AN ENVIRONMENTAL ACCOUNTING SYSTEM IN THE PLANNING AND MANAGEMENT OF EDP DISTRIBUTION COMPANY’S INVESTMENT PROJECTS

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ABSTRACT

Energias de Portugal (EDP) has assumed a proactive approach to the environmental issues in its activity sectors. In 2005, an Environmental Accounting System (EAS) was developed for the EDP Group, with the goal of meeting the requirements of the portuguese Accounting Directive no.29 – Environmental Issues. This Directive follows the European Commission Recommendation concerning the recognition, measurement and presentation of environmental issues in the companies’ accounts and management reports. At the same time, it was intended to enhance the presentation of data in order to meet the obligations of information supply to entities such as the Energy Sector Regulator, the National Institute of Statistics and the stakeholders.

The EDP Distribuição (EDPD) is the company responsible for the planning, construction and operation of the distribution electrical system in Portugal. Its activities are guided by strong environmental concerns, such as the reduction of environmental and landscape impacts. In 2006, the EAS was implemented in the project management application used in EDPD for investment projects. The EDPD EAS solution came into production in March 2007.

In 2008, a methodology for monitoring the quality of environmental data in the system was implemented, and new reports for consolidation of the financial data were made available in the system. The obtained environmental financial results show that there has been a strong positive evolution in the identification, recording and accounting of environmental investments.

New challenges, such as the asset and risk management, are to be systematically introduced in the business decisions, and they will guarantee that the EDPD EAS solution will stand as a dynamic and continuously updated system.

INTRODUCTION

In modern societies the respect for the environment is a central and increasingly important aspect in the activities of socially responsible companies. The concern with the environmental issues makes it inevitable for companies to consider the environmental management and accounting as part of their business strategy.

Energias de Portugal (EDP), being a portuguese utility, develops its activities in technological sectors vital to the economical and social development of the country. The EDP Group’s mission is based on the creation of value for the shareholder, the orientation for the client and the investment in human resources in order to be more competitive and efficient, and to act as a source of expertise and innovation. However, the activities arising from the processes associated with the production, transmission and distribution of electricity, and gas distribution, may be the source of some negative environmental impacts.

For several years EDP has assumed a proactive attitude in its approach to the environmental issues. For this reason, EDP has been committed to ensure the energy services in the best conditions and at the lowest cost, guaranteeing the respect for the environment and, at the same time, meeting the highest standards of ethics.

In March 1994 the EDP Group adopted its Environmental Policy, which established voluntarily the environment as a management goal. Since then, mechanisms for consistent affirmation of the environmental policy principles in the various activities of the Group have been created [1].

Ten years later, in March 2004, the Principles of Sustainable Development of the EDP Group were approved. This set of principles guides the search for balance between economic, environmental and social activities, for the present generation and for generations to come. EDP has been strongly committed to developing its businesses in a sustainable manner [1].
In Portugal, the European Commission Recommendation of May 30 2001, concerning the recognition, measurement and presentation of environmental issues in the annual accounts and annual management reports of the companies, led to the publishing of the Accounting Directive no.29 – Environmental Issues, in April 18 2005 [2][3]. To meet these Directive guidelines, an Environmental Accounting System (EAS) was developed in 2005 for the EDP Group.

In September 2008, EDP became the single portuguese company to integrate the Dow Jones Sustainability Indexes World and STOXX. These indexes distinguish companies that present the best performance concerning sustainability issues [1].

2. THE ENVIRONMENTAL ACCOUNTING SYSTEM (EAS)

For the presentation of corporate results in a faithful and comprehensive manner, companies must include the environmental elements in their accounts. The traditional accounting has proven to have limitations in recording certain transactions related to environmental impacts. In order to introduce the environmental issues in the management and accounting systems, there is a need to adopt an environmental accounting that allows the incorporation, in traditional systems, of all necessary environmental variables.

The implementation of an environmental accounting allows an analysis of the impact of the financial environmental elements in the accounts of the company, contributing therefore to a management based on much more informed decisions. It also allows to comply with the legislation and to prepare environmental reports.

In 2005, an EAS was developed for the EDP Group [4], with the objective of achieving the following main goals:

- to meet the requirements of Portuguese Accounting Directive no. 29 for Environmental Issues, which adopts the European Commission Recommendation of May 30 2001;
- to contribute to the planning, management and control of the environmental related activities of the Group;
- to produce complete, detailed and transparent financial information, making it possible a global analysis of the EDP’s performance, and a clear identification of its environmental costs and income;
- to optimize the presentation of data to meet the obligations of information supply to entities such as the National Institute of Statistics, the European Community, the stakeholders, as well as the clients and the public in general;
- to improve the recording, compiling and supplying of information to give response to specific incentives, such as the Energy Sector Regulator programme for the improvement of the environmental performance of portuguese regulated companies. The eligible measures for this program are the ones that contribute directly to reduce or compensate negative environmental impacts resulting from the activities of a company, or which potentiate positive environmental impacts, and that are of voluntary nature [5].

The application of the EAS in the EDP Group started on January 2006.

3. THE MANAGEMENT OF INVESTMENT PROJECTS IN THE DISTRIBUTION COMPANY

The EDP Distribution company is responsible for the planning, construction and operation of the distribution electrical system in Portugal. The company is strongly committed to execute its technical projects, which range from low-voltage installations to the high-voltage substations, with technical excellence, on time, within the approved budget, and guided by environmental concerns such as the reduction of both environmental and landscape impacts. To achieve these goals, a detailed planning of the activities, resources and costs involved in the projects is essential. It is also necessary to be able to monitor and control all tasks in each project execution.

Since 2002, the company uses the PS (Project System) module of SAP (Systems, Applications and Products in Data Processing) to support the management of its investment projects (see figure 1) [6]. In the PS a project is planned with the work breakdown structure (WBS), a model that organizes project tasks into a hierarchy. The project is split into WBS elements, with defined basic dates and determined costs. The sequence of tasks associated with each WBS element is planned with networks. They represent and describe all the processes that are part of a project, as well as all the tasks necessary for its execution, and are used for planning, analyzing, controlling and monitoring schedules, dates and resources.

The PS tool allows to coordinate and to monitor all phases of a project. These include both technical and commercial aspects, from the planning, budgeting and approval, the purchases of services and materials, the releasing, and the management of resources, to the technical and financial closures of the project.
4. IMPLEMENTATION OF THE EAS IN THE DISTRIBUTION COMPANY

The developed solution

For the implementation of the EAS in the Distribution company it was decided to adapt the SAP-PS module. The proposed solution was based on the recommendations of the EAS of the EDP Group. The aim of the EAS PS implementation was to record the transactions related to the investments of the company that have as their main goal to reduce, prevent or remedy environmental damages arising from the company’s activities [4][7][8].

This process led to the creation of environmental assets in the module, and to the specification and implementation of reports to extract the investment data of environmental nature. The implementation of the EAS PS solution was not a pure technical implementation, but it also changed the business process and culture of the company.

The necessary measures to comply with environmental regulations, or arising from commitments and objectives set voluntarily by the company in order to meet the requirements of customers, increase market share or improve the image of the company, were considered. The measures which the main objective was to avoid, reduce or mitigate negative environmental impacts were also considered.

The implementation of the process led to the creation of projects with a characterization of their environmental relevance at the network level. It was necessary to specify and implement several tables and menus in the PS module, in order to allow the characterization of the environmental data, namely the environmental domain, environmental item, identification criterion, and the environmental data of technical nature. The selection options for the user to define the process for the treatment of the environmental costs were also specified and implemented [8].

The treatment of the environmental costs in the PS module is defined by the user's selection of the environmental relevance: by Operations (selection, operation by operation, of the contributing part to the environment); by Additional Cost (by comparison with previously simulated planning for activities without environmental benefits).

The costs which are relevant to the environment are transferred to a so-called “green” WBS element. In the case of environmental relevance by operations, the percentage in which each operation contributes to the “green” WBS element will be set automatically by the system. If the option is additional cost, a field for planning without environmental relevance is available for the planned values obtained by the simulation of the solution without environmental benefits. The percentage to be transferred to the “green” WBS element is the difference between the planned values of the solution with and without environmental benefits.

The flowchart of the business processes was modified accordingly, with the environmental relevance being identified at the project’s planning phase, and the selection of the environmental relevance originating two new subprocesses. The project structural elements were changed to include environmental costs and “green” WBS elements (see figure 2).

Implementation, testing and training

In order to implement the EAS in EDPD, a working group was created, integrating people from different departments of the company as well as from EDP Holding and EDP Valor [1]. The team started in February 2006. During that year, the design and the specification of the solution for SAP-PS, its development, implementation and testing were achieved.

At the end of 2006 and early 2007, training sessions were organised to promote the use of the new environmental concepts already adapted to the reality of the Distribution company, and to promote the use of EAS PS system [9].
EAS PS came into production in March 2007 within EDPD.

5. DATA MONITORING, RESULTS AND REPORTS

In 2008, a methodology for monitoring the quality of the environmental data in the system was implemented. The aim of this methodology was to control the process of classification of environmental components in the investment projects, from their planning phase to their closure, in order to ensure the reliability of the data and to identify future improvements. This task was coordinated between the Planning Department and the Environment and Sustainability Office of EDPD. Data was extracted and monitored on a monthly basis.

The environmental financial results obtained during 2008 showed that there has been a strong positive evolution in the identification, recording and accounting of environmental investments. Also in 2008, new reports for consolidation of the financial data were made available in the system, namely in the BW (Business Warehouse) module [1]. These reports make it possible to provide an automatic response to the requirements of entities such as the Portuguese Institute of Statistics.

6. FUTURE DEVELOPMENTS

In the near future, the monitoring of the EAS PS will be enhanced, with the goal of ensuring the quality of the environmental data in the system.

The process of recording and extracting data to meet the obligations of environmental information disclosure will be optimised, to include the changes in the Regulator programmes as well as other entities’ requests for environmental information. New challenges, such as the asset and risk management, are to be systematically introduced in the business processes, and they will guarantee that the EAS PS will stand as a dynamic and continuously updated system.

7. CONCLUSION

For several years EDP has been strongly committed to developing its businesses in a sustainable manner, in order to ensure the right balance between its economic, environmental and social activities.

The Environmental Accounting System implemented in the project management module of EDPD has proven to have many qualitative and quantitative benefits, such as promoting an efficient measuring, recording, analyzing and reporting of environmental costs in the investment projects of the company. At the same time, it enables the automatic production of reports with the delivery of financial and technical information associated with these investments.

Today, EDP relies heavily on communication, promoting the supply of detailed and transparent information to the public and to all entities interested in knowing the approach of the EDP Group to the environmental issues.

REFERENCES


