictions on water use as well as generate problematic conditions. For example, the multiple uses can decrease the basin water quality thus forcing the power company to clean it.

5.3 Are there financial implications to the identified risks?

These risks are very difficult to quantify. In 2010 there will be an effort to quantify them.

5.4 Please describe any actions the company has taken or plans to take to manage or adapt to the risks that have been identified, including their impact on operating costs (positive or negative) and CAPEX programs.

EDP has a project, COMPRO which aims to effectively communicate big projects with all stakeholders. This project sets a methodological approach to communication thus ensuring that all adequate steps are taken in order to guarantee the project acceptance by the stakeholders. This project is currently under developed in Portugal.

The actions taken to mitigate/avoid these risks are:

- Emergency and Crisis Plans for personnel risk related to climate changes;
- Insurance for personnel risk as well as for profit losses;
- Asset diversification.

EDP's activities are so geographically spread one can say we have a natural hedge: the probability of extreme weather occurring simultaneously in Europe, USA and Brazil is very low.

RISKS IN SUPPLY CHAIN

6. WATER USE IN SUPPLY CHAIN

6.1 Are you able to identify which of your key water-intensive inputs come from water-stressed regions?

No.

6.2 Do you require your key suppliers to report on their water use, risks and management? Please comment.

At the moment EDP does not require its key suppliers to report on water use. This requirement will be effective in the near future.

6.3 Please add any comments regarding supplier water reporting here:

At the moment EDP does not require its key suppliers to report on water use. This requirement will be effective in the near future.

EDP plans to start in 2010 the evaluation, for its main suppliers, of: location in water stress areas, water intensity, water related risk management, etc.

The main inputs of EDP are equipment and raw materials. As for equipments EDP must consider cables, transformers, pumps, motors, wind turbines. For consumables EDP must consider coal, fuel, gas and chemical products.

7. PHYSICAL RISKS

7.1 Is your supply chain exposed to significant physical risks related to water?

This question will be addressed in 2010. At the moment EDP does not possess this information.

8. REGULATORY RISKS

8.1 Are the companies in your supply chain exposed to significant regulatory risks related to water?

Yes. The chemical products are exposed to water regulatory risks, because most of them use water intensively.

8.2 Please describe the ways in which the identified risks affect or could affect the companies in your supply chain.

The chemical products are essential in the process water treatment. Without them the plant may have to stop.

8.3 Are there financial implications to the identified risks? Please describe them.

Yes. The financial implication is the stoppage of the power plants.

9. OTHER RISKS

9.1 Are the companies in your supply chain exposed to other significant risks (such as reputational risks) related to water?

This question will be addressed in 2010.

OTHER

10. DETRIMENTAL WATER-RELATED IMPACTS IN PAST FIVE YEARS

10.1 Please describe any detrimental impacts to business related to water your company has faced in the past five years, their financial impacts and whether they have resulted in any changes to company practices.

The detrimental water-related impacts in the past 10 years (since 2000) have been evaluated by EDP Produção, the thermal and hydro production company in Portugal. The values obtained were: for corrective measures due to excessive raining, for hydro assets about 45,000 Euro, for thermal assets 80,000 Euro. The corrective measures due to excessive dryness, from 1994 till 2005, for thermal assets cost about 900,000 Euro. The adaptation measures related with these last measures cost about 350,000 EUR.

In Portugal in 2009 a transformer in a hydro power plant ruptured due to a lightning strike and emergency procedures were implemented to recover 5m^3 of oil and 10 m^3 of oil/water mixture, thus preventing any environmental damage on the water basin.

In Spain, in HC, to prevent incidents that can cause non-controlled spills, there is program going on sub-stations that will seal water covers and will also install oil collectors. Also under this program these installations supplied with equipment to control accidental oil spills and to mitigate its environmental impacts.

11. OPPORTUNITIES

11.1 Do water-related issues present significant opportunities for your company? In what way(s)?

Yes. The main opportunity that water issues represent for EDP is the energy production that will be generated in the new hydro capacity that is being built in Portugal. By 2015 there will be 1.7 GW more hydro capacity, by 2020 there will be 1.8 GW more hydro capacity. Some of the new plants are reversible, that is, they allow for pumped storing of hydroelectricity.

The hydro plants due till 2015 are: Picote II (246 MW repowering), Bemposta II (191 MW repowering), Alqueva II (256 MW repowering with pumping), Ribeiradio (77 MW new plant), Baixo Sabor (171 MW new plant with pumping) and Venda Nova III (736 MW repowering with pumping).

The hydro plants due till 2020 are: Foz Tua (251 MW new plant with pumping), Fridão (238 MW new plant), Alvito (225 MW new plant with pumping), Salamonde II (204 MW repowering with pumping) and Paradela II (555 MW new plant with pumping).

This new hydro capacity will be free of CO_2 and the reversible hydro power plants some will allow energy storage, this will permit the storage of electricity generated by wind thus further decreasing the CO_2 emissions.

The reversible hydro power plants also play a strategic role in wind energy because they allow off peak wind energy storage and sale in peak hours. This not only creates a positive cash flow but also helps dealing with wind curtailment, that is, the non use of wind energy in off peak hours.

Hydro power plants also play an important role in the management of the national electrical systems because they are a quick start plant, thus allowing for a more efficient grid management and increasing the system availability.

The referred hydro power plants also represent a reputational opportunity and can potentially differentiate EDP corporate brand positively among utilities. This happens because their state-of-the-art projects include far-reaching social and environmental benefits and compensations, such as ecosystem recovery and management over large areas or social intervention in the regions where future dams will be, as well as environment and technology educational resources for local schools and the creation of recreational and tourism areas that provide both cultural services and are potential sources of revenue for populations otherwise suffering from severe isolation and lack of economic stimulus and employment.

In what regards water related issues there are also the recent CCGTs that were built with cooling tower technology instead of an open cycle cooling source. This technology allows savings in water use.

In addition, EDP has an efficient water management, consistent with its high rank sustainable management. Consequently, EDP is since 2008 included in the Dow Jones Sustainability Index, being silver class in 2008 and gold class in 2009, meaning that EDP is amongst the best performers in sustainability in the world.

11.2 Are there financial implications associated with the identified opportunities? Please describe them.

EDP has already invested approximately 300 million Euro in hydro power and expects to invest more 1,200 million Euro till 2012. The additional cost due to the reversible equipment, in comparison with a traditional one, is of approximately 30% more.

The reversible hydro power plants will most probably originate additional positive revenues, since they allow for the storage of energy in off-peak hours and later sale in peak hours.

The cooling towers in CCGTs allow for savings in water use, thus generating positive revenue.

Brand value is not easily quantifiable but it is agreed that it has an important value and that a company's reputation improvement is passed on to its brand and affects its shares positively.

11.3 Please describe any actions your company has taken or plans to take to exploit the opportunities identified, including the investment needed to take those actions.

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In what regards water related issues there are also the recent CCGTs that were built with cooling tower technology instead of an open cycle cooling source. This technology allows savings in water use.

12. LINKAGES BETWEEN WATER AND ENERGY/CARBON

12.1 Has your company identified any linkages between its use of water and energy, or considered any trade-offs between the two when taking action to manage water or carbon related risks or to exploit water or carbon related opportunities? Please describe them.

Yes. EDP is a company that has since long foreseen the water/carbon related opportunities. When the CO_2 risk became more real EDP designed a strategy to cope with it. EDP's strategy is supported in three pillars: controlled risk, superior efficiency and focused growth. In controlled risk one of the key drivers is the CO_2 emission reduction through investment in clean generation. In focused growth one of the key drivers is the gradual increase in hydro capacity in Portugal.

The investment in hydro capacity will allowed not only the production of electricity CO_2 free, but also the storage of more CO_2 free electricity (wind generated), through the reversible plants.

Also due to its fast start, at peak loads hydro power plants can replace fuel and gas technologies that are more CO_2 intensive.

WATER ACCOUNTING

13. WATER WITHDRAWALS

13.1 Are you able to provide data for the total water withdrawn in your own operations?

Yes.

13.2 Please provide figures for total water withdrawal by source type.

Area/unit	Surface water (m^3)	Ground water (m^3)	Rainwater	Waste water	Municipal water	Total (m^3)
Company total	1,725,897,497	1,126,214	n/k	n/k	n/k	1,727,023,711

13.3 If possible, please also provide data on your water withdrawals broken down by country, region, watershed, business unit, facility or any other area/unit appropriate to your business.

Area/unit	Surface water (m^3)	Ground water (m^3)	Rainwater	Waste water	Municipal water	Total (m^3)
Portugal	1,271,206,160	757,445	n/k	n/k	n/k	1,271,963,605
Spain	454,691,337	340,851	n/k	n/k	n/k	455,032,188
Brazil		27,918	n/k	n/k	n/k	27,918

13.4 Add any comments here or use this space to report water withdrawals in a different format to that set out above.

The water data is gathered in an internal data system, SIS. This is in place since 2008, and it is not yet operating in full power. So some of the data was not available for 2009.EDP is working hard to guarantee that all reported data is in the SIS system.

13.5 Are any water sources significantly affected by your withdrawal of water?

No.

13.6 Add any comments here.

The operation of electricity plants (gas and coal, cogenerations and hydro plants) demands for significant amounts of water use, for consumption as well as for refrigeration. The water volume needed depends on the plant type. The plant licensing is subjected to an authorisation regime of the competent authority that is only given when the plant operation is compatible with the resource use and it is granted that it will not create significant damage.

14. WATER RECYCLING AND REUSE

14.1 Do you know the total volume of water recycled and reused in your own operations?

No.

14.2 You may explain here why you are not able to report the total volumes of water recycled or reused in your own operations and whether you have any plans to put in place systems that would enable you to do so.

This data is currently not available. Efforts are being made to have this data.

15. WATER DISCHARGES

15.1 Are you able to identify your planned and unplanned discharges of water from your own operations by destination, by treatment method and by quality in terms of effluent using standard effluent parameters?

Yes.

15.2 Has your company paid any significant penalties or fines in respect of breaches of regulations relating to discharges from your own operations during the reporting period?

No.

15.3 You may provide details here including any actions taken to minimize the risk of future non-compliance.

In 2009 HC Energía has paid a 5 000 Euro fine – not significant - due to spills in cogeneration plants. This is not a significant value. Also in HC Energía there is a judicial process pending regarding an uncontrolled spill in the La Riera hydro plant. This incident is not judicially solved and no fines have been yet paid.

Both ISO 14001 and EMAS demand for an accurate and preventive operation management. The high rate of certification in EDP guarantees that

the best practices are being applied thus minimizing the risk of non-compliance.

15.4 Are any habitats significantly affected by discharges of water and runoff from your operations?

Yes.

15.5 Please add any comments here.

The main assets EDP has are hydro, wind and thermal power plants, gas pipelines, electrical lines. The assets that might impact, through its runoff, on habitats, are the hydro power plants. This is actually being mitigated through some measures such as the projects developed under the compensation measures. One of the Projects is being developed with CBIO (Centro de Investigação em Biodiversidade e Recursos Genéticos) that is specialised in three main lines of investigation: genes, species and ecosystems. This Centre is one of the Portuguese investigation centres classified with the grade of Excellent. The work developed with CIBIO aims to achieve a positive net impact in the ecosystem.

EDP will also start in the second semester of 2010 the IHA certification. This is the most recognised certification on dams and looks carefully into four areas: (1) strategic assessment, (2) project preparation, (3) project implementation and (4) project operation.

In what regards operational measures EDP is developing compensation measures in all of its new dams. In addition EDP implements ecosystem protection measures such as the repopulation of rivers with its original species. Moreover in 2009 in Taverga (Spain) a fish lift was placed into operation.

15.6 Please list any habitats significantly affected by discharges of water and runoff from your operations.

Habitat	Comment
Riparian zones	Dams impact up and down stream on riparian zones.

16. WATER INTENSITY

16.1 Please provide financial intensity measurements for your water use (water unit / financial unit).

Area / business unit	Water use type	Volume of Water (m^3)	Financial metric	Financial quantity (EUR)	Water Intensity (m^3/EUR)
Portugal	Water withdrawals	1,271,963,605	Revenue	2,331,504,000	0.546
CT Sines	Water withdrawals	1,166,002,800	Revenue	455,349,748	2.561
CT Setúbal	Water withdrawals	40,424,699	Revenue	109,002,791	0.371
CT Carregado	Water withdrawals	9,973,216	Revenue	95,847,329	0.104
CT Barreiro	Water withdrawals	45,549,690	Revenue	41,428,344	1.099
CT Ribatejo	Water withdrawals	9,696,928	Revenue	77,836,272	0.125
CT Mortágua	Water withdrawals	316,272	Revenue	5,625,820	0.056
Spain	Water withdrawals	455,032,188	Revenue	142,963,000	0.318
CT Aboño	Water withdrawals	440,426,769	Revenue	198,143	2222.772
CT Soto de Ribera Coal	Water withdrawals	9,740,037	Revenue	71,470	136.281
CT Ciclo Combinado Soto 4 CCGT	Water withdrawals	2,028,032	Revenue	67,484	30.052
CT Ciclo Combinado de Castejón	Water withdrawals	2,496,499	Revenue	107,771	23.165
EDP Portugal and Spain	Water withdrawals	1,726,995,793	Revenue	3,761,141,000	0.459

16.2 Please provide activity-related intensity measurements for your water use (water unit / activity).

Area/business unit	Volume of Water (m^3)	Activity Type	Please provide any contextual details that you consider relevant to understand the units or figures you have provided.
		Energy production (GWh)	Water Intensity (m^3/kWh)
EDP Group	2,182,027,981	34,424	0.063
Portugal	1,271,963,605	15,044	0.085
CT Sines	1,166,002,800	8,869	0.131
CT Setúbal	40,424,699	188	0.215
CT Carregado	9,973,216	0	0.000
CT Barreiro	45,549,690	120	0.380
CT Ribatejo	9,696,928	5,818	0.002
CT Mortágua	316,272	49	0.006
Spain	455,032,188	9,690	0.047
CT Aboño	440,426,769	4,555	0.097
CT Soto de Ribera coal	9,740,037	1,310	0.007
CCGT Soto	2,028,032	1,354	0.001
CCGT Castejón	2,496,499	2,137	0.001
EITO Cogeneración	63,519	47	0.001
Iniciativas Tecnológicas de Valorización de Residuos, S.A.	96,150	118	0.001
Sinova Medioambiental, S.A.	84,132	104	0.001
Planta de Puente Génave (Bioener)	97,050	65	0.001

17. EXTERNAL VERIFICATION/ASSURANCE

17.1 Indicate what percentage of your withdrawals and discharges have been verified or assured.

Category	Percentage verified/assured
Withdrawals	100% KPMG
Discharges	100% KPMG