

ICS 13.020.99

CCS Z 01



Association Standards

T/AIAC 006-2023

Standard for ESG information disclosure of energy enterprises

能源企业ESG信息披露标准

(English Translation)

Issue date: 2023-05-28

Implementation date: 2023-07-01

Issued by The Investment Association of China

Published by Standards Press of China

CONTENTS

| | |
|--|-----|
| Foreword..... | I |
| Introduction..... | III |
| 1 Scope..... | 1 |
| 2 Normative references..... | 1 |
| 3 Terms and definitions..... | 1 |
| 4 Disclosure principles..... | 8 |
| 5 Disclosure index system..... | 9 |
| 6 Disclosure requirements..... | 10 |
| 7 Disclosure process..... | 11 |
| 8 Responsibility and supervision..... | 13 |
| Annex A (Informative) Indexes and instructions for ESG information disclosure of energy enterprises | 14 |
| Bibliography..... | 27 |

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1—2020 *Directives for standardization — Part 1: Rules for the Structure and Drafting of Standardization Documents*.

Please note that some contents of this document may involve patents. The issuer of this document is not responsible for identifying patents.

This document was proposed and prepared by the Investment Association of China.

Editor-in-chief units of this document: Beijing Jiuzhou Zero Carbon Energy Research Institute Co., Ltd., SusallWave Digital Technology (Shenzhen) Co., Ltd.

Participating units of this document: CNPC Research Institute of Economic and Technology, Economic and Technical Research Co., LTD. of State Grid (Fujian) Power Group, China Tianying Co., Ltd., Xinjiang Goldwind Science and Technology Co., Ltd., Tongwei Co., Ltd., Anhui Yuanchen Environmental Protection Technology Co., Ltd., bp China, China Great Wall Securities Co., Ltd., Shenergy Group Finance Co., Ltd., Zhejiang Haers Vacuum Containers Co., Ltd., Green Advanced Materials Research Institute of China Energy Engineering Group Co., Ltd., Institute of National Security and Green Development of Jiangnan University, Asia Green Fund, Yonker

(Beijing) Technology Co., Ltd., Prestige and Fortune Fintech (Beijing) Co., Ltd., Hydrogen Mountain Technology Co., Ltd., RESTE Carbon Environmental Management (Shenzhen) Co., Ltd., Chinese Classification Society Quality Authentication Company., The Energy Investment Professional Committee of The Investment Association of China, The Zero Carbon China Research Center of The Investment Association of China.

The main drafters of this document: Fu Chengyu, Sun Yaowei, Ma Weihua, Liu Shunda, Zeng Xingqiu, Ding Zhimin, Li Wen, Gu Xinke, Wang Xiaoyang, Jin Haoshan, Liang Jianyong, Zhang Qiang, Lv Xuedu, Wen Gang, Lin Weibin, Chen Zongfa, Li Ting, Zhang Jie, Jiang Yang, Yu Chunping, Mei Dewen, Ji Qing, Mao Hongju, Peng Enling, Xu Xiaoling, Chen Li, Yang Bo, Huang Kuan, Nie Bing, Liang Yan, Chen Hong, Hu Ailing, Xiang Kangli, Zhang Wei, Wu Ying, Zhu Zihan, Mi Shengrong, Bai Hong, Zhou Peihao, Peng Qimei, Meng Bo, Jiang Yi, Zhang Wei, Zheng Yi, Zheng Dongdong, Zheng Longfei, Li Yifan, Zhang Xi, Wang Jingjing,.

Introduction

Proposed by the United Nation, Environmental, social and governance (ESG) is a new mode of doing business, which represents an important step for integrating the concept of sustainable development into the development strategy and operation management process of enterprises, an innovative tool for green capital investment and avoidance of non-traditional risks, and an evaluation system for measuring non-financial performance and sustainable development capability of enterprises. This document proposes requirements for the disclosure of non-financial information of energy enterprises in three dimensions, environmental, social and governance. The "environment" dimension focuses on the performance of enterprises in managing their environment, tackling climate change, utilization of key resources and protecting biodiversity; the "social" dimension focuses on the performance of enterprises in safety production, implementation technological innovation, provision of values to customers, protection of employees' rights, and making social contributions. The "governance" dimension focuses on the performance of enterprises governance structure, adherence to business ethics, performing internal risk control, supply chain management, and information disclosure.

As a part of "Zero Carbon China" standard system and a supporting standard of T/AIAC 005—2023 *Standard for the ESG Evaluation of energy enterprises*, this document follows the principles of benchmarking international practice, adjusting to

local conditions, system integrity, use-oriented, aiming at helping energy enterprises carry out high-quality ESG information disclosure, assisting China's energy sector to improve ESG information disclosure and ESG management, thereby fully enhance their comprehensive value in economic, environment and social aspects, and better participating in international energy cooperation and achieving sustainable development.

Standard for ESG information disclosure of energy enterprises

1 Scope

This document specifies the disclosure principles, disclosure index system, disclosure requirements, disclosure process, responsibility and supervision of ESG information disclosure of energy enterprises.

This document applies to the disclosure of ESG information by Chinese energy enterprises with energy business at home and abroad and multinational enterprises with energy business in China.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1

Energy enterprise

Enterprises engage in the production, supply, construction, and other relevant activities of energy including coal, petroleum, natural gas, electricity, new energy and renewable energy.

3.2

ESG Information Disclosure

Information disclosure on enterprises sustainability performance in three dimensions: environmental, social and governance.

3.3

Reporting period

The specific period covered by the reported information

3.4

Policy

The intent or direction of the organization is formally expressed by the top manager.

[SOURCE: GB/T 23331—2020, 3.2.3]

3.5

Environment

The external presence of the organization's operational activities, including air, water, land, natural resources, plants, animals, people, and their interrelationships.

NOTE 1: External presence may extend from within the enterprise to the local, regional, and global system.

NOTE 2: External presence can be described by biodiversity, ecosystem, climate, and other characteristics.

[SOURCE: GB/T 24001—2016, 3.2.1]

3.6

Climate change

Climate change is caused by direct or indirect human activities that alter the composition of the Earth's atmosphere, in addition to natural variations of climate observed during the similar period.

[SOURCE: United Nations Framework Convention on Climate Change, Article 1]

3.7

Energy

Coal, petroleum, natural gas, biomass, electricity, heat, and other resources obtain useful energy directly or by processing and conversion.

[SOURCE: Law of the People's Republic of China on Conserving Energy, Article 2]

3.8

Energy efficiency

Output of performance, services, products, commodities, or energy (3.7), as a ratio or other quantitative relationship to input energy.

NOTE: Input and output should be detailed in terms of quality and quantity and can be measurable.

[SOURCE: GB/T 23331—2020, 3.5.3]

3.9

Greenhouse gas

Gaseous constituent of the atmosphere, both natural and anthropogenic, absorbs and emits radiation at specific wave lengths within the spectrum of infrared radiation emitted by the earth's surface, the atmosphere, and clouds.

NOTE: Unless otherwise specified, greenhouse gases in this document mainly include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

[SOURCE: GB/T 32150—2015, 3.1]

3.10

Greenhouse gas emission

The total amount of greenhouse gases (3.9) released into the atmosphere at a specific time.

[SOURCE: GB/T 32150—2015, 3.6]

3.11

Carbon neutrality

The statute of greenhouse gas net emission is zero at a specific time.

[SOURCE: PAS 2060: 2014, modified]

3.12

Stakeholder

Individuals or groups whose interests may be affected by the decisions or activities of the organization, and their presence may have a direct or indirect impact on the decision-makings or activities of the organization.

[SOURCE: GB/T 36000 — 2015, 3.13, modified]

3.13

Employee

Individuals who establish labor relations or de facto labor relations with the organization through a labor contract.

[SOURCE: GB/T 36000 — 2015, 3.20]

3.14

Customer

Organizations or individuals that purchase property, products, or services for commercial, private, or public purposes.

[SOURCE: GB/T 36000 — 2015, 3.5]

3.15

Supply chain

The production and circulation process involves net chain structure formed by

providing the products to the end users.

NOTE: The supply chain includes suppliers, manufacturers, logistics providers, internal distribution centers, distributors, wholesales and other entities that contact end users.

[SOURCE: GB/T 24420 — 2009, 3.1]

3.16

Community

With a certain number of populations as the main body, a regional living community with a specific culture, organizational system, lifestyle and sense of belonging formed in the process of residence.

NOTE: The scope of an urban community in China generally refers to the areas under the jurisdiction of a residential (village) committee or community workstation after the reform of the community system.

[SOURCE: GB/T 31490.1 — 2015, 2.1]

3.17

Green procurement

In procurement activities, enterprises promote the concept of green and low-carbon, give full consideration to environmental protection, resource conservation, safety and health, recycling low-carbon and recycling promotion, and prioritize the procurement and use of energy saving, water saving, material saving and other raw materials,

products and services that are conducive to environmental protection.

[SOURCE: GB/T 33635 — 2017, 3.2]

3.18

Corporate governance

An institutional arrangement that coordinates between the stakeholders of the corporation.

[SOURCE: GB/T 26317 — 2010, 3.1]

3.19

Internal control

Processes implemented by the corporation's board of directors, board of supervisors, management, and all employees to achieve control targets.

[SOURCE: Basic norms for enterprise internal control, Article 3]

3.20

Risk

The negative or positive effect of uncertainty on goals.

[SOURCE: GB/T 23694 — 2013, 2.1, modified]

3.21

Risk management

In terms of risk (3.20), direct and control the coordination activities of the organization.

[SOURCE: GB/T 23694 — 2013, 3.1]

4. Disclosure principle

4.1 Accuracy

ESG information of enterprises should be disclosed in a way that is understandable and accessible to stakeholders, and the content should be concise, clear and easy to understand.

4.2 Substantive

The disclosed information should be material to the decision-making and value-creation ability of enterprises and stakeholders, reflect the enterprise situation in a targeted manner, and fully and timely prompt possible uncertainties and risks.

4.3 Objectivity

The disclosed information should be based on objective facts or judgments and opinions that have a factual basis.

4.4 Consistency

The disclosed information should be consistent with the actual situation of the enterprise, and the information released through multiple channels should be

consistent.

4.5 Balance

The disclosed information should include both positive and negative information in various aspects of environmental, social and governance, to avoid the negative impact of missing or underreporting information on the supervision of regulators, the judgment of investors, and third-party evaluation.

4.6 Timeliness

Enterprises and relevant information disclosure obligors should disclose information promptly, and should not intentionally choose the time of disclosure to strengthen or dilute the effect of information disclosure, resulting in actual unfairness.

4.7 Sustainability

Enterprises and relevant information disclosure obligors should regularly disclose ESG issues and key information of enterprises, and promote the optimization of information disclosure management with continuous information disclosure.

5. Disclosure index system

The ESG information disclosure index system of energy enterprises is divided into three levels, including 4 first-level indexes, 18 second-level indexes, and 31 third indexes. The composition and disclosure of indexes at each level are illustrated in

6. Disclosure requirement

6.1 Disclosure specification

Relevant energy enterprises shall follow the government regulatory requirements or the guidelines of relevant institutions for disclosure and note that the disclosures comply with the specifications of this document. Energy enterprises shall establish and improve the disclosure management system, standardize the work procedures, and clarify the work responsibilities. The data disclosed by the enterprise shall comply with the relevant standards and technical specifications.

6.2 Disclosure cycle

Relevant energy enterprises can independently stipulate the disclosure cycle according to the needs, generally for one year, and the disclosure cycle can be shortened with conditions.

6.3 Disclosure form

Relevant energy enterprises shall disclose in the forms of ESG/Corporate Social Responsibility (CSR)/sustainability reports, and disclose on the platform designated by the regulatory authority or the company's own choice.

7. Disclosure process

7.1 Overview

The ESG disclosure of energy enterprises shall follow the PDCA cycle of "Plan—Do —Check—Act", and a specific process is carried out in the following steps:

a) Plan

- 1) Establish ESG information disclosure mechanism;
- 2) Formulate ESG information disclosure implementation plan.

b) Do

- 1) Identify the core ESG issues of the enterprise;
- 2) Information collection and processing;
- 3) Compile ESG information disclosure report of the enterprise;
- 4) Release ESG information disclosure report of the enterprise.

c) Check

Check that ESG information disclosures comply with the principles of the disclosure standards (see Chapter 4)

d) Act

Continuously optimize the ESG information disclosure.

7.2 Plan

7.2.1 Establish ESG information disclosure mechanism

Energy enterprises shall establish ESG information disclosure mechanism and clarify the division of responsibilities according to their sustainable development strategies,

and organically integrate ESG information disclosure with enterprise development strategies and daily operations.

7.2.2 Formulate ESG information disclosure implementation plan

Energy enterprise shall formulate an ESG information disclosure implementation plan, systematically build the framework and workflow of ESG information disclosure, covering the specific plan and supporting materials of Do (7.3) step, and submit to the relevant departments of the enterprise or committees for approval.

7.3 Do

7.3.1 Identify the core ESG issues of the enterprise

Energy enterprises shall combine with the enterprise's main business, value chain and other business relationships, and identify the core ESG issues (including but not limited to the index given in Annex A) that significantly impact the enterprise's sustainable development.

7.3.2 Information collection and processing

Energy enterprise shall collect, organize, check and properly store information by the core ESG issue (7.3.1) and the ESG information disclosure indexes and disclosure statement (Annex A) of the energy enterprise.

7.3.3 Compile the ESG information disclosure reports of the enterprise

Energy enterprise shall compile and form ESG information disclosure report of enterprise based on information collection.

7.3.4 Release the ESG information disclosure reports of the enterprise

Energy enterprises shall release ESG information disclosure reports through multiple channels, and inform stakeholders about the access way of the reports.

7.4 Check

Energy enterprise shall check ESG information disclosure reports and check that they complies with the disclosure principles of accuracy, substantive, objectivity, consistency, balance, timeliness and sustainability.

7.5 Act

Energy enterprise shall continuously optimize the ESG information disclosure and take appropriate measures to improve the quality of ESG information disclosure.

8 Responsibility and supervision

Energy enterprise shall be responsible for the authenticity, accuracy and completeness of ESG information disclosure. ESG information disclosure shall be subject to the supervision by government, regulatory agencies, investment institutions, the public and new media, etc.

Annex A

(Informative)

ESG information disclosure index and disclosure statement of the energy enterprise

A.1 "Basic disclosure" index

Index and disclosure statement under the first-level index "Basic disclosure" are shown in Table A.1.

**Table A.1 Index and disclosure statement under the first-level index "Basic
disclosure"**

| Index | Disclosure statement |
|---|--|
| 1 Organizational situation | (1) Legal name of the enterprise; (2) The ownership nature and legal form of the enterprise, e.g., whether the enterprise is the public or private, the legal entity, the partnership enterprise, or the sole proprietorship enterprise; (3) The domicile of enterprise; (4) The distribution area of the enterprise's business; (5) The contact information of the enterprise |
| 2 Activity, value chain and other business relationship | (1) Specify the specific industry in which the enterprise operates; (2) Specify the value chain of the enterprise, such as activities, products, services and the markets served, supply chains, downstream entities and their activities; (3) Other relevant business relations of the enterprise |
| 3 Information disclosure | (1) Reporting period and frequency of ESG/CSR/sustainable development reports; (2) Reporting period of the ESG information disclosure. If it is inconsistent with the reporting period of the financial reports, the reason need to be explained; (3) The way to access the reports; (4) Make commitments to the accuracy, substantive, objectivity, consistency, balance, timeliness and sustainability of ESG/CSR/sustainable development reports; (5) The assurance of ESG/CSR/sustainable development reports, etc. (If applicable) (6) Relevant national, internal and external frameworks of information disclosure references [such as China Corporate Social Responsibility Reporting Guidelines (CASS-ESG 5.0), Global Reporting Initiative Standards (GRI Standards), International Financial Reporting Sustainability Disclosure Standards (IFRS Standard), Sustainability Accounting Standards Board (SASB Standard), Task Force on Climate-Related Financial Disclosure Recommendations (TCFD Recommendations), etc.] can be noted |

| | |
|---|--|
| | together. |
| 4 Statement on sustainable development strategies | Statement on the relevance of sustainable development of enterprise, and enterprise strategies to promote sustainable development. |

A.2 "Environmental" index

The index and disclosure statement under the first-level index "Environmental" are shown in Table A.2.

Table A.2 Index and disclosure statement under the first-level index

"Environmental"

| Index | Disclosure statement | |
|-------------------------------------|----------------------|--|
| 1 Environmental management | | |
| 1.1 Environmental management system | Management | (1) The leader department/organization of environmental management, and the position and leadership position of the department/ organization in the organizational structure of the enterprise; (2) Leadership policy commitment of environmental management; (3) Institutional system construction for environmental management, such as conventional environmental management system, environmental risk control system, environmental event emergency management system, environmental performance incentives and assessment systems; (4) Training and drill measures for environmental management, such as environmental management training, emergency exercises for environmental emergencies |
| | Performance | (1) Carry out the environmental management training during the reporting period, such as the number of training, the number of participants, the proportion of covered employees, etc; (2) Carry out environmental emergency drills during the reporting period, such as the number of drills, the number of participants, the proportion of covered employees, etc; (3) The enterprise passes the environmental management system (ISO 14001, etc) certification during the reporting period, such as the number and proportion of entities within the certification period |

| | | |
|--|-------------|--|
| 1.2 Investment in environmental protection | Management | The main directions and targets of investment in environmental protection. |
| | Performance | (1) Investment in environmental protection during the reporting period, such as the total amount of investment in environmental protection and the proportion of revenue; (2) Green and transformation financing during the reporting period, such as the number and amount of green/transformation loans approved, the number and amount of green/transformation bonds issued, etc; (3) The establishment of green/transformation investment funds during the reporting period, such as the number and scale of funds, the establishing time of funds, and the fields of fund investment, etc |
| 2 Climate change | | |
| 2.1 Climate change management | Management | (1) The governance structure to address climate change, and the leadership responsibilities of the board of directors and senior management; (2) Strategic integration to address climate change, e.g. incorporate climate risks and opportunities into business strategies, and analyzing climate scenarios for business strategy resilience; (3) Management systems to address climate change, such as institutional processes for identifying and assessing, managing and responding to climate risks; (4) Target planning to address climate change, such as path planning for achieving carbon peak/carbon neutrality and reducing the emission of greenhouse gas in the near future |
| | Performance | (1) The time when carbon peak is committed (or has been achieved). (2) The time when carbon neutrality is committed (or has been achieved). (3) Specific targets and progress in reducing greenhouse gas emissions. |
| 2.2 Climate change mitigation | Management | (1) Implement carbon emission reduction measures, such as green and low-carbon transformation business, the improvement of process/equipment and the withdrawal of outdated production capacity, the development and application of negative carbon technology, and the optimization of their own operational emissions; (2) Implement carbon offset measures, such as carbon trading and carbon sink activities. (3) Build the carbon management system, and its functions. such as carbon emission management, carbon asset management, carbon trading management, etc.,. |

| | | |
|--|-------------|--|
| | Performance | <p>(1) Greenhouse gas emissions in scope I and scope II during the reporting period, such as type, total amount, intensity, etc;</p> <p>(2) Greenhouse gas emissions in scope III during the reporting period, such as type, total amount, intensity, etc;</p> <p>(3) The development and application of negative carbon technology during the reporting period, e.g., establishing the carbon capture, utilization and storage technology/direct air capture technology and other projects converted carbon absorption, etc. (If applicable);</p> <p>(4) Participation in national/local carbon market compliance during the reporting period, e.g., whether it is full compliance, etc. (If applicable);</p> <p>(5) The purchase of voluntary carbon emission reduction quotas during the reporting period, such as voluntary carbon emission reduction quotas, etc.;</p> <p>(6) The development of ecological carbon sink projects during the reporting period, such as tree planting, greening and CO₂ offset converted by carbon sink projects</p> |
| 2.3 Adaptation to climate change | Management | <p>(1) Measures to address physical risks and seize relevant opportunities;</p> <p>(2) Measures to address transformation risks and seize relevant opportunities;</p> |
| | Performance | <p>(1) Measures to address physical risks/transformation risks and seize the effects and benefits brought by relevant opportunities during the reporting period;</p> <p>(2) The green revenue of the enterprise during the reporting period, such as green revenue sources and amounts (If applicable)</p> |
| 3 Resource development and utilization | | |
| 3.1 Energy resources | Management | <p>(1) The leader department/organization of energy management;</p> <p>(2) Leadership policy commitment of energy management;</p> <p>(3) Institutional system construction of energy management;</p> <p>(4) Performance assessment measures of energy management;</p> <p>(5) Improvement measures of energy efficiency, e.g. reducing energy intensity and energy loss, etc;</p> <p>(6) Optimization measures of energy structure, such as research and development of non-fossil energy development technology, manufacturing equipment utilize for non-fossil energy, direct utilize of non-fossil energy, mergers and acquisitions of non-fossil energy businesses/projects/assets, etc.</p> |
| | Performance | <p>(1) The enterprise passes the energy management system (ISO 50001, etc.) certification during the reporting period, such as the number and proportion of entities within the certification</p> |

| | | |
|------------------------------------|-------------|--|
| | | <p>period;</p> <p>(2) The consumption of direct and indirect energy during the reporting period, such as type, total amount, etc;</p> <p>(3) Energy intensity during the reporting period, such as comprehensive energy consumption per unit output value, comprehensive energy consumption per unit output of major products, etc;</p> <p>(4) Energy loss during the reporting period, such as coal transportation loss rate, oil transportation loss rate, gas transportation loss rate, gas flash steam emission rate, power plant consumption rate, power grid loss rate, heat network loss rate, etc.;</p> <p>(5) Energy structure during the reporting period, such as the consumption and proportion of various types of energy, the supply and proportion of various types of energy</p> |
| 3.2 Water resources | Management | <p>(1) Institutional system construction of water resources management;</p> <p>(2) Measures for the efficient use of water resources, e.g. reducing fresh water intake, optimizing water recycling and water resource use, improving water efficiency and alternative water or circulating water</p> |
| | Performance | <p>(1) Fresh water (surface water, ground water, tap water) during the reporting period, such as water consumption, water intensity, etc;</p> <p>(2) The use of renewable water and other alternative water in unconventional water resources during the reporting period, such as water consumption and the proportion of total water consumption;</p> <p>(3) The benefits of specific water-saving measures taken during the reporting period, such as quantity, converted water-saving amount, etc</p> |
| 4 Pollution prevention and control | | |
| 4.1 Waste water | Management | <p>(1) Institutional system construction of waste water discharge management;</p> <p>(2) Target planning of waste water control and discharge;</p> <p>(3) Measures and innovative technologies for waste water control and discharge</p> |
| | Performance | <p>(1) Waste water discharge during the reporting period, such as type, discharge amount, discharge intensity, compliance rate, etc;</p> <p>(2) Waste water recycling during the reporting period, such as the recycling amount, recycling utilization rate, etc</p> |
| 4.2 Waste gas | Management | <p>(1) Institutional system construction of waste gas discharge management;</p> |

| | | |
|-----------------------------|-------------|--|
| | | (2) Target planning of waste gas control and discharge; (3) Measures and innovative technologies for waste gas control and discharge |
| | Performance | (1) Waste gas discharge during the reporting period, such as type, discharge amount, discharge intensity, compliance rate, etc; (2) Waste gas recycling during the reporting period, such as the recycling amount, recycling utilization rate, etc |
| 4.3 General waste | Management | (1) Institutional system construction of general waste discharge management; (2) Target planning of general waste control and discharge; (3) Measures and innovative technologies for general waste control and discharge |
| | Performance | (1) General waste discharge during the reporting period, such as type, discharge amount, discharge intensity, compliance rate, etc; (2) General waste recycling during the reporting period, such as the recycling amount, recycling utilization rate, etc |
| 4.4 Hazardous waste | Management | (1) Institutional system construction of hazardous waste discharge management; (2) Target planning of hazardous waste control and discharge; (3) Measures and innovative technologies for hazardous waste control and discharge |
| | Performance | (1) Hazardous waste discharge during the reporting period, such as type, discharge amount, discharge intensity, compliance rate, etc; (2) Hazardous waste recycling during the reporting period, such as the recycling amount, recycling utilization rate, etc |
| 5 Biodiversity conservation | Management | (1) Biodiversity conservation governance structures, and leadership responsibilities of the board of directors and senior management; (2) Biodiversity conservation strategy integration, e.g., incorporating biodiversity risks and opportunities, etc, in the business strategies; (3) Biodiversity conservation management system, such as institutional processes for identifying and assessing, managing and responding to biodiversity risks; (4) Biodiversity conservation target planning, such as specific performance targets and action planning for biodiversity conservation; (5) Biodiversity conservation measures, such as ecological impact assessment, impact monitoring, restoration measures, public welfare protection, etc |
| | Performance | (1) Carry out ecological status survey and ecological impact |

| | | |
|--|--|--|
| | | <p>prediction before the project started during the reporting period, and formulate the ecological protection countermeasures, such as the amount and proportion of the projects.</p> <p>(2) Biodiversity impact monitoring in the whole process during the implementation of the project during the reporting period, such as the amount and proportion of projects;</p> <p>(3) The completion of ecological environment restoration and recovery after project withdrawal during the reporting period, such as the number and proportion of projects;</p> <p>(4) Activities and effects of biodiversity conservation in public welfare during the reporting period</p> |
|--|--|--|

A.3 "Social" index

The index and disclosure statement under the first-level index "Social" are shown in Table A.3.

Table A.3 Index and disclosure statement under the first-level index "Social"

| Index | Disclosure statement | |
|---------------------------------------|----------------------|--|
| 1 Safety protection | | |
| 1.1 Safety management and performance | Management | (1) The leading department/organization of safety management, and the position and leadership position of the department/organization in the organizational structure of the enterprise; (2) Leadership policy commitment of safety management; (3) Institutional system construction for safety management, such as safety management system specification, risk identification and response mechanism, performance objectives and assessment measures; (4) Employees' training measures for safety production; (5) Occupational health examination system; (6) Occupational disease prevention measures |
| | Performance | (1) The enterprise obtains the occupational health and safety management system (ISO 45001, etc.) certification during the reporting period, such as the number and proportion of entities within the certification period; (2) The implementation of safety production training during the reporting period, such as the number of training, participants, the training coverage rate, etc; |

| | | |
|---|-------------|--|
| | | <p>(3) Employees' occupational health examinations during the reporting period, such as the number of occupational health examinations, the coverage rate of physical examination, etc;</p> <p>(4) Employees' occupational diseases during the reporting period, such as the number of employees suffering from occupational diseases, and the rate of occupational diseases, etc;</p> <p>(5) The occurrence of safety accidents during the reporting period, such as the number of extremely severe /severe/large/general safety accidents;</p> <p>(6) Deaths on duty during the reporting period, such as the number of deaths on duty, the mortality rate of millions of working hours, etc;</p> <p>(7) The occurrence of work-related injuries during the reporting period, such as the number of work-related injuries, the number of working hours lost due to work-related injuries, the rate of working hours lost due to work-related injuries, etc</p> |
| 2 Technology and innovation | | |
| 2.1 Digital transformation management | Management | <p>(1) Digital strategic planning;</p> <p>(2) Digital management measures, such as organizational governance system, process control mechanism, and technical solutions of digital transformation, etc</p> |
| | Performance | <p>(1) The optimization of production and operation achieved by the enterprise's digital transformation during the reporting period, such as efficiency improvement, cost reduction, quality improvement, etc;</p> <p>(2) Product/service innovation achieved by the enterprise's digital transformation during the reporting period, such as the new technology/product, service extension and value-added, main business growth, etc;</p> <p>(3) Business transformation achieved by the enterprise's digital transformation during the reporting period, such as the user/eco-partner connection and empowerment, digital new business, green and sustainable development, etc</p> |
| 2.2 Technology research and development | Management | <p>(1) Strategic planning of the enterprise's technology research and development;</p> <p>(2) Investment direction of enterprise's technology research and development;</p> |
| | Performance | <p>(1) Research and development investment during the reporting period, such as research and development cost, research and development team, etc;</p> <p>(2) Research and development results during the reporting period, such as the number of new/accumulated patents, the number of new/accumulated software copyrights, and research</p> |

| | | |
|----------------------------|-------------|--|
| | | and development awards (such as national science and technology awards, provincial and ministerial science and technology awards), etc |
| 3 Customer value | | |
| 3.1 Product quality | Management | (1) Leadership policy commitment of product/service quality management; (2) Institutional system construction of product/service quality management, such as quality management rules and regulations, product recall/recovery mechanism; (3) Measures to improve product/service quality |
| | Performance | (1) Quality management system certification (ISO 9001, etc.) obtained by the enterprise during the reporting period, such as the number and proportion of entities within the certification period; (2) Product and service quality during the reporting period, such as product qualification rate, product recall practice, etc |
| 3.2 Customer service | Management | (1) Conventional rights protection systems and measures for customers; (2) Customer data privacy protection system and measures; (3) Customer satisfaction survey |
| | Performance | (1) Customer satisfaction during the reporting period, such as the number of customer complaint incidents, the rate of customer survey satisfaction, etc; (2) Customer privacy protection during the reporting period, such as customer privacy protection investigation, customer privacy disclosure incidents, etc |
| 4 Employee rights | | |
| 4.1 Standardize employment | Management | (1) Fair employment (equality, diversity and non-discrimination in employment, etc.) system; (2) The prohibition of child labour system; (3) The prohibition of forced labour system; (4) Measures to sign labour contracts in accordance with the law, etc; (5) Employees' basic welfare (payment of five insurances and one pension in accordance with the law, etc) security system; (6) The establishment of labour unions and measures to ensure operation; (7) Employees' communication and participation channels, such as democratic communication congresses, staff congresses, employee seminars, open days, and employee mailboxes. |
| | Performance | (1) The number and composition of employees during the reporting period, such as the total number and composition ratio of employees divided by gender, employment type (full-time |

| | | |
|------------------------------|-------------|---|
| | | <p>or part-time, etc), age group and region;</p> <p>(2) The labour contract signed with employees during the reporting period, such as the rate of contract signing;</p> <p>(3) The coverage of employees' "five insurances and one pension" during the reporting period, such as the coverage rate of "five insurances and one pension";</p> <p>(4) The operation of labour union during the reporting period, such as the number of staff service activities, the number of people served and the coverage ratio, etc</p> |
| 4.2 Career development | Management | <p>(1) Systems and measures to support employees' promotion and development;</p> <p>(2) Systems and measures to carry out employees' vocational training</p> |
| | Performance | <p>(1) Employees' promotion and development during the reporting period, such as the number of employees promoted and the proportion of total employees;</p> <p>(2) Employees' vocational training during the reporting period, such as the number of training, participants, and the proportion of covered employees, etc</p> |
| 5 Social contribution | | |
| 5.1 Energy supply | Management | <p>(1) Leadership policy commitment of energy supply;</p> <p>(2) The system of conventional energy supply security;</p> <p>(3) Pre-plan of emergency energy supply;</p> <p>(4) Price control mechanism during energy storage;</p> <p>(5) Relevant measures to international green energy cooperation</p> |
| | Performance | <p>(1) Guarantee of energy security supply during the reporting period, such as power supply reliability;</p> <p>(2) Implementation of international green energy cooperation during the reporting period, such as trade volume, investment, technology export, etc</p> |
| 5.2 Community responsibility | Management | <p>(1) Measures to assess and mitigate the potential adverse impacts on local society before the commencement of the enterprise project;</p> <p>(2) Measures to track and respond to potential adverse impacts on local society after the commencement of enterprise project;</p> <p>(3) Community communication and interactive participation mechanisms;</p> <p>(4) Community inclusion and support development measures;</p> <p>(5) Dispute appeal and conflict resolution mechanisms;</p> <p>(6) Institutional measures to protect human rights in security work;</p> <p>(7) Institutional measures to support employment in the project location</p> |

| | | |
|--------------------|-------------|---|
| | Performance | <p>(1) The implementation of community participation activities during the reporting period, such as the number of community activities participated and the coverage rate of project community participation;</p> <p>(2) Human rights training for security staff during the reporting period, such as the number of training, the coverage rate of training, etc;</p> <p>(3) The employment of the project location solved by the enterprise during the reporting period, such as the number of new jobs created and the number of people employed, etc</p> |
| 5.3 Social welfare | Management | <p>(1) Charitable donations or public welfare activities;</p> <p>(2) Enterprise public welfare funds/fundations;</p> <p>(3) Systems and measures for employee volunteer service;</p> <p>(4) Planning and measures to help rural revitalization</p> |
| | Performance | <p>(1) Enterprise's charitable donations during the reporting period, such as the amount of donations, the number of donated projects, etc;</p> <p>(2) The operation of corporate public welfare funds/fundations during the reporting period, such as the amount of funds raised, the amount of donations, the number of projects, etc;</p> <p>(3) Employees' participation in social welfare services during the reporting period, such as the number of participants and the cumulative duration of participation</p> |

A.4 "Corporate Governance" index

The index and disclosure statement under the first-level index "Corporate Governance" are shown in Table A.4.

Table A.4 Index and disclosure statement under the first-level index "Corporate Governance"

| Index | Disclosure statement | |
|---------------------------|----------------------|---|
| 1 Governance structure | | |
| 1.1 Stockholders' meeting | Management | (1) Investor relations management system; (2) Profit distribution (cash dividends, stock dividends, etc.) system; (3) Construction of investor communication channels |

| | | |
|--------------------------|-------------|--|
| | | (traditional channels, network channels, etc); (4) Guarantee the system of holding stockholders' meetings, stockholder participation and the rights of small and medium-sized stockholders |
| | Performance | (1) The participation of stockholders in the annual stockholders' meeting during the reporting period, such as the proportion of shareholding by participating stockholders, the number of minority stockholders attending the meeting, etc; (2) The attendance of directors, supervisors and secretary of the board of directors at the annual stockholders' meeting during the reporting period, such as the proportion of participants, etc; (3) The profit distribution of the enterprise to stockholders during the reporting period, such as the number and amount of dividends distribution |
| 1.2 Board of directors | Management | (1) Systems and measures of the board of directors to ensure independence, professionalism, diversity, normal operation and performance of duties; (2) The establishment and operation system of specialized committees of the board of directors (audit committee, nomination committee, remuneration and evaluation committee, strategy committee, sustainable development committee, etc.) |
| | Performance | (1) The independence of the board of directors during the reporting period, such as the number and proportion of independent directors and the proportion of independent directors in each specialized committees; (2) The professionalism of board of directors during the reporting period, such as the number of professional ability/experience in the main business field of the enterprise, the number of professional ability/experience in financial accounting, etc; (3) The diversity of the board of directors during the reporting period, such as the number and proportion of women, and the number and proportion of ethnic minorities; (4) The operation of specialized committees of the board during the reporting period, such as the number of meetings held, the number of proposals discussed/voted on, etc |
| 1.3 Board of supervisors | Management | Systems and measures to ensure the normal operation and performance of duties of the board of supervisors |
| | Performance | (1) The composition of the board of supervisors during the reporting period, such as the number of members with professional ability/experience in the main business field of the enterprise, the number of members with professional |

| | | |
|-------------------------|-------------|--|
| | | ability/experience in financial accounting, etc, the number of staff supervisors, the number of external supervisors, etc; (2) The holding of meetings of the board of supervisors during the reporting period, such as the number and time of meetings of the board of supervisors |
| 1.4 Senior management | Management | (1) Systems and measures to ensure the normal operation and performance of duties of senior management; (2) Senior management diversity system; (3) Equity incentive system for senior management; (4) The system of incorporating ESG factors in senior management |
| | Performance | (1) The stability of senior management during the reporting period, such as the number of senior executives at the beginning and end of the reporting period, the number of outgoing executives and reasons; (2) The diversity of senior management during the reporting period, such as the number and proportion of women, and the number and proportion of ethnic minorities; (3) Equity incentives for senior executives during the reporting period, such as the number and proportion of incentives covered and the amount of incentives |
| 2 Business ethics | Management | (1) Anti-bribery and corruption system; (2) Anti-unfair competition system; (3) Anti-monopoly system; (4) Anti-money laundering system; (5) Complaint reporting channels and whistleblower protection system; (6) Business ethics training system; (7) Business ethics supervision and inspection, and accountability and punishment measures |
| | Performance | (1) Business ethics training during the reporting period, such as the number of training and participants, and the proportion of covered employees; (2) Investigate and deal with cases of violation of business ethics during the reporting period, such as the number and circumstances of cases, and the handling methods |
| 3 Risk internal control | | |
| 3.1 Internal control | Management | (1) Internal control organizational structure and responsibility arrangement; (2) Internal control daily supervision and regular evaluation system |
| | Performance | (1) Internal control of the enterprise during the reporting period, such as financial/non-financial self-evaluation conclusions, types of internal control audit report opinions, etc; |

| | | |
|-----------------------------|-------------|---|
| | | (2) Discovery and solve internal control issues during the reporting period |
| 3.2 Risk management | Management | (1) Organizational structure and responsibility arrangement of risk management; (2) Daily risk monitoring and regular audit system; (3) Identification of internal and external risks and countermeasures |
| | Performance | Discovery and solve of risk events by the enterprise during the reporting period |
| 4 Supply chain management | | |
| 4.1 Supply chain compliance | Management | (1) Systems to ensure fairness and transparency in the supply chain; (2) Environmental standards of supply chain management; (3) Social standards of supply chain management |
| | Performance | (1) The openness and transparency of the supply chain during the reporting period, such as the number and proportion of open tenders; (2) Suppliers obtain environmental management system certification (ISO 14001, etc.) during the reporting period, such as the number and proportion of certified suppliers; (3) Suppliers obtain occupational health and safety management system certification (ISO 45001, etc.) during the reporting period, such as the number and proportion of certified suppliers |
| 4.2 Supply chain quality | Management | (1) Supplier quality assessment and qualification review system; (2) Supplier collaborative development measures, e.g. facilitating supplier transformation, providing supply chain financial services, etc. (If applicable) |
| | Performance | (1) Suppliers pass the quality management system (ISO 9001, etc.) during the reporting period, such as the number and proportion of certified suppliers; (2) The implementation of supplier co-development activities during the reporting period, such as the number of supplier training/exchange activities, the number and scale of supply chain finance loans provided, etc |

Bibliography

- [1] GB/T 19000—2016, *Quality management system Basics and terms*
- [2] GB/T 19001—2016, *Quality management system Requirements*
- [3] GB/T 19580—2012, *Excellence performance evaluation guidelines*
- [4] GB/T 23011 — 2022, *Integration of informatization and industrialization digital transformation Value benefit reference model*
- [5] GB/T 23331—2020, *Energy management system Requirements and guidelines*
- [6] GB/T 23694—2013, *Risk management Terms*
- [7] GB/T 24001—2016, *Environmental management system Requirements and guidelines*
- [8] GB/T 24420—2009, *Supply chain risk management guideline*
- [9] GB/T 26317—2010, *Corporate governance risk management guideline*
- [10] GB/T 30146—2023, *Public safety Business continuity management system Requirements*
- [11] GB/T 31490.1 — 2015, *Community informatization Part 1: General principles*
- [12] GB/T 32150—2015, *Accounting and reporting of greenhouse gas emissions from industrial enterprises General rule*
- [13] GB/T 33000 — 2016, *Basic specification for enterprise safety production standardization*

- [14] GB/T 33635—2017, *Green manufacturing, green supply chain management of manufacturing enterprises Guideline*
- [15] GB/T 35770—2022, *Compliance management system Guideline*
- [16] GB/T 36000—2015, *Guidelines for social responsibility*
- [17] GB/T 36002 — 2015, *Guidelines for the classification of social responsibility performance*
- [18] GB/T 39604 — 2020, *Social responsibility management system Requirements and guidelines*
- [19] GB/T 45001 — 2020, *Occupational health and safety management system Requirements and guidelines*
- [20] T/AIAC 005-2023, *Standards for the ESG evaluation of the enterprise*
- [21] ISO 14064-1:2018, *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*
- [22] ISO 14090:2019, *Adaptation to climate change — Principles, requirements and guidelines*
- [23] ISO 28000:2007, *Specification for security management systems for the supply chain*
- [24] ISO 37301:2021, *Compliance management systems — Requirements with guidance for use*
- [25] PAS 2060:2014, *Specification for the demonstration of carbon neutrality*

- [26] *Administrative measures for the collection and use of credit information of market entities in the energy industry*. National Energy Administration, 2016.
- [27] *Administrative measures for the environmental information disclosure of enterprise in accordance with the law*. Ministry of Ecology and Environment, 2021.
- [28] *Accounting standards for business enterprises - Basic standards*. Ministry of Finance of the People's Republic of China, 2006.
- [29] *Basic specifications for internal control of enterprises*. Ministry of Finance of the People's Republic of China and other five departments, 2008.
- [30] *Administrative measures for information disclosure of listed companies*. China Securities Regulatory Commission, 2021.
- [31] *Governance code for listed companies*. China Securities Regulatory Commission, 2018.
- [32] *China corporate social responsibility reporting guidelines*. Chinese Academy of Social Sciences, 2022.
- [33] *Regulations of the People's Republic of China on the administration of company registration*. State Council of the People's Republic of China, 2016.
- [34] *Company law of the People's Republic of China*. Standing Committee of the National People's Congress, 2018.
- [35] *Energy conservation law of the People's Republic of China*. Standing Committee of the National People's Congress, 2018.

- [36] *Labor law of the People's Republic of China*. Standing Committee of the National People's Congress, 1995.
- [37] *Environmental, social and governance reporting guidelines*. Hong Kong Stock Exchange, 2022.
- [38] *OECD guidelines for due management for responsible business conduct*. Organization for Economic Cooperation and Development, 2018.
- [39] *United Nations Framework Convention on Climate Change*. United Nations, 1992.
- [40] *Ten principles of the United Nations Global Compact*. United Nations Global Compact, 2019.
- [41] *Sustainability Reporting Standards (GRI Standards)*. Global Reporting Initiative, 2021.
- [42] *Convention on biodiversity*. United Nations, 1992.
- [43] *Recommendations of the Task Force on Climate-related Financial Disclosure (Final Report)*. Task Force on Climate-related Financial Disclosure, 2017.
- [44] *Sustainability Accounting Standards Board Standards*. Sustainability Accounting Standards Board, 2018.