

The Research on the Problems and Countermeasures of Environmental Accounting Information Disclosure in Chinese Coal Industry

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ABSTRACT

The '14th Five-Year Plan' specifically mentioned the promotion of green development and the harmonious coexistence of human and nature. This shows that with our country is pursuing economic development, we are paying more and more attention to environmental issues. In the process of profit-seeking, enterprises will inevitably have an impact on the environment, especially some enterprises with heavy pollution and high energy consumption. In this context, it is necessary for companies to collect and sort environmental accounting information and provide it to prospective users. The coal industry is one of the 16 heavily polluting industries, so the environmental accounting information disclosure of the coal industry has a certain representativeness, which has reference significance for the construction of China's environmental accounting information disclosure system.

Keywords: *Environmental Accounting, Information Disclosure, Coal Industry*

1. INTRODUCTION

1.1. Research Background

In 2012, the Eighteenth National Congress of the Communist Party of China incorporated the construction of ecological civilization into the five-in-one layout of socialism with Chinese characteristics, and made a strategic decision to vigorously promote the construction of ecological civilization; Our country officially promulgated the "Environmental Protection Law" in 2015; The "14th Five-Year Plan" specifically mentions green development and promotes the harmonious coexistence of human and nature. In recent years, with the decline of air quality, global warming and ozone holes, environmental issues have attracted more attention from the society. With enterprises developing, they will inevitably have an impact on the environment, especially heavy-polluting companies dominated by steel, chemical, and coal. Therefore, disclosing environmental information is an inevitable requirement for companies to assume social responsibility. This article takes the coal industry as the research object, reveals the current status of environmental accounting information disclosure from the content and method of it, evaluates its disclosure

quality and finds out problems, proposes to build an environmental accounting information disclosure quality evaluation model and other constructive opinions.

1.2. Research Significance

1.2.1. Theoretical Significance

The needs of the country's macro-control. The government has added environmental indicators to the old national economic accounting system. It is necessary to collect environmental information from various enterprises and organizations to understand the environmental situation of the entire society, and the disclosure of environmental information is conducive to improving the government's collection efficiency.

The need for national micro-control. With the change of economic growth model and the adjustment of industrial structure, new requirements have been put forward for the environmental information of enterprises. With our country's economic development model transforming to high-quality growth, its industrial structure has changed, and the survival, development, and transformation of enterprises with heavy pollution and high energy consumption have become the top

priority. Disclosing environmental accounting information is also the first step in transformation and development.

1.2.2. Practical Significance

Environmental accounting information disclosure is the need for internal control and development of enterprises. Companies attach importance to environmental accounting information disclosure, which is conducive to timely understanding the impact of their business activities on the environment and improving the internal control of the company as well as increasing its economic and environmental benefits. Stakeholders including Investors, creditors and the government will also consider environmental information when making investments or making decisions to determine whether the company has the ability to develop sustainably.

1.3. Literature Review

1.3.1. Theoretical Basis of Environmental Accounting Information Disclosure

In 1870, Sun Ensu (2020) first proposed the concept of environmental accounting and that companies should incorporate the cost of environmental pollution into the cost accounting system in the "Social Cost Conversion Study of Pollution Control" and "Pollution Accounting Issues". This kicks off the prelude to environmental accounting research. In 1992, Ge Jiashu and Li Ruoshan introduced the concept of green accounting to our country for the first time and proposed that green accounting theory will become a new trend to improve traditional accounting theories in "The New Trend of Western Accounting Theory in the 1990s: Green Accounting Theory".

1.3.2. Current Status of Environmental Accounting Information Disclosure

Yang Jintao (2020) proposed that listed companies do not pay attention to environmental accounting information disclosure, and the overall level of information disclosure is still in its infancy. The number of environmental responsibility reports reviewed by third parties is small. Zhao Xuanmin and Yang Menglin (2016) concluded that the higher the degree of the equity concentration, the higher the level of environmental accounting information disclosure. But in terms of the steel industry, Wang Sisi and Lu Xinwen (2017) concluded that the higher the degree of the equity concentration, the lower the level of environmental accounting information disclosure. Qin Zhibo (2020) proposed that environmental accounting information disclosure is mainly divided into government-led, industry self-discipline and co-led.

1.3.3. Problems and Causes of Environmental Accounting Information Disclosure in the Coal Industry

Yang Jintao (2020) believes that companies have insufficient awareness of disclosure, that the quality of disclosure content is not high, and that there is a lack of an effective review system. Zhao Shuang, Yang Tingting, Li Zhixue (2020) believe that most listed companies with heavy pollution and high energy consumption tend to disclose environmental accounting information that is beneficial to enterprises. Huang Mingmin (2020) believes most companies' information disclosure methods are backward and single, with poor initiative, and the disclosure content has great autonomy and randomness.

Sun Ensu (2020) believes that companies should implement the concept of green development, set clear environmental goals, reasonably distribute departmental responsibilities, and improve corporate environmental information disclosure. Jia Jianguo (2020) proposed an accounting information disclosure system that combines voluntary and mandatory disclosure. Zhao Shuang, Yang Tingting, Li Zhixue (2020) proposed to build a cooperative supervision mechanism for stakeholders, standardize the unification of the form and substance of environmental accounting information disclosure, and optimize the corporate governance structure and decision-making mechanism.

2. ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE CONTENT AND METHODS

2.1. Environmental Accounting Information Disclosure Content

In a broad sense, environmental accounting information disclosure refers to companies regularly publishing environmental expenditures and income to stakeholders through information media. In a narrow sense, it means that enterprises use traditional accounting methods to measure environmental assets, liabilities, income, expenses, and profits in production and operation activities, evaluate the impact of environmental activities on business results, and provide references for stakeholders. The content of environmental accounting information disclosure consists of two parts: financial information and non-financial information. Financial information is expressed in currency, and financial statements are used to reflect the environmental activities of the enterprise, such as pollution discharge fees, greening fees, and environmental restoration fees. Non-financial information refers to information that is documented about the environmental activities of an enterprise, such as the enterprise's energy conservation and

environmental protection policies, goals, and results, etc. In the short term, disclosure of environmental accounting information aims to achieve economic benefits while taking into account environmental benefits and promote sustainable development. In the long term, it is an inevitable requirement for promoting the construction of ecological culture and promoting the harmonious coexistence of human and nature.

2.2. Disclosure Methods of Environmental Accounting Information

There are four main methods of environmental accounting disclosure:

First: Social responsibility report: Companies use non-financial information to disclose its environmental activities, related policies, and environmental protection results to information demanders.

Second: Financial reports: Companies use financial information to disclose environmental assets, liabilities, expenditures, and profits to information demanders, while also explaining unexpected environmental incidents and emergency plans.

Third: Temporary environmental reports: Companies punished due to environmental emergencies or business activities affecting the environment, are required to timely disclose temporary environmental reports to the public.

Fourth: Shareholders' meeting report: It is issued simultaneously at the shareholders' meeting and corporate financial statements, aiming to show the company's environmental protection concepts, policies, performance and other so forth to the public.

3. ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE OF COAL INDUSTRY

3.1. Present Situation Of Environmental Accounting Information Disclosure In Coal Industry

In this paper, we use the research methods of empirical analysis and normative analysis, and combine the data of environmental accounting information disclosure of 37 listed companies in the coal industry to understand the current situation of environmental accounting information disclosure in the coal industry. It can be seen that qualitative disclosure has always dominated, accounting for 60.96%, while quantitative disclosure only accounts for 39.04%. Moreover, the total quantitative disclosures in 2018 and 2019 accounted for 39.5%, which was only 2% higher than the 37.5% in 2016 and 2017. At the same time, there are very few disclosures in the form of currency. From 2016 to 2019, the companies that disclosed environmental accounting information in the form of currency accounted for only 13.71%, 11.56%, 14.67%, and 12.39%, respectively.

3.2. Problems of Environmental Accounting Information Disclosure in Coal Industry

3.2.1. Lack of Uniformity in Disclosure Content and Disclosure Methods

Most sample enterprises' environmental accounting information disclosure data are beneficial to enterprises, such as improving environmental monitoring mechanism, energy conservation and emission reduction, and transformation of environmental protection equipment. This actually only discloses environmental assets and environmental costs, and there is almost no disclosure of environmental-related liabilities, owners' rights, income and profits. Thus, environmental accounting information disclosure of listed companies in the coal industry is selective, which violates the principle of accounting integrity.

Table 1. Statistics of Environmental Accounting Information Disclosure in Coal Industry (In the table, A represents qualitative and B represents quantitative)

Financial Report										Social Responsibility Report										Chairmen's Statements / Interim Report										Subtotal
2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
8	4	12	6	12	8	12	12	13	12	6	6	5	4	6	6	6	6	6	6	13	4	6	6	12	4	10	2	12	3	228

Data sources: CFI.CN, WWW.0033.COM, <http://www.cninfo.com.cn/>

The current accounting system has blind spots in the environmental accounting confirmation and measurement. There are only secondary subjects of "pollution discharge fee" and "greening fee" in the related management fees, and most companies add secondary detailed subjects such as environmental assets, environmental liabilities, and environmental costs. However, the additional subjects are not uniform and the disclosure method is also different, which makes the environmental accounting information disclosure of listed companies in the same industry lack of comparability.

3.2.2. Disclosure Content Is Not Of High Quality

The disclosure system is imperfect. Enterprise environmental accounting information is scattered in various sections, and the information has a high repetition rate. Most companies make disclosures through non-independent forms such as financial reports and social responsibility reports. As a result, companies lack complete environmental accounting information modules and independent environmental financial reports.

Disclosure lacks data support. For example, the 2020 semi-annual report of Zhengzhou Coal and Electric Co., Ltd. uses large paragraphs of text to describe the pollutant discharge unit, pollutants discharged, and total discharge. Only the total pollutant emissions and COD concentration have specific data. However, the construction and operation of pollution prevention facilities only illustrate national policies, which lack data.

The disclosure content is duplicated. The format of the chapters of environmental accounting information disclosure in the corporate annual report from 2017 to 2020 remains unchanged, and the repetition rate of non-financial information is very high, and even the content of the previous year is used.

3.2.3. Lack of Effective Supervision Mechanism

At present, environmental accounting information disclosure is mainly about the sorting, publishing and auditing of environmental information by enterprises, and there is no mandatory third-party audit approval. This has led many enterprises to reduce external audits in order to save costs, making it more difficult to improve the quality of corporate environmental information disclosure.

3.2.4. Corporate Social Responsibility In The Disclosure Is Not High

Most managers of listed companies ignore the significance of environmental accounting information disclosure, and only care about the business efficiency of the company rather than the environmental impact, and fear that negative environmental accounting information will affect the company's stock price and reduce goodwill. In addition, environmental information disclosure will increase the operating costs of enterprises. Therefore, the environmental information disclosure of listed companies is relatively perfunctory, and the sense of social responsibility of listed companies is not high.

4. COUNTERMEASURES OF ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN COAL INDUSTRY

4.1. Perfecting Environmental Accounting Information Disclosure System And Improving Disclosure Quality

Establish an environmental accounting confirmation and measurement system, and clarify the structure and content of environmental accounting standards, environmental balance sheets, and environmental profit statements. At the same time, it is necessary to strengthen the administrative management and public opinion supervision of heavy pollution and high energy consumption enterprises, and punish enterprises that do not meet the standards of environmental accounting information disclosure.

More quantitative disclosure of environmental information is divided into five categories: environmental assets, environmental liabilities, environmental income, environmental expenses, and environmental gains and losses. Set up secondary detailed subjects such as cumulative depreciation of environmental protection equipment, compensation and fines, pollution discharge fees, greening fees, resource recovery, government environmental protection subsidies and special funds, which are disclosed in a currency-based manner.

Update disclosure content. Enterprises should change the chapters and formats of disclosure and reduce the content disclosed in the previous year.

Table 2. Environmental Accounting Information Disclosure Quality Evaluation Index System

Goal layer	First level indicators	Second-tier indicators
Evaluation Index System of Environmental Accounting Information Disclosure Quality of Listed Companies in China's Coal Industry	Financial dimension	Investment in environmental protection equipment
		R & D expenditure on environmental technologies
		Investment in energy conservation and environmental protection projects
		Liabilities involving government subsidies
		Pollution control expenditure
	Customer (Government and Public) dimension	“three simultaneous” system
		Number of environmental accidents
		Honors for environmental protection
		Enterprises participate in environmental protection public welfare undertakings
	Internal environmental management dimension	Whether industrial waste is disposed of according to law

4.2. Establish A Quality Evaluation Model For Environmental Accounting Information Disclosure

Financial dimensions, customer (government affairs and public) dimensions, internal environmental management dimensions and development potential dimensions constitute the standard layer, which is divided into 18 indicators (as shown in the figure). Determine the weight of evaluation indicators, and establish a list of environmental accounting information disclosure indicator systems for listed companies in various industries. Constructing an environmental accounting information disclosure quality evaluation model can more intuitively reflect the weight of the company's environmental indicators in accounting information, and can compare environmental accounting indicators of listed companies in the same industry, so that information users can more intuitively understand the company's environmental accounting information.

4.3. Increase Third-party Supervision And Strengthen Corporate Internal Control

Establish auditing standards and procedures for environmental accounting information. Auditing agencies implement audit procedures for the disclosure of corporate environmental accounting information. The intervention of a third-party supervision and management agency can prevent companies from closing environmental accounting information. In addition to external control, corporate environmental

accounting information disclosure has been incorporated into the internal control system to make environmental information disclosure routine, and strengthen the supervision of environmental information disclosure.

4.4. Strengthen Environmental Protection Publicity And Improve Corporate Social Responsibility

Enhancing the media attention of enterprises in the release of environmental accounting information. The government should strengthen the publicity and popularization of environmental protection policies and give full play to the role of public supervision. At the same time, it will give play to the guiding role of ecological civilization in market development, expand the team of green economy investors, and force listed companies to improve the quality of their environmental accounting information disclosure and enhance the reliability of information.

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