

# Study on the Disclosure of Environmental Accounting Information of New Steel Corporation

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## Abstract

**With rapid economic development, the environment on which human beings depend is being destroyed at an unprecedented rate, and environmental problems have become a global issue. It is recognized that the production and operation behavior of enterprises is a major factor leading to environmental pollution, especially in the iron and steel industry. To improve the social responsibility of the steel industry for environmental protection, strengthening the regulation of environmental accounting disclosure in the steel industry is an important tool. This paper analyzes the many problems and causes of environmental accounting information disclosure of Sinosteel Corporation and proposes measures to solve the problems related to environmental accounting information disclosure from enterprises, governments, and society.**

## Keywords

**XISCO; Environmental Accounting; Information Disclosure.**

## 1. Introduction

The environment is fundamental to human survival and development, and with the rapid development of society and the economy, people's quality of life has been greatly improved. However, environmental pollution and environmental problems also arise, which not only bring great harm to people's life and health but also will have a certain impact on the sustainable and stable development of the economy. With the increasing seriousness of environmental problems, the emergence of environmental accounting makes the company gradually take the green road. The pollution caused by the daily business activities of the enterprise cannot be reflected in detail by accounting means, but the enterprise should disclose it in the annual report and other information. In the process of development, enterprises should correctly deal with economic and social interests and actively undertake social responsibility to ensure the healthy development of enterprises.

## 2. Concepts and Theories Related to the Disclosure of Environmental Accounting Information

### 2.1. Concepts Related to Environmental Accounting Information Disclosure

Environmental accounting information disclosure refers to the communication of environmental information by enterprises to the public through annual reports, social responsibility reports, environmental reports, etc [1] There are two purposes for the disclosure of environmental information. One is for enterprises to meet government regulations regarding environmental accounting information disclosure. In nature the public's right to know about environmental information, the government has formulated corresponding laws and safeguards. The other is for enterprises to improve the content of accounting information.

Enterprises are obliged to disclose to information users the environmental accounting information of the enterprise in the previous year using annual reports. [2]

## **2.2. Theoretical Basis of Environmental Accounting Disclosure**

### **2.2.1. Social Responsibility Theory**

Social responsibility of enterprises refers to the responsibility for society and the environment while creating profits for enterprises and bearing legal responsibilities for shareholders. In today's economic society, the development of enterprises should not only pursue their maximum interests but also take into account the interests of society and achieve the harmonious development of society.[3] If enterprises do not understand and develop blindly, they will certainly cause serious environmental pollution problems, which are not conducive to sustainable business development and also affects the overall interests of society. Enterprises should list environmental management costs and benefits in major projects, disclose environmental accounting information objectively, and fully coordinate the relationship between themselves, society, and the environment.

### **2.2.2. Sustainable Development Theory**

The key to sustainable development is to ensure stable economic development and to be able to effectively protect the ecological environment on which human beings depend. Under no circumstances can we sacrifice and give up the environment for the sake of economic development. The iron and steel industry is one of the pillars of the national economy, but it is an industry that consumes a lot, both in terms of raw materials and energy requirements. Therefore, as a heavily polluting iron and steel industry, we must raise awareness of environmental protection, ensure the correctness and timeliness of the disclosure of environmental accounting information of the enterprise, effectively fulfill the responsibility of environmental protection, and actively accept the supervision of all parties.

## **3. Introduction of Sinosteel Corporation and the Current Status of Environmental Accounting Information Disclosure**

### **3.1. Introduction of XISCO**

Sinosteel Corporation (referred to as XISCO), is with total assets of 51 billion yuan and 23,100 employees. In 2019, the company produced 9.42 million tons of steel and achieved revenue of 65 billion yuan, ranking 14th among 89 large and medium-sized steel enterprises in China in terms of economic efficiency and 297th among the top 500 Chinese enterprises in 2019. After more than 60 years of development, the company has become a manufacturing enterprise integrating ore mining, steel smelting, steel rolling, and extended processing, with a total of more than 800 varieties and 3,000 specifications in the product series of general steel and special steel. The company has strong scientific and technological innovation ability and has won the second prize in national scientific and technological progress four times. With strong product development capability, the company has successfully developed dozens of high-end products such as steel for marine engineering, which are widely used in petroleum and petrochemical, large bridges, military ships, nuclear power plants, and other key national projects and exported to more than 20 countries and regions.

### **3.2. Current Situation of Environmental Accounting Information Disclosure of XISCO**

#### **3.2.1. Environmental Accounting Information Disclosure Mode of XISCO**

By reviewing the relevant information of XISCO from 2018-2021, we found that XISCO, like most companies in the industry, chose to disclose environmental accounting through annual reports and social responsibility reports. Its disclosure route and pathway are relatively single

and are not disclosed in the form of an environmental report. The following table shows the summary of XISCO for four years from 2018-2021 in terms of disclosure mode and disclosure percentage, respectively.

**Table 1.** Environmental Accounting Disclosure Model of XISCO

Items	2018	2019	2020	2021
Annual Report	√	√	√	√
Social Responsibility Report	√	√	√	√
Environmental Report	×	×	×	×

Source: XISCO financial report

**Table 2.** Percentage of environmental accounting information disclosed in the annual report of XISCO

	2018	2019	2020	2021
Announcement Time	2019.4.23	2020.4.20	2021.4.20	2022.4.20
Disclosure Length	195	202	189	190
Environmental share	2.56%	2.48%	3.17%	3.19%

Source: XISCO financial report

**Table 3.** Percentage of environmental accounting information disclosure in the social responsibility report of XISCO

	2018	2019	2020	2021
Announcement Time	2019.4.23	2020.4.20	2021.4.20	2022.4.20
Disclosure Length	21	20	11	10
Environmental share	8.57%	11.9%	7.14%	7.10%

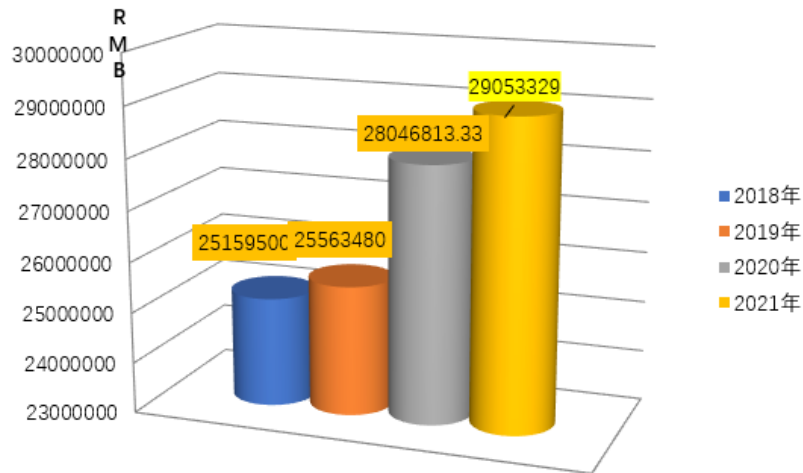
Source: XISCO financial report

As can be seen from the above table, XISCO mainly discloses environmental management in the form of social responsibility report. The length of disclosure in the social responsibility report generally shows a decreasing trend, and only in 2019, did the disclosure of environmental accounting information account for more than 10% in the past three years. In the annual reports of companies, the disclosure of environmental accounting information is generally on the rise, but the proportion is still low. Companies should pay attention to the disclosure of environmental accounting information, not limited to a single disclosure method, and should disclose as much detail as possible to improve the quality of environmental accounting information disclosure.

### 3.2.2. Content of Environmental Accounting Disclosure of XISCO

From the company's annual report, it can be understood that the income from government grants is included in deferred income. It can be seen from the annual report of XISCO. that the

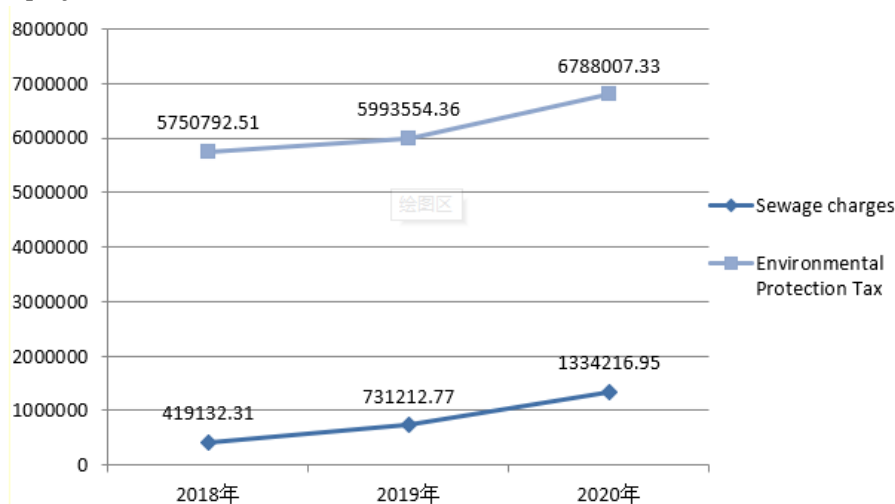
growth of deferred revenue is relatively stable, with the largest growth reaching \$28 million in 2020. XISCO has a more detailed disclosure by the government in its environmental gains for 2018-2020. This also reflects the high importance the state attaches to the development of NISCO, and the need for NISCO to pay more attention to the quality of environmental accounting disclosure.



**Figure 1.** XISCO 2018-2020 Environmental Revenue

Source: XISCO financial report

Environmental costs are the funds invested by enterprises to protect the environment and improve its quality. [4] The formation of environmental costs can be analyzed in terms of the root cause and the impact on the environment. The first is the source. If an enterprise wants to maintain a sustainable development status, it must control environmental pollution at the source and increase the cost of environmental protection. The second is the impact on the environment. If a company has already caused damage to the environment, it should be remedied promptly.



**Figure 2.** XISCO Environmental Expenditures 2018-2020

Source: XISCO financial report

From figure 2, it can be seen that the overall trend of the environmental protection tax of XISCO is increasing, and the overall trend of emission fee is also increasing, which indicates that the pollutant emission of XISCO is continuously increasing, and the enterprises should turn waste into treasure, reduce the emission of pollutants, and contribute their part to build a harmonious and coexisting society. Through the annual report and social responsibility report of XISCO, we

can see that the starting point of enterprises' disclosure is to establish their positive image, so they will only selectively publish the information that is beneficial to them, but will not report the serious pollution and damage to the environment that they produce in the production process, and the information disclosure in this area needs to be further strengthened.

## **4. Problems and Causes of Environmental Accounting Disclosure of XISCO**

### **4.1. Problems of Environmental Accounting Information Disclosure of XISCO**

#### **4.1.1. Lack of Completeness of Environmental Accounting Information Disclosure Content**

In the environmental accounting information disclosure system, environmental financial information is the most important one, but during the period from 2018 to 2020, XISCO did not publicly disclose the environmental behaviors and environmental assets in the development of the company, as well as did not make any additions in the notes. This will prevent users from properly understanding the efforts made by the company in terms of environmental protection. In the case of information on the company's environmental management, the lack of systematic disclosure of environmental management is explained in brief terms and not analyzed in detail and concrete terms. In terms of information on environmental enforcement, companies do not disclose enough information on environmental incidents, major lawsuits, and environmental regulations, and do not disclose the relevant content in the company's reports. In its annual report, XISCO only disclosed its environmental information and did not compare it with the company's environmental accounting data in previous years or with the industry as a whole. The environmental accounting information of enterprises cannot be compared horizontally and vertically and cannot meet the requirement of comparability.

#### **4.1.2. Lack of Reliability of Environmental Accounting Information Disclosure Content**

XISCO is ambiguous in terms of environmental responsibility and environmental management, therefore, its credibility decreases, which in turn affects the quality of the overall environmental accounting information. China's current laws and regulations do not specify what kind of accounting information disclosure a company should adopt and only encourage it to make its declaration, without formulating corresponding environmental auditing standards to guide the auditing work, resulting in the lack of corresponding auditing work experience for auditors. In the absence of independent audits, companies tend to establish a good social image in the minds of users to gain more government cooperation and attract more investors but often disclose little or nothing at all about certain negative impacts that may damage the company's image. Ltd.'s environmental accounting information disclosure is not reliable enough, which makes external information users not fully understand the company's environmental protection status and thus affects their decision-making.

#### **4.1.3. Lack of Independence in the Way of Environmental Accounting Information Disclosure**

By analyzing the disclosure methods of XISCO from 2018 to 2020, we can find that there is no unified standard for the disclosure methods of XISCO, no special channel for disclosure, and the year-end choice of disclosure in the social responsibility report and annual report, no independent report is used for the comprehensive disclosure of environmental accounting information, relying on the two methods of the annual report and social responsibility report, which makes the environmental The distribution of environmental accounting information is fragmented and not comprehensive enough for information users to make an accurate and objective assessment of the company's environmental performance. Therefore, XISCO should improve the disclosure system of environmental accounting information, establish independent environmental reports and improve the quality of disclosure.

## 4.2. Causes of Environmental Accounting Information Disclosure of XISCO

### 4.2.1. Enterprise Level

Insufficient awareness of environmental accounting information disclosure. The company's awareness of environmental accounting information disclosure is poor, which is mainly manifested by the company's culture. Corporate culture, as the source of business and development of enterprises, has the function of guidance and direction. Companies do not establish a good concept of environmental protection, thus affecting the enthusiasm of environmental accounting information disclosure, which is mainly manifested in the fact that companies do not make independent disclosure on most of the environmental management information disclosure, but put it in different places, thus seriously affecting the integrity of information and reducing the quality of information.

Lack of professional talents. Environmental accounting is a highly qualified discipline in the fields of environmental economics, accounting, and environmental biology. Due to its high intensity, the work requirements of environmental accounting are also high and the requirements for professional knowledge are also high. [5] However, due to the relatively late development of environmental accounting, the knowledge structure of most accounting practitioners is not perfect and comprehensive enough, and the quality of the financial personnel of XISCO is not high, so the quality of environmental information disclosure of XISCO is not high either. In the current situation that the theory of environmental accounting is not mature and the practical operation is not widely used yet, the enterprises must adjust the staff at the right time, strengthen the professional quality of the staff and form an excellent talent team to better carry out environmental accounting, analyze environmental accounting data more accurately and improve the level of environmental accounting information disclosure.

### 4.2.2. Government Level

Laws and regulations are not sound. The iron and steel industry is a highly polluting industry, which produces a large number of harmful gases and solid wastes every year, causing serious pollution to the environment. Laws and regulations have a certain restraining and regulating effect on the business activities of enterprises, and only under the compulsory requirements of laws can the production activities of enterprises be carried out in an orderly manner. With the increasing importance of environmental protection, relevant government departments have introduced many laws and regulations on environmental accounting information disclosure one after another, but there are many problems in the process of implementation. In our laws and regulations, there is no explicit provision to punish companies that fail to disclose accounting information, resulting in problems such as avoidance and improper use in the disclosure process, and in some years, even detailed information on environmental accounting information disclosure cannot be found. [6]

Inadequate government regulation. To establish a good social image, companies cannot disclose negative information that is detrimental to their interests, do not handle it appropriately, and do not monitor it thoroughly, which leads to negativity and laziness of companies, thus leading to the problem of disclosing environmental accounting information. Environmental management requires the joint efforts of multiple departments, but among many departments, there is often some lack of clarity and shifting of responsibilities, and some departments even unify the scope and content of regulations, resulting in the inability to monitor them effectively.

### 4.2.3. Social Level

The general awareness of the general public of environmental protection is low. China's current society in general has a low awareness of environmental protection, and the company's environmental accounting information disclosure is not sufficient. "Pollution first and then cure" has become a social phenomenon, and the public does not recognize that the environment

is a public good, nor does it recognize that whether or not an enterprise publicly discloses environmental accounting information is related to itself, so it is easy to cause enterprises to ignore the potentially destructive effects of production and operation activities and negatively disclose corporate environmental accounting information. [7] In addition, when environmental accounting courses are offered in China's universities, there is a lack of understanding of environmental accounting and less research on its teaching content. In spare time, there are few, if any, activities such as lectures and competitions on environmental accounting organized by schools. Therefore, the role of universities in promoting environmental accounting in theoretical research of environmental accounting is not fully developed. At the same time, because the connection between major universities and enterprises is not close enough, the current demand for environmental accounting talents in China's major universities is not comprehensive enough.

There is a lack of professional environmental accounting auditing institutions. Since accounting standards do not provide for their audit, the focus of accounting firms is often concentrated on the audit of accounting reports and neglects the disclosure of environmental accounting. The lack of auditing and supervision of environmental accounting information has led to the low credibility of environmental accounting information disclosure. Environmental auditing in China is still in its infancy, and not enough attention is paid to environmental auditing work. The development of environmental accounting in China is also slow compared to foreign countries, and no special environmental auditing standards have been developed. Therefore, the overall information disclosure of steel enterprises in China is not guaranteed.

## **5. Suggestions for Improving the Disclosure of Environmental Accounting Information of XISCO**

### **5.1. Enterprise Level**

#### **5.1.1. Improve the Awareness of Disclosure and Strengthen the Responsibility for Environmental Protection**

As the subject of environmental accounting information disclosure, whether the managers of enterprises care about and support the environment directly affects the company's environmental accounting information disclosure and environmental management. Business operators must adhere to the idea of sustainable development, invest in society, environment, and economy, give full play to the reuse value of resources, reduce environmental pollution, and coordinate the interests of society, environment, and economy. The company management must realize that there is a positive correlation between the company's financial status and its external image; the higher the quality of disclosure, the better the image and reputation of the company will be, while the company's internal and external investors will have more confidence in the company, thus enhancing its financing ability. Second, provide environmental knowledge to the company's employees. Through videos and presentations, employees can understand the whole process and take environmental protection measures from the employees' point of view to improve their environmental awareness and improve overall level.

#### **5.1.2. Cultivate Professional Talents and Improve Employee Literacy**

Environmental accounting is a marginal discipline consisting of environment, economics, accounting, and other disciplines, and it requires higher and higher quality and professionalism of accounting talents.[8] When selecting accounting talents, the knowledge and use of environmental accounting acquired by applicants should be fully considered. Training on knowledge about environmental accounting should be conducted regularly for incumbent companies, and experts in the field should be invited to give lectures to make them aware and understand the application of environmental accounting. In addition, joint efforts can be made

with major universities to provide continuous fresh blood to the company. Accounting practitioners play a pivotal role in the process of disclosing environmental accounting, and improving the awareness and competence of accounting practitioners can enhance the quality and level of information disclosure. Therefore, enterprises must improve the quality of accounting practitioners to enable them to make better disclosures.

## **5.2. Governmental Level**

### **5.2.1. Improve Laws and Regulations and Strengthen Government Supervision**

Environmental accounting standards are an important guarantee for the quality of environmental accounting information. The establishment of environmental accounting standards is conducive to promoting the operation of enterprises in China to be in line with international standards. At present, many countries and international organizations in the world have already introduced relevant environmental accounting standards, such as Japan, and the United States, etc. Therefore, it is necessary to develop China's environmental accounting standards as soon as possible to improve the level of environmental accounting information disclosure in China. Led by the Ministry of Finance and the Ministry of Securities and Regulatory Affairs, a specialized agency should be set up by relevant professionals according to the national conditions and combined with foreign practices to regulate and theoretically study the environmental accounting system in China. It is necessary to regulate and guide the environmental accounting information disclosure of enterprises through the power of government and clarify the content and way of its disclosure.

### **5.2.2. Establish Incentive Mechanism and Introduce Reward and Punishment Policy**

China's taxation authorities should include environmental pollution and other needs into the taxation scope of enterprises to meet the current, environmental protection and economic development. The government should take into account the state of development of environmental accounting in China and the relevant environmental protection policies, and formulate policies that are compatible with them, such as reductions, exemptions, credits, etc. so that more of the company's money will be used for environmental protection. China's regulatory authorities can incentivize the disclosure of a company's environmental accounting information by formulating incentives and penalties to improve the quality of environmental accounting information disclosure by companies. At the same time, companies that release and violate the rules will be punished and will be announced on the official website, to better promote the disclosure of environmental accounting information of companies.

## **5.3. Social Level**

### **5.3.1. Strengthen the Guidance of News and Public Opinion, and Increase the Attention of Public Opinion**

Nowadays, Internet technology is changing rapidly, people are online almost all the time, our surroundings are full of all kinds of news, and the influence of media is increasing. The awareness of corporate social responsibility plays a pivotal role in information disclosure, so the media has to take more responsibility. The media should not only pay attention to the company's information disclosure but also achieve more detailed disclosure. For those companies that take the initiative to assume social responsibility, they should provide continuous news to help promote the company, while those companies that do not disclose as required should continue to follow up so that more people can understand the company's behavior, thus achieving the effect of public opinion supervision. Environmental protection is a major issue that concerns the whole society and the survival of mankind, and it relies on both government regulation and the collective power of society at large to monitor it. As long as all people can establish environmental awareness, everyone will be able to consciously pay attention to the environmental responsibility of enterprises.



### 5.3.2. Introduce Third-party Audits and Standardize Information Disclosure

As the saying goes, the authorities are confused, and the onlookers are clear. Corporate environmental accounting statements that are not audited by a professional third party are likely to cause blind optimism among corporate management and other stakeholders, thereby undermining their credibility. Auditing is an important part of the company's accounting disclosure, and a professional auditor auditing the company's annual report can effectively improve the company's disclosure and thus reduce the government's supervision of the company.[9] For this reason, environmental accounting audits by third parties should be introduced in China to monitor the quality and quantity of their disclosures. An environmental accounting audit is a quality assurance barrier for corporate environmental accounting disclosure, which can effectively avoid the current disclosure chaos, and its importance is self-evident, and the pace of construction of special environmental accounting audit needs to be accelerated.

## 6. Conclusion

Although the road of environmental accounting is rugged, but the future is bright. The green economy is the inevitable choice of historical development and the inevitable trend of future development. Only by vigorously developing a low-carbon economy and promoting the development of environmental accounting can enterprises not be eliminated by society under the new historical conditions, thus promoting the sustainable development of the national economy. As long as the state, enterprises, and all parties in society can make positive efforts, our environmental accounting will be better developed. While creating economic wealth and winning business profits, enterprises should also assume corresponding social responsibilities, increase investment in the environment, actively disclose high-quality environmental accounting information, and jointly protect the environment on which we depend for survival.

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