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# Forms Of Disclosure Of Environmental Liabilities Demonstrated By Companies In The Electricity Sector

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***Abstract:***
*The present project aimed to present the forms of disclosure of the environmental liabilities demonstrated in companies in the electricity sector, conceptualizing its origin and presentation model. In view of this, a field research was carried out through a questionnaire with a total of 9 representatives of the electricity sector linked to accounting, located in 9 states of the country. The analysis was carried out with emphasis on the theory based on books and articles on environmental liabilities and relating to the practice exercised in the management of these organizations. Through the study carried out, it is perceived that there is knowledge about environmental liabilities, but the evidence and measurement are not always done correctly and, many times, they end up not assuming the wear and tear caused to the environment.*

***Keyword:*** *Environmental liabilities, Electricity sector, Accounting.*

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## I. Introduction

Environmental liabilities represent all the obligations that companies allocate exclusively to investments for the benefit of the environment. Some sectors characterized as potentially polluting attract more attention from society with regard to aspects related to the environment. One of them is electricity, the focus of this research, and highlighted by Law No. 10.165/2000 as an activity with medium environmental impact.

This research aims to demonstrate the form of disclosure of environmental liabilities presented by organizations in the electricity sector, as well as the concept of environmental liabilities, the moment of their occurrence and measurement.

The National Electric Energy Agency (ANEEL, 2001), the regulatory body of the electricity sector in Brazil, through Resolution No. 444, of October 26, 2001, determines the preparation of the social balance sheet following the model proposed by the Brazilian Institute of Social and Economic Analysis (IBASE). This model presents indicators of environmental and social responsibility, evidenced in order to portray or quantitatively demonstrate the values destined to social and environmental actions. However, the big problem currently encountered is the form of disclosure that each company uses.

According to Paiva (2006), environmental accounting is the activity of identifying data and recording environmental events to process information that subsidizes the user, serving as a parameter in their decision-making.

For Ferreira (2003), environmental accounting is conceptualized as a set of information that adequately reports, in economic terms, the actions of an entity that modify its assets. The author highlights environmental accounting as not being a new type of accounting, but an emphasis given to the information contained in duly evidenced accounting records.

In this context, we can define environmental accounting as the study of the environmental assets (assets, rights and environmental obligations) of companies, since its objective is also to provide its users, both internal and external, with information focused on environmental events that cause changes in the equity situation. Another fact that we can observe is the great difficulty in separating information of an environmental nature from other general information of the company.

For Bergamini Júnior (1999, p.4) the factors that hinder the process of implementing environmental accounting are:

- Lack of clear definition of environmental costs;
- Difficulty in calculating an effective environmental liability;
- Problem in determining the existence of an obligation in the future on account of past costs;
- Lack of clarity in the treatment to be given to "long-lived assets", such as, for example, a nuclear power plant;
- Reduced transparency regarding the damage caused by the company to its own assets, among others.

Despite the difficulties, accounting must disclose in its financial statements all environmental information, assets, liabilities and environmental costs, complying with the general rules of the class, faithfully presenting the company's impact on the environment and its actions to repair them.

In 1993, the National Campaign of Citizenship Action against Hunger, Misery and for Life was launched, idealized by sociologist Herbert de Souza, known as Betinho. Still in the 90s, Betinho presented a proposal for a Social Balance Sheet and, soon after, created the Social Balance Sheet seal, in order to encourage organizations to disclose their results in social participation (KRAEMER, 2009). In 1998, the Ethos Institute was created, a non-profit organization that aims to mobilize, raise awareness and help companies to manage their businesses in a socially responsible way (ETHOS INSTITUTE, 2009).

Social responsibility in companies is relatively recent. For a long time, companies have sought exclusively to maximize profit, ignoring social and environmental aspects. In recent years, with the emergence of new demands and greater pressure for transparency in business, companies have been forced to adopt a more responsible posture in their actions (RESPONSABILIDADE, 2009).

Managers who adopt social responsibility make organizational decisions based not only on economic gain and obedience to the laws, but also on the criterion of social benefit, as well mentioned by Montana and Charnov (2006). In other words, such companies seek the approval of the community for their social involvement and wish to obtain recognition Revista em Agronegócios e Meio Ambiente, v.5, n.1, p. 163-189, jan./apr. 2012 - ISSN 1981-9951 168 Environmental Sustainability Analyzed by a Company in the Public Electricity Sector of its actions.

Also, with reference to corporate social responsibility, the Ethos Institute (2003) lists seven guidelines that guide it, which are: adopt values and work with transparency; value employees and collaborators; always do more for the environment; involve partners and suppliers; protect customers and consumers; promote your community; and commit to the common good.

Ribeiro (2005) defines environmental liabilities as sanctions for the destruction of the environment and business measures to prevent damage caused to it, with the harm possibly compromising the present or future results of companies. Tinoco and Kraemer (2004) report that environmental liabilities are a sacrifice of economic benefit for the preservation, recovery and protection of the environment.

The environmental liability is, then, all the expense, investment or disbursement borne by the company to preserve or reverse the damage caused to nature, imposed by a fine or other penalty.

These damages cause problems for the profitability of organizations, as the burden can be charged at any time by the government, through fines or taxes, by institutions or people who feel harmed, such as customers and the general public, through indemnities (RIBEIRO, 2005).

If we analyze the last four decades, there have been several environmental liabilities that have marked world history. For example, the waste nuclear materials in Chernobyl, Russia, making it a ghost town; in Rio de Janeiro, when 1200 liters of oil leaked into Guanabara Bay, killing much of the region's aquatic fauna and flora. Fifteen years later, the largest environmental liability ever seen in Brazil occurs, leaving several missing, unemployed and several cities damaged due to the rupture of the ore tailings dam in the region of Mariana, Minas Gerais.

According to Law No. 6,938/81 - National Environmental Policy - Article 14 - First Paragraph: "The polluter is obliged, regardless of the existence of fault, to indemnify or repair the damage caused to the environment and to third parties, affected by its activity". The Public Prosecutor's Office of the Union and the States will have the legitimacy to file civil and criminal liability actions for damage caused to the environment.

The events mentioned above show the importance of a company establishing pollution prevention measures, investing to avoid environmental liabilities, fines, lawsuits, damage to image and loss of market.

For Ribeiro (2005), environmental liabilities can originate from any event or transaction that reflects the interaction of the company with the ecological environment, whose sacrifice of economic resources will occur in the future. He cites as an example:

- Acquisition of assets to contain environmental impacts;
- Acquisition of inputs that will be inserted in the operational process so that it does not produce toxic waste;
- Maintenance and operation expenses of the environmental management department, including labor;
- Expenses for the recovery and treatment of contaminated areas (machinery, equipment, labor, inputs in general);
- Payment of fines for environmental infractions;
- Expenses to compensate for irreversible damages, including those related to the attempt to reduce the damage to the company's image in the eyes of the public.

Thus, its origin occurs when there are expenses related to the environment, consisting of expenses from the current or previous period, acquisition of permanent goods, or in the existence of risks of these expenses becoming effective (contingencies).

According to Ferreira (2011) "The objective of measurement is the economic event and this must represent a decision made".

According to Tinoco and Kraemer (2004), in the measurement of liabilities, the direct incremental costs that may occur with the repair should be taken into account; the costs of salaries and social charges of workers linked to the environmental restoration process; control obligations after the repair of environmental damage; and technological progress as public authorities recommend the use of new technologies.

The environmental liability must be recognized in the financial reports if it is likely to occur and if it can be reasonably estimated, and there are several contingency patterns to be used in the characterization of what would be an event. However, if there are difficulties in estimating its value, an estimable value must be provisioned, recording the details of this estimate in explanatory notes.

For Ribeiro (2005) there are at least three types of obligations: legal obligations, arising from instruments of legal force; constructive: when the company, imbued with an awareness of social responsibility, is willing to use all necessary and available means to provide for the well-being of the surrounding community; and equitable: which reflect the obligations that the company is obliged to comply with due to ethical and moral factors, regardless of the law.

For Tinoco (2004), environmental liabilities can be seen as the normal ones of a preventive structure, corrective indemnities and punitive indemnities, stating that the great discussion revolves around the definition of the measurement criteria of these three categories. As a way of identifying and measuring environmental liabilities, due diligence can be used, that is, work aimed at identifying all economic, financial and physical aspects affected or in the future affecting the company's equity situation.

Other instruments used are Environmental Studies, such as the Environmental Impact Study (EIA) and the Environmental Impact Report (EIR). These aim to identify the impacts caused to the environment, measuring the costs inherent to them.

According to Ribeiro (2005), in view of the repercussion of some major environmental disasters that occurred in our country, national agencies also began to require the safe-conduct of a due diligence report on environmental risks related to the companies' activities.

Therefore, it is a work done by environmental specialists in order to identify the economic, financial and physical aspects, among which are the environmental variables that affect or may affect the equity situation of a company.

Inspections are carried out by reviewing:
- Adjacent properties to assess potential off-site contamination of sources;
- Environmental tools and property reports;
- Regulatory environmental tools and databases.

Even though it represents an important instrument of dissemination, research carried out by Paiva (2006) found that information regarding the environment is the least evidenced in the Social Balance Sheet, noting the small amount of information found to infer solid conclusions about how companies are investing in terms of conservation, recovery and improvement of the environment.

Although in Brazil there is no obligation to publish the environmental effects caused by a company, Ribeiro (2005) suggests two ways of evidencing environmental accounts: the first, through the traditional structure of the Balance Sheet and Income Statement, including environmental accounts; and the second, through an Environmental Demonstration, segregating economic and financial data related to the environmental area, aiming to reflect the efforts to mitigate its impacts on the ecological heritage.

Tinoco (2004) recommends the inclusion of environmental information in the Management Report, as well as in the Explanatory Notes, describing the rules adopted to account for environmental protection measures.

In this context, we observe that many companies seek to hide their environmental liabilities. However, its disclosure is of great value, for accounting to be able to provide true information to its users, serving as an instrument in the decision-making process and, especially, in the processes of acquisition, merger, incorporation, sale and privatization of companies, considering that future managers will bear all the rights and responsibilities of the new company, including environmental liabilities, which can represent large amounts and compromise the company's continuity.

Therefore, the objective of this research was to verify the situation of the statements presented by the companies, and showed the importance of allocating values to benefit the environment that is used.

## II. Material And Methods

The research used in this article is descriptive and the technical procedure occurred from data collection in bibliographic information restricted to books, articles and the internet, and developed from material already published, consisting mainly of books and scientific articles.

In Gil's (2008) conception, descriptive research has as its main objective to describe the characteristics or establish the relationships between the facts. It was also field study research, in which it seeks to deepen the specific reality of the electricity sector, basically by questionnaire applied to managers of the sector.

The present research had as its object of study the form of disclosure of the environmental liability, demonstrated by nine companies in the electricity sector distributed in the country, also observing its concept, its origin and its legislation before the electricity sector.

As for the data collected, they were classified as primary and secondary. In the case of the primary schools, because it was field research, where it was carried out with accounting managers located in the electricity sector, meeting the specific needs of the research.

The secondary ones were established because all the theoretical part had been researched in books, articles and other sources already published in the media on the subject under study.

The data were collected during the period from June to September 2024. All the theoretical part regarding environmental liabilities was researched through books in the Unitins library, internet portals throughout the period informed above. In June, the practical part was carried out with managers through a questionnaire to collect information on the relationship of professionals in the area with the understanding and form of demonstration of environmental liabilities.

The data collected from the questionnaire applied were analyzed, thus being able to identify the positive points and "gaps" in the management and later were confronted with the theory addressed, thus being able to demonstrate the final analyses in graphs where they express the reality of the electricity sector and environmental accounting.

The limitations were restricted by the lack of time of some managers to answer the questionnaire due to the demand of daily work.

## III. Result And Discussion

In the third question, it was addressed whether the company knows when it generates an environmental liability, in the response of the participants there have already been variations in response where 67% claim to be aware of the generation of the liability, 22% are not sure and 11% say they do not know. Graphically, the data reported above can be seen in Figure 1.

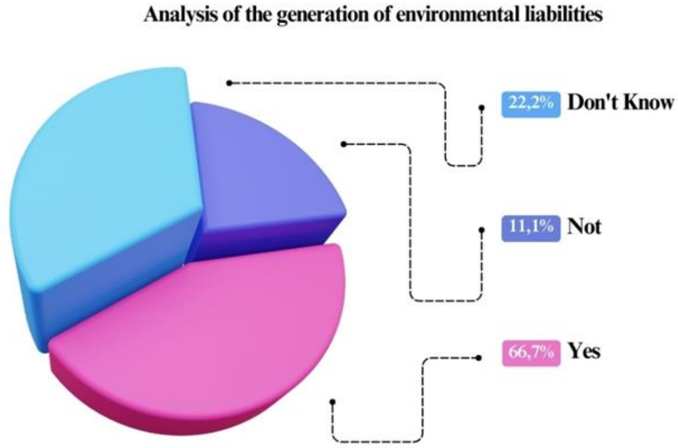
I believe that this issue generated doubts in the participants due to the real lack of ability to identify the exact moment of the generation of the liability, even knowing that the electricity sector frequently causes damage to the environment.

Continuing, the fourth question, questions the knowledge of the participants in relation to the disclosure of environmental liabilities, in totality they stated that the disclosure should be made in the social balance sheet, but four of the questioned highlighted the use of explanatory notes.

According to the National Electric Energy Agency, a new model was created, called the Annual Report of Socio-Environmental and Economic and Financial Responsibility, which is subject to a process of continuous improvement, as a result of the sector's search for more ethical, transparent and sustainable processes.

The fifth question questioned the mandatory measurement of environmental liabilities, where 67% say it is mandatory and 33% did not know how to answer.

**Figure 01. Analysis of the results of the research.**



It is mandatory for the grantees of the electricity sector to prepare the Socio-Environmental and Economic and Financial Responsibility Report, as of the 2013 fiscal year. It is noted that the model presented is a minimum standard to be prepared, and it is at the discretion of the company to prepare its reports based on more comprehensive standards.

The sixth question addressed whether the company aims at the recovery of the areas affected by the generation of electricity, all of them affirm the performance of recovery works, where four participants mentioned the following actions:

-  Recovery of degraded areas
-  Preservation of Federal Heritage Areas
-  Waste disposal
-  Environmental education
-  Energy efficiency
-  Environmentally friendly research and development
-  Culture, sport and tourism

Continuing with the questionnaire, the seventh question refers to the history of accidents or environmental incidents that occurred in the company, in this regard, all participants stated that the entity presents or presented, the following facts were made available by one of the companies:

-  Oil Leaks in the Ground
-  Vehicle collision with poles
-  Electrical cable break claim

In the eighth question, the existence of proposals for improvements in relation to environmental responsibility was addressed, 100% stated that the company works with these parameters, it was commented that the managers together with the presidency and board of directors of the company, raise awareness among employees with regard to the preservation of the environment, implementing the culture of environmental responsibility.

The ninth question was carried out openly, where participants had to answer how the measurement of the environmental asset and its impacts is carried out. The answer of all were compatible, where they stated that the company invests in equipment, aiming at the elimination or reduction of polluting agents, with a useful life of more than one year, they also allocate amounts for research and development of technologies in favor of the environment and carry out local infrastructure works, seek the development and enhancement of the region and that, it starts to eliminate environmental liabilities.

The last question addressed, also openly, asks how the environmental liability is developed in the entity, most answered that it depends on the data caused, but all covered that the containment of the liability is the means used by the entity.

For example, when there is an incident with an oil leak on the ground, the entity removes the contaminated area, takes it to incineration and replaces the affected site with new soil.

## IV. Conclusion

Environmental liabilities represent all the obligations that companies allocate exclusively to investments for the benefit of the environment. Currently, environmental accounting is progressively integrated with accounting management and control. With globalization, society starts to demand more from companies, which can often directly affect their development and permanence in the competitive market.

Based on the analysis of the theoretical research carried out, a questionnaire was created with ten questions, eight objective and two discursive, for the managers, it can be concluded that the objective of the article was achieved, where it presented the form of disclosure and measurement of the environmental liability.

The result of the questionnaire demonstrates that the managers have an understanding of the subject addressed and know the importance that environmental accounting has within the entity, but the main problems that could be seen are that some employees did not know about the mandatory measurement of environmental liabilities, which makes it clear that most of the time due to the busy daily life, there is no time left to acquire knowledge.

However, it does not justify the attitude, in the globalized world in which we live, it is of paramount importance for the employee to be looking for innovations, adding knowledge, since not only the internal superiors charge, but also the government and especially society, it is necessary to work together to expand this new branch of accounting more and more, making companies more responsible in relation to the environment.

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