



PECC

# Improving the carbon Disclosure System mapping the carbon reduction roadmap



## **Abstract**

In recent years, with the increasing positive interaction among governments, enterprises and the public in the field of ecological environmental protection, information disclosure and the degree of public knowledge have become key factors in promoting the synergistic governance of multiple parties. On the one hand, China has made remarkable progress in the construction of a corporate environmental information disclosure mechanism, which not only provides solid support for pollution prevention and control, but also lays the foundation for the construction of an ecological civilization to move into a strategic stage with carbon reduction at its core. On the other hand, at the global level, Chinese export-oriented enterprises are facing brand new challenges as the international community continues to escalate its requirements for disclosure of corporate greenhouse gas emissions and product carbon footprint information. Against this backdrop, and with the “dual-carbon” goal as its leader, China has already demonstrated unprecedented determination and action, introducing a number of carbon-disclosure-related policies and actively building supporting platforms to facilitate their effective implementation.

SIP Lvse Jiangnan Public Environmental Concern Centre (hereinafter referred to as “PECC”), as an environmental public welfare organization, has been tracking the development of carbon disclosure policy since 2021 and monitoring the carbon disclosure status of enterprises through the platform. Up to now, PECC has released six research reports on carbon disclosure, covering key emitting industries such as cement and chemical industry, etc. The purpose is to promote enterprises to strengthen carbon disclosure, assume corresponding social responsibility, stimulate the consensus and action of related industries on green transformation, and promote the sustainable development of enterprises.

Based on the results of previous research, this report will sort out the basic framework of the carbon disclosure policy, refine the problems found in working practice, assess the functionality of the existing carbon disclosure platform, and put forward specific suggestions for improvement, aiming at further optimizing the carbon disclosure policy system, promoting the continuous improvement and effective implementation of the carbon disclosure mechanism, encouraging and supervising more enterprises to participate in and enhance the public disclosure of carbon emission information, and promoting the economic and social Green and Low Carbon Transformation.

## **1. Analysis of Carbon Disclosure Regulations and Policies**

### **1.1 Domestic carbon disclosure policy**

#### **(1) Domestic carbon disclosure policy**

At present, China has established a “1+N” policy system for carbon peaking and carbon neutrality.<sup>2021</sup> In October 2021, the Central Committee of the Communist Party of China (CPC) and the State Council successively issued the *Opinions on the Complete and Accurate Implementation of the New Development Idea and Doing a Good Job in Carbon Peaking and Carbon Neutrality Work* and the *Peak Carbon Action Program by 2030*, which as “1” forms a top-level design covering the two key stages of carbon peak and carbon neutralization. The “N” is the implementation program and related support and guarantee programs covering the scope of key areas and key industries.

In order to ensure the effective implementation of the dual-carbon target, the State has also introduced a series of laws and regulations to regulate the environmental behavior of enterprises, especially the management of carbon

emissions and information disclosure. For example, the *Administrative Measures for the Legal Disclosure of Environmental Information of Enterprises* (hereinafter referred to as the *Administrative Measures*) and the *Format Guidelines for the Legal Disclosure of Environmental Information of Enterprises* require eligible key enterprises and listed companies to disclose annual carbon emissions data. These provisions not only provide clear operational guidelines for enterprises, but also promote the monitoring and support of carbon emission reduction efforts by the whole society by ensuring the transparency and accuracy of information.

The importance of carbon disclosure is also particularly emphasized in China's carbon trading-related policies and regulations. the *Measures for the Administration of Carbon Emission Trading (for Trial Implementation)* issued on December 31, 2020, requires key emission units to regularly disclose their greenhouse gas emission reports and encourages the public and news media to monitor carbon trading. To further improve the legal framework, the State Council promulgated the *Interim Regulations on the Administration of Carbon Emission Trading* on January 25, 2024 (formally implemented on May 1, 2024), which, as the first administrative regulation in the field of carbon emissions in China, fills the gaps in the carbon market legislation, and explicitly stipulates that key emission units will face administrative penalties if they fail to disclose information about their emissions, emission facilities, and statistical accounting methodology, etc., in the annual emission report to the society as required. It clearly stipulates that key emission units will face administrative penalties if they fail to disclose to society the information on emissions, emission facilities and statistical accounting methods in their annual emission reports as required.

## **(2) Industry Carbon Disclosure Policy**

The Interim Regulations on the Administration of Carbon Emissions Trading require key greenhouse gas emitting units included in the national carbon emissions trading market to disclose key information from their annual greenhouse gas emissions reports, and those who fail to comply face fines. And according to *the National Development and Reform Commission's notice on the National Carbon Emissions Trading Market Construction Program (Power Generation Industry)* [NDRC Climate Regulation [2017] No. 2191], the industries that are currently mandatorily included in the carbon emissions trading market include only the power generation industry.

On September 9, 2024, the Ministry of Ecology and Environment released the *National Carbon Emission Trading Market Coverage of Cement, Iron and Steel, and Electrolytic Aluminum Sectors (Draft for Public Comments)*, which explicitly proposed 2024 as the first control year for the cement, iron and steel, and electrolytic aluminum sectors, and the completion of the first compliance work by the end of 2025. This is the first time since the opening of the national carbon market on July 21, 2021 that the coverage has been expanded.

In addition, the non-ferrous metals and building materials industries have emphasized the strengthening of corporate social responsibility and the improvement of carbon emission reporting and information disclosure mechanisms in their respective carbon peak implementation plans. *The Guiding Opinions on Promoting Green, Innovative and High-Quality Development of the Oil Refining Industry* set out the goal of exploring ways to strengthen carbon emissions management and studying the establishment of a database on carbon emissions and product carbon footprints. Meanwhile, *the Carbon Peak Implementation Program for the Industrial Sector* encourages small and medium-sized enterprises to raise their environmental awareness and take the initiative to publicize information on carbon emission reduction.

The financial industry is also paying increasing attention to carbon disclosure, which is not only a key step in promoting the development of green finance, but also an important cornerstone for risk management, asset allocation optimization and the achievement of sustainable development goals. Through accurate carbon disclosure, financial institutions can more effectively identify and assess climate-related financial risks, optimize their investment portfolios, prioritize support for low-carbon and green projects, improve operational transparency, enhance public and investor confidence, ensure compliance with increasingly stringent regulatory requirements, stimulate technological innovation and promote healthy market development.

In addition, the *Opinions on Financial Support for Doing a Good Job in Carbon Peak and Carbon Neutrality* clearly states that a sound carbon emissions reporting and information disclosure system, including enterprises and financial institutions, needs to be established. *The Guiding Opinions on Further Strengthening Financial Support for Green and Low-Carbon Development* further emphasize that bond issuers should disclose the carbon emission reduction effects and emissions of the projects they support, promote proactive environmental information disclosure by financial institutions and financing entities, improve the information disclosure system on the sustainable development of listed companies, and improve the framework for disclosing information on carbon emissions.

Shipping Industry International Maritime Organization (IMO) 2023 On July 7, 2023, IMO adopted the “IMO Strategy for Greenhouse Gas Emission Reductions from Ships to 2023,” which sets quantitative targets for emission reductions, including an average of at least a 40% reduction in CO<sub>2</sub> emissions per unit of shipment in international shipping by 2030, as well as close to a The strategy sets quantitative emission reduction targets, including an average reduction of at least 40% of CO<sub>2</sub> emissions per unit of transport in international

shipping by 2030, and a target of net zero emissions around 2050.

The China Maritime Safety Administration has issued *the Measures for the Management of Ship Energy Consumption Data and Carbon Intensity*, which require ships to collect and report ship energy consumption data in accordance with the regulations and to carry out carbon intensity supervision and inspection work. Chinese ships of 5,000 gross tons and above on international voyages are required to report to the authorized Maritime Safety Administration directly under the Ministry of Marine Affairs by March 31 of each year the annual energy consumption data of the ship for the previous calendar year and relevant supporting documents, and to assess the annual carbon intensity level of the operation.

### **(3) Local carbon disclosure policies**

Under *The guidance of the Action Program for Peak Carbon by 2030*, provincial-level regions have formulated corresponding implementation programs for peak carbon in the light of local realities, and 17 of them have explicitly put forward the requirements for carbon disclosure in their programs. For example, the Hunan Provincial Carbon Peak Implementation Program states that key energy-using units should sort out and account for their own carbon emissions and conduct in-depth research on carbon reduction paths. Supporting the construction of a dual-carbon service platform in the FTZ, guiding listed companies, import and export enterprises, and key enterprises in carbon trading to establish a carbon emission information disclosure system in line with international rules, and regularly publicizing information on carbon emissions of enterprises, which will be counted as their environmental credits.

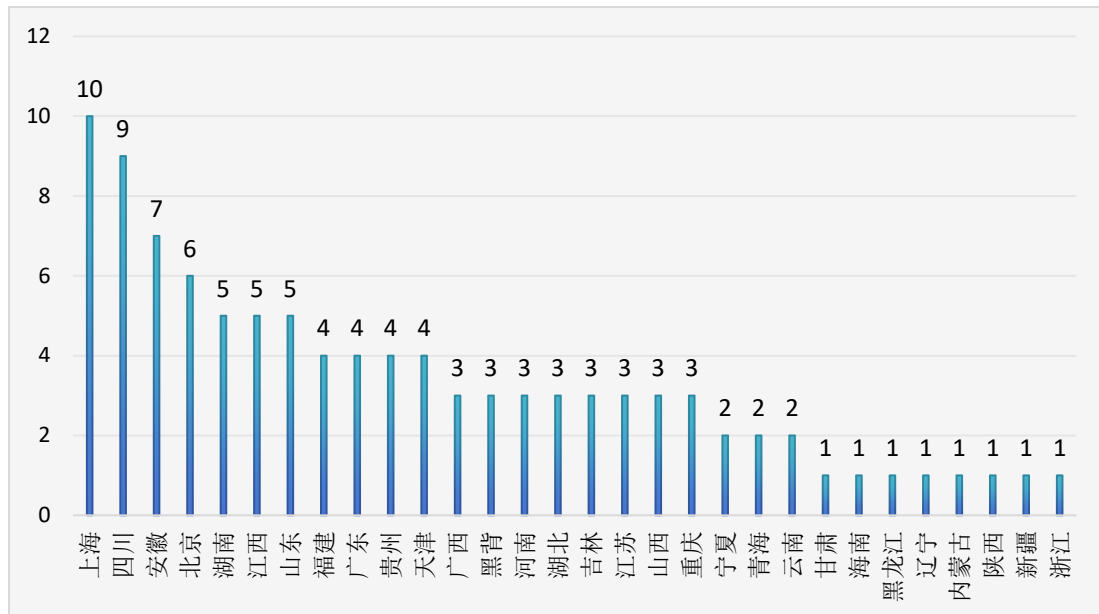


Figure 1 Number of policies involving carbon disclosure in each province and city

In addition to the Peak Carbon Implementation Program, there is no shortage of provisions in other green and low-carbon policies that encourage the requirement of carbon disclosure content. Among them, the four provinces of Anhui, Hunan, Jiangxi and Sichuan are particularly outstanding. In addition to being in line with the goals of carbon peaking and carbon neutrality promoted at the national level, the policy further enriches and improves the requirements for carbon disclosure and the direction of development, reflecting the positive attitudes and practical actions of the local governments in realizing sustainable development. For example, Anhui Province issued the *14th Five-Year Plan for Responding to Climate Change in Anhui Province*, which provides for the improvement of climate change information dissemination channels, the establishment of a platform for disclosing information on carbon emissions by enterprises, and the establishment of an incentive mechanism for public participation. Sichuan Province, on the other hand, has issued *The Sichuan Province Action Plan for Reducing Pollution, Reducing Carbon and Synergizing Efficiency*, which explicitly proposes the implementation of a system for disclosing environmental information in accordance with the law, accelerating the construction of a management system for disclosing corporate



environmental information in accordance with the law, and promoting the disclosure of environmental information, such as carbon emissions, by key enterprises and financial institutions.

In the area of green finance, many provinces and cities are committed to creating a more robust financial services system to support the development of a low-carbon economy. For example, *the Implementation Plan for the Development of Green Finance in Guangdong Province in Support of the Carbon Peak Initiative* relies on the Shenzhen Stock Exchange to build a platform for the innovative development of green finance, guides listed companies to proactively disclose information on carbon emissions, and carries out product innovations such as the Green Securities Index and the “Environmental, Social and Corporate Governance (ESG)” evaluation system.

#### **(4) Carbon Disclosure Policy for Listed Companies**

Listed companies play an important role as models in the capital market. Therefore, securities regulators have issued a series of regulations and guidelines to promote the disclosure of carbon emission information by listed companies. The *Guidelines on the Content and Format of Information Disclosure by Companies Issuing Public Securities No. 2 - Content and Format of Annual Reports* and the *Guidelines on the Content and Format of Information Disclosure by Companies Issuing Public Securities No. 3 - Content and Format of Semi-Annual Reports*, both of which were revised and issued in June 2021, are encouraging Companies are encouraged to voluntarily disclose the measures they have taken to reduce carbon emissions and their effects. It is also for this reason that in the first six phases of PECC's research, it was found that listed companies in a number of industries, such as cement, chemical, and building materials, had inadequate disclosure of carbon emission information.

On April 12, 2024, the three major exchanges in Shanghai, Shenzhen and North China each officially released the Sustainability Report (Trial), which requires eligible listed companies to establish and publish a sustainability disclosure framework by April 30, 2026, to disclose information on carbon emissions, and encourages third-party audits to ensure the accuracy and transparency of the data. The guidelines also encourage reference to international standards and promote consistency with international best practices.

The Hong Kong Stock Exchange on the H-share market, as early as 2015 has been gradually listed companies to disclose carbon emissions information to put forward requirements, the Hong Kong Stock Exchange issued the *Environmental, Social and Governance Reporting Guidelines* greenhouse gas emissions and emissions intensity into the “non-disclosure of the explanation of the” entries. The third edition of the Guidelines, which came into effect in July 2020, further emphasizes the disclosure requirements for climate-related information, including policies, actions and their impact on issuers on material climate-related matters, as well as Scope 1 and Scope 2 GHG emissions. In November 2021, the HKEx issued the Climate Disclosure Guidelines, which added a new disclosure requirement for Scope 3 emissions, reflecting a focus on the carbon footprint of the entire value chain. On April 19, 2024, the Stock Exchange issued a Consultation Summary on Climate Disclosure Requirements, and greenhouse gas emissions disclosure will be phased in as mandatory disclosure from January 1, 2025 onward.

In practice, *Observation Report on Carbon Emission Information Disclosure of A&H-share Listed Companies in Chemical Industry in Yangtze River Delta* (the report involving H-share listed companies in the six issues of PECC), we found that the eight H-share listed companies involved in the report have

actively disclosed carbon emission related information under the guidance and constraints of the carbon disclosure policy of the H-share market, which involves the response to climate change and carbon emission data, and has been performing well, which indicates that Exchange disclosure requirements are highly effective in guiding and regulating the disclosure of carbon emission information by listed companies.

## **1.2 International carbon disclosure policy**

At present, the international community's concern about climate change has reached an unprecedented level, and, according to incomplete statistics, nearly two dozen countries and regions have taken practical action to address this global challenge by formulating relevant laws, regulations and policies. These measures generally include the establishment of mandatory accounting and reporting systems for carbon emissions, aimed at ensuring transparency and facilitating the achievement of emission reduction targets. Further, some countries have introduced mandatory greenhouse gas disclosure for listed companies as a means of strengthening the role of markets in monitoring environmental impacts.

### **(1) International Common Criteria**

The Task Force on Climate-Related Financial Disclosure (TCFD) officially released its full Climate-Related Disclosure Recommendations report in June 2017, encouraging companies to voluntarily adopt the standard.

治理	战略	风险管理	指标和目标
披露企业关于气候相关风险和机遇的治理情况	如果该等信息具有重要性，则披露气候相关风险和机遇对公司的业务、战略和财务规划造成的实际和潜在影响。	披露企业如何识别、评估和管理气候相关风险。	如果该等信息具有重要性，则披露评估和管理有关气候相关风险和机遇时使用的指标和目标。
a)描述董事会对气候相关风险和机遇的监督情况。	a)描述企业在短期、中期和长期识别的气候相关风险和机遇。	a)描述企业识别和评估气候相关风险的流程。	a)披露企业按照其战略和风险管理流程评估气候相关风险和机遇时使用的指标。
b)描述管理层在评估和管理气候相关风险和机遇方面的职责。	b)描述气候相关风险和机遇对公司的业务、战略和财务规划的影响。	b)描述企业管理气候相关风险的流程。	b)披露范围1、范围2和（如适用）范围3温室气体排放和相关风险。
	c)描述企业的战略韧性，并考虑不同气候相关情景（包括气温上升2°C或低于2°C的情景）。	c)描述如何将识别、评估和管理气候相关风险的流程纳入企业全面风险管理。	c)描述企业在管理气候相关风险和机遇时使用的目标以及目标完成情况。

Figure 2 TCFD's Recommendations and Disclosure of Information on the Recommendations






	International	European Union		United States
	Framework	Standards		Laws/Regulations
Organization				 
Short Title	Recommendations	IFRS S1 and S2	ESRS	CSRD      SEC Proposal
Focus	Climate Change	Sustainability	Sustainability	Sustainability      Climate Change
Required <sup>1</sup>	Voluntary	Voluntary	Required	Required      Required
Materiality <sup>2</sup>	Financial	Financial	Financial/Impact	Financial/Impact      Financial
Finalized	2017	2023	2022 <sup>3</sup>	2022      Proposed
<b>Incorporate or draw from the Task Force's 11 recommended disclosures</b>				
<small>1. IFRS S1 and S2 are not required until jurisdictional authorities mandate their use.  2. See Figure D2 (p. 85) for descriptions of materiality.  3. EFRAG delivered final draft standards to the European Commission in late 2022. In July 2023, the European Commission adopted the first set of standards.</small>				

Figure 3 Disclosure policy based on TCFD recommendations

In June 2023, the International Sustainability Standards Board (ISSB) formally issued the first two final drafts of its sustainability disclosure standards for international financial reporting, of which International Financial Reporting Sustainability Disclosure Standard 2 - Climate-Related Disclosures (IFRS S2) requires companies to report total Scope 1, 2 and 3 greenhouse gas emissions with reference to the Greenhouse Gas Accounting Framework (GHG Protocol)

to report total Scope I, II and III GHG emissions, and to disclose the sources of Scope III GHG accounting data. In July of the same year, the Financial Stability Board (FSB) announced that the work of the TCFD had been completed and that the TCFD was dissolved in October 2023.

TCFD recommendations, recommended disclosures and guidance	IFRS S2
<b>Governance</b> Disclose the company's governance around climate-related risks and opportunities.	<b>Governance</b> Disclose information that enables users of general purpose financial reports to understand the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.
<b>Recommended disclosure a)</b> Describe the board's oversight of climate-related risks and opportunities.	IFRS S2 is broadly consistent with recommended disclosure a). IFRS S2 requires the disclosure of <b>more detailed information</b> —for example, how a governance body's or individual's responsibilities for climate-related risks and opportunities are reflected in terms of reference, mandates, role descriptions and other related policies applicable to that body or individual.
<b>Recommended disclosure b)</b> Describe management's role in assessing and managing climate-related risks and opportunities.	IFRS S2 is broadly consistent with recommended disclosure b).
TCFD recommendations, recommended disclosures and guidance	IFRS S2
<b>Strategy</b> Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy and financial planning where such information is material.	<b>Strategy</b> Disclose information that enables users of general purpose financial reports to understand a company's strategy for managing climate-related risks and opportunities.
<b>Recommended disclosure a)</b> Describe the climate-related risks and opportunities the company has identified over the short, medium and long term.	IFRS S2 is broadly consistent with recommended disclosure a). IFRS S2 also requires a company to refer to and consider the applicability of <b>industry-based disclosure topics in its industry-based guidance</b> in identifying climate-related risks and opportunities. IFRS S2 also requires disclosure of <b>more detailed information</b> about where in the company's business model and value chain risks and opportunities are concentrated.
TCFD recommendations, recommended disclosures and guidance	IFRS S2
<b>Recommended disclosure b)</b> Describe the impact of climate-related risks and opportunities on the company's businesses, strategy and financial planning.	IFRS S2 is broadly consistent with recommended disclosure b). IFRS S2 requires disclosure of <b>more detailed information</b> describing the effects of climate-related risks and opportunities. For example, how a company has responded to, and plans to respond to, the identified risks and opportunities, any transition plans it has and how it plans to achieve its climate-related targets. In the requirements related to the current and anticipated effects of climate-related risks and opportunities on a company's financial position, financial performance and cash flows, IFRS S2 sets out <b>criteria for circumstances in which quantitative and qualitative information is required</b> . Companies are permitted to disclose only qualitative information in some circumstances—for example, if a company <b>cannot separately identify the effects of the risk or opportunity or if the level of measurement uncertainty involved is too high</b> . IFRS S2 requires a company preparing disclosures on the anticipated financial effects of climate-related risks and opportunities to use <b>all reasonable and supportable information that is available at the reporting date without undue cost or effort</b> . IFRS S2 also provides that a company <b>use an approach that is commensurate with the company's circumstances</b> in preparing disclosures about the anticipated financial effects of a climate-related risk or opportunity.
TCFD recommendations, recommended disclosures and guidance	IFRS S2
<b>Recommended disclosure c)</b> Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	IFRS S2 is broadly consistent with recommended disclosure c). <b>However, IFRS S2 does not specify particular scenarios for a company to use in its climate-related scenario analysis.</b> <sup>(a)</sup> IFRS S2 requires a company to provide <b>additional information</b> regarding its resilience on: <ul style="list-style-type: none"> <li>• significant areas of uncertainty the company has considered in its assessment;</li> <li>• the company's capacity to adjust and adapt its strategy and business model over time; and</li> <li>• how and when the company has carried out its climate-related scenario analysis.</li> </ul> IFRS S2 provides that a company carrying out climate-related scenario analysis <b>use an approach that is commensurate with the company's circumstances and consider all reasonable and supportable information that is available at the reporting date without undue cost or effort</b> .
<small>(a) IFRS S2 does not specify particular scenarios for a company to use in its climate-related scenario analysis because the relevant scenarios would depend on the company's facts and circumstances, including the nature and location of its operations and the physical and transition risks to which it is exposed. IFRS S2 requires a company to select scenarios that are relevant to its circumstances in order to provide useful information to users of general purpose financial reports and to explain which climate-related scenarios it has used, including whether they are related to transition or physical risks and whether the company used, among its scenarios, a climate-related scenario aligned with the latest international agreement on climate change.</small>	

Figure 4 IFRS S2 Climate-related disclosures vs. TCFD proposals (reprinted November 2024)

## **(2) EU Carbon Disclosure Standard**

The European Union has been particularly prominent in the exploration and practice of international carbon disclosure policies, demonstrating its leadership and foresight in global action against climate change, building a multi-level, all-encompassing carbon disclosure framework, and successively promulgating laws and regulations such as *the Sustainable Finance Disclosure Regulation*, *Taxonomy Regulation*, *Green Bond Standard*, etc. The European Union is also a member of the European Parliament and the Council of the European Union. The company has promulgated laws and regulations such as the Sustainable Finance Disclosure Regulation, the Taxonomy Regulation, and the Green Bond Standard.

In November 2022, the European Union formally adopted *the Corporate Sustainability Reporting Directive* (CSRD). The directive makes it clear that uniform standards should be adopted to mandatorily regulate the disclosure of corporate non-financial information, and the quality of disclosure should be ensured through an independent assurance mechanism, so as to further strengthen the supervision of corporate ESG information disclosure. With this, the EU has become the first developed economy in the world to adopt a unified standard for corporate ESG reporting, officially opening a new chapter in the independent development of sustainability reporting guidelines. In addition to this, the Directive significantly expands the requirements for corporate carbon reporting to include more medium-sized enterprises and non-EU multinationals, requiring disclosure of their environmental, social and governance performance, in particular carbon emissions data, including Scope I, II and III emissions.

In July 2023, the EU also issued *the European Sustainability Reporting Standards* (ESRS) as a supplement to the Corporate Sustainability Reporting

Directive, with a special emphasis on disclosure of carbon emissions, requiring companies to provide detailed carbon footprint data and ensure that this information is true and accurate. The two policies explicitly require companies to disclose Scope 1, 2 and 3 carbon emissions and provide for mandatory forensics on the content of the reports. It is worth noting that the Act not only targets large EU companies, but also includes all companies listed on EU regulated markets, as well as non-EU companies with an average annual turnover in the EU of more than a certain amount and with local subsidiaries or branches, implying that certain Chinese companies doing business in the EU will also need to comply with the disclosure requirements of the Act. In addition, the EU has adopted targeted measures in specific industry sectors. For example, the *New Batteries Act*, enacted in August 2023, requires battery manufacturers to not only disclose the carbon footprint value of their products, but also to provide a declaration of the carbon footprint rating, and sets a maximum threshold limit for the carbon footprint. This not only helps consumers make more environmentally friendly choices, but also promotes technological innovation and resource recycling in the battery industry.

In July 2024, the European Union issued the Corporate Sustainability Due Diligence Directive (CSDD), which requires companies to have a climate transformation plan, a warming target of 1.5 degrees Celsius, and to disclose Scope 1 2 3 emissions data. At the same time, for companies with more than 1,000 employees, board remuneration needs to be linked to climate transformation goals. CSDD's inclusion in the Climate Transformation Program plays an important complementary role to CSRD.

### **(3) U.S. Carbon Disclosure Policy**

The United States has likewise demonstrated a positive attitude and action in carbon disclosure policies, adopting a series of regulations to improve the

transparency of corporate carbon emission information and promote the development of a green economy. On March 21, 2022, the U.S. Securities and Exchange Commission (SEC) issued a proposal to “Enhance and Standardize Climate-Related Disclosure to Serve Investors,” which would require publicly traded companies to disclose information about greenhouse gas (GHG) emissions related to their business, including Scope I, II, and III, and the implementation of this rule marks a step forward in mandatory carbon disclosure in the United States. The implementation of this rule marks an important step towards mandatory carbon disclosure in the United States. On September 27, 2023, the U.S. Congress passed the Energy Innovation and Carbon Dividend Act of 2023, which contains a fee on the carbon content of fuels, including crude oil, natural gas, coal, or any other product derived from those fuels. The bill also requires the Department of Energy to enter into an agreement with the National Academy of Sciences to study and report on the various impacts associated with the carbon fee and emissions reduction schedule established by the bill.

On March 6, 2024, the SEC formally adopted the proposal to “Enhance and Standardize Climate-Related Disclosures to Serve Investors” and issued a final climate-related disclosure rule (the “Final Rule”), which will require publicly traded companies and companies applying to go public to disclose climate-related information, including detailed information about risks, costs, activities, and oversight, in their annual reports and registration statements for listing. The Final Rules require listed companies and companies seeking to list to disclose climate-related information in their annual reports and registration statements, including detailed information on risks, costs, activities, and oversight. The final rule largely references the TCFD requirements, but does not fully follow them in terms of recommendations; for example, the final rule does not require disclosure of executive compensation related to climate-related issues. The SEC announced a moratorium on this new rule on



April 4, 2024, pending the outcome of the judicial review.

The Greenhouse Gas Protocol (GHG Protocol) issued a research report in October 2024 highlighting the similarities and differences between the IFRS S2, ESRS, and SEC climate-related disclosure rules, see Table 1

Table 1 Similarities and differences in disclosure rules related to the three climates

<b>catalog</b>	<b>IFRS S2 climate-related disclosures</b>	<b>European Sustainability Reporting Standard (ESRS)</b>	<b>U.S. Securities and Exchange Commission (SEC) Rules</b>
<b>summarize</b>	Meeting investor demand for emissions measurements with the GHG Protocol	Communicate significant impacts on people and the environment with direct reference to the GHG Protocol	Meet investor needs without assigning specific protocols or standards
<b>direct quotation</b>	Direct reference to GHG Protocol's Corporate Standard (2004) and Scope 3 Standard (2011)	Direct reference to GHG Protocol's Corporate Standard (2004) and Scope 3 Standard (2011)	Allow registrants to select the EAS of their choice, including the GHG Protocol
<b>Organizational boundaries</b>	IFRS S2 and Enterprise Standard (2004) are consistent in terms of organizational boundaries, allowing for a choice of equity shares and control methods	ESRS E1 requires the use of financial control methods, while the Enterprise Standard (2004) allows for a choice of equity share and control methods	Allow registrants to choose the method of determining organizational boundaries, but must disclose the method used
<b>Operational Boundaries</b>	IFRS S2 requires disclosure of Scope 1, 2 and 3 GHG emissions, the Corporate Standard (2004) requires disclosure of Scope 1 and 2 emissions only.	ESRS E1 requires disclosure of scope 1, 2 and significant scope 3 GHG emissions	Require disclosure of only Scope 1 and Scope 2 GHG emissions that are material to investors
<b>Scope 2 emissions</b>	IFRS S2 requires location-based disclosure and separate disclosure of contractual instrument information; ESRS	ESRS E1 and GHG Protocol are aligned for Scope 2 emissions, requiring dual reporting	Not specify methodologies for reporting Scope 2 emissions, but

	E1 and GHG Protocol are aligned on Scope 2 emissions and require dual reporting		encourage the use of market-based and location-based methodologies
<b>Scope 3 emissions</b>	IFRS S2 requires disclosure of Scope 3 GHG emissions and uses its own Scope 3 measurement framework; ESRS E1 requires disclosure of GHG emissions for all 15 Scope 3 categories	ESRS E1 requires disclosure of GHG emissions for all 15 Scope 3 categories	Not required to report scope 3 emissions
<b>removes</b>	IFRS S2 requires biological emissions and GHG removals to be reported separately from the scope	ESRS E1 requires GHG removals and biological emissions to be reported separately from the scope	No explicit reference to reporting biological emissions or GHG removals

#### (4) UK Carbon Disclosure Policy

The UK is a world leader in this regard, with the 2013 revision of the *Companies Act 2006* requiring all companies listed on the London Stock Exchange to disclose their greenhouse gas emissions data from September 2013, marking the UK as the first country to implement such a mandatory carbon disclosure policy. Over time, the scope of application of the policy has been further extended to include not only local companies but also overseas entities that are effectively controlled or operated by UK-listed companies. This initiative has greatly enhanced the awareness of UK listed companies of their environmental responsibilities in their global operations, and achieved transparent management of carbon emissions across borders, setting a worthy example for other regions to follow.

On August 2, 2023, the U.K. plans to establish Sustainability Disclosure Standards (SDS) by July 2024, based on the IFRS S1 and IFRS S2 guidelines issued by the ISSB. The new SDS will standardize the content of corporate disclosures of sustainability-related risks and opportunities and constitute

regulatory policy on sustainability matters.

## **(5) Australian Carbon Disclosure Policy**

The Australian Accounting Standards Board (AASB) issued a draft disclosure of the Australian Sustainability Reporting Standard - Climate-Related Financial Disclosures on October 23, 2023, which contains a general guideline on climate-related financial disclosures, a guideline on climate-related financial disclosures, and an ASRS reference, respectively.

The Mandatory Climate-Related Financial Disclosure Bill, passed by the Australian Senate on August 22, 2024, aims to formally require eligible businesses and asset owners to disclose climate-related financial information. The bill draws on the Australian Treasury's previously released consultation paper on a framework for climate-related financial disclosure, as well as the International Sustainability Standards Board Standards (ISSB Standards).

### **1.3 Summary**

Although, the establishment of the carbon disclosure policy system in China started relatively late, there have been a number of administrative regulations, departmental rules, departmental normative documents, and self-regulatory guidelines of stock exchanges, etc., which have made clear provisions on the compliance obligations of different types of subjects for disclosing carbon emission information.

As the national carbon emissions trading market only includes the power generation industry, the program for the inclusion of cement, iron and steel, and electrolytic aluminum industries in the carbon emissions trading market is still at the stage of soliciting opinions and has not yet been formally released.

Therefore, according to *the Interim Regulations on the Administration of Carbon Emission Trading*, only the power generation industry is currently required to disclose carbon emission information on a mandatory basis.

In addition, for listed companies, carbon disclosure in the H-share market is no longer limited to direct and indirect GHG emissions from their own operations (Scope 1 and Scope 2), but also requires disclosure of other indirect GHG emissions occurring in their value chain (Scope 3). And although the A-share market has also begun to gradually mandate listed companies to disclose carbon emissions data, the scope of mandatory disclosure only includes Scope 1 and Scope 2, and Scope 3 is still mainly to encourage disclosure.

Besides, according to incomplete statistics, with the support of national policies, 17 provincial-level regions have clarified the requirements for carbon disclosure based on the local actual situation, and have actively explored in the field of green finance. However, except for Hong Kong, Macao and Taiwan, there are still 14 regions that have not formulated relevant disclosure requirements for the time being.

Internationally, EU member states, the UK, the US and other countries are at the forefront of carbon disclosure policies, ensuring the transparency and accuracy of carbon emission information through mandatory regulations and a multi-level framework. These international experiences provide useful reference for China to further improve its carbon disclosure policy. Although China has made some progress in carbon disclosure, there is still much room for improvement, and there is a need to further strengthen the construction of the carbon emission management system, clarify the specific requirements for carbon disclosure, and gradually promote the formulation and implementation of relevant policies. In the future, China is expected to continue to deepen and expand its carbon disclosure policy and make greater contributions to the

global response to climate change.

## **2. Carbon Disclosure Platform**

### **2.1 Domestic carbon disclosure platform**

#### **(1) National Carbon Market Management Platform**

In February 2023, the National Carbon Market Management Platform was officially launched and operated as an integrated management platform serving the whole business and process of carbon emission data management, quality supervision and verification management, covering all aspects of carbon emission management, improving data accuracy and management efficiency, and providing a powerful management tool for government departments.

However, the platform's access to information is mainly limited to regulatory authorities, key emission units and third-party verification organizations, and as the general public can only access the list of key emission units through the National Carbon Market Information Network, the specific carbon emission data are not made public, which leads to a lack of transparency in the society, affects the effectiveness of public participation and supervision, and limits the support and trust of the society in carbon emission reduction targets.

Currently, the country's key emitting industries include eight major areas: petrochemicals, chemicals, building materials, iron and steel, non-ferrous metals, paper-making, domestic civil aviation and power generation. According to incomplete statistics, in 2023, there were 13 provincial-level regions that published lists related to the petrochemical industry, 12 regions that published lists of the chemical industry, 12 regions that published lists of the building materials industry, 12 regions that published lists of the nonferrous metals

industry, 12 regions that published lists of the paper industry, 11 regions that published lists of the iron and steel industry, and 11 regions that published lists of the domestic civil aviation industry list in 11 regions, while 31 regions (excluding Hong Kong, Macao and Taiwan) have published a list of the power generation industry, which is the only industry that has achieved full mandatory disclosure.

In addition, there is a wide variation in the timing of the publication of the lists by provinces and cities, with some doing so at the end of the year and others waiting until the following year. This timing variability further reflects the varying degrees of progress in disclosing carbon emissions information in different regions.

## **(2) Enterprise environmental information disclosure system in accordance with the law**

The *Administrative Measures* provide that eligible enterprises shall disclose environmental information from January 1 to December 31 of the previous year by March 15 of each year. Therefore, in order to strengthen the supervision and guidance of enterprises that disclose environmental information in accordance with the law, and to promote the establishment of a sound management system for the disclosure of environmental information in accordance with the law, various regions have begun to set up a system for the disclosure of environmental information in accordance with the law (hereinafter referred to as the “Information Disclosure System”). The information column on carbon emissions set up by the information and disclosure system discloses, among other things, the actual annual emissions of the year covered by the annual environmental report, the actual emissions of the previous year, information on the clearance of allowances, information on emission facilities, and accounting methods.

I 碳排放情况	
本年度实际排放量(kg): 279934000	上年度实际排放量(kg): 301464000
配额清缴信息: 完成配额清缴	是否编制发布报告: 是
发布网址: <a href="https://enterprise.cets.org.cn/">https://enterprise.cets.org.cn/</a>	报告发布信息:
排放设施信息: 主要包括3台75t/h循环流化床锅炉、2台背压式汽轮发电机组(1台6MW、1台12MW), 以及配套的控制装置和脱硫脱硝等装置。	温室气体排放核算方法: 《企业温室气体排放核算与报告指南 发电设施》

Figure 5 Carbon Disclosure Field of the Information Disclosure System

Combined with the communication with the government and enterprises during the previous six carbon disclosure report studies, the annual information filing by enterprises needs to be opened by the provincial department first, after which the enterprises can fill in, modify or supplement the relevant information. As a result, some of the enterprises that have written to us and need to supplement the relevant information of the previous year either need to contact the ecological environment department to open the authority to fill in the report of the previous year, or can only make supplementary disclosure in the form of temporary disclosure in the current year.

In addition, PECC also found that the letter disclosure system in Hebei and Beijing would be inaccessible from time to time. In response to the situation, PECC made a request to the Hebei Province Ecological Environment Department and the Beijing Municipal Bureau of Ecology and Environment respectively in late November, and received official replies from the two departments. The Beijing Municipal Bureau of Ecology and Environment indicated that the link to Beijing's information disclosure system has been updated, and the detailed link can be obtained through the Voice of Beijing Environment. The Hebei Provincial Department of Ecology and Environment also provided a new link to the information disclosure system.



Figure 6 Hebei Provincial Information Disclosure System cannot be accessed

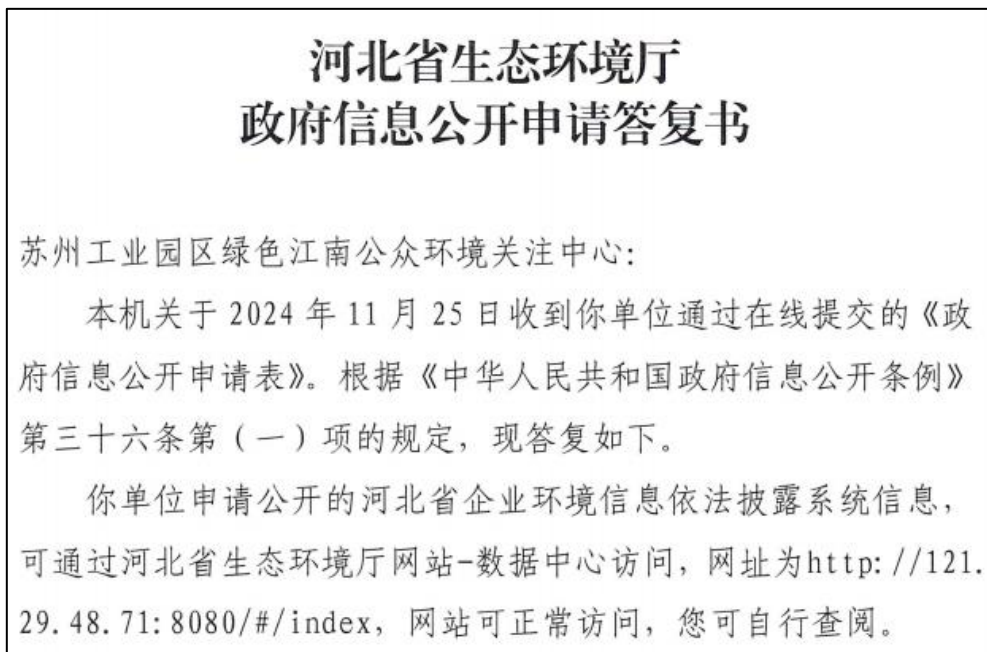


Figure 7 Written reply from the Hebei Provincial Department of Ecology and Environment

Individual regions such as Jiangsu and Zhejiang require security verification before accessing the annual environmental information reports filed by enterprises, which increases the process of public access.





Figure 8 Security Verification Required for Jiangsu Province Information Disclosure System

It is worth mentioning that the Shaanxi Provincial Information Disclosure System has added a “Feedback” column in the “Operation” column to facilitate public supervision and feedback. PECC had provided feedback on the lack of disclosure of 47 hazardous waste management companies one by one through the column in mid-July, but no response has been received. Based on the situation, PECC wrote to the Shaanxi Provincial Department of Ecology and Environment by sending a letter at the end of November. As of the publication of the report, no reply has been received.



Figure 9 No response to public feedback at this time

### (3) Industry Carbon Disclosure Platform

In addition to the unified national disclosure platform, some industries have also constructed industry carbon disclosure platforms under the organization of relevant departments, such as the automobile, iron and steel, and electromechanical industries.

As a major carbon emitter, low-carbon development of the automotive industry is of great significance, but the current domestic automotive industry carbon emission reduction work there are still significant problems: carbon accounting standards and data are missing, carbon emission reduction at the level of implementation of the industry chain synergy is not strong, weak awareness of carbon reduction by enterprises, etc., it is difficult for the automotive industry to collaborate to reduce carbon, China's automotive industry chain carbon disclosure platform will be effective in solving the above problems. As of April 30, 2024, the China Automotive Industry Chain Carbon Disclosure Platform has made public the carbon footprint data of more than 6,200 passenger cars including their parts and materials, including the whole life cycle carbon

emission data, involving carbon footprint, carbon emission reduction and other information, in order to enhance the industry's carbon emission reduction capability and promote green consumption. For example, the Ideal MEGA Ultra has a product carbon footprint of 269.28gCO<sub>2</sub>e/km per unit mileage.

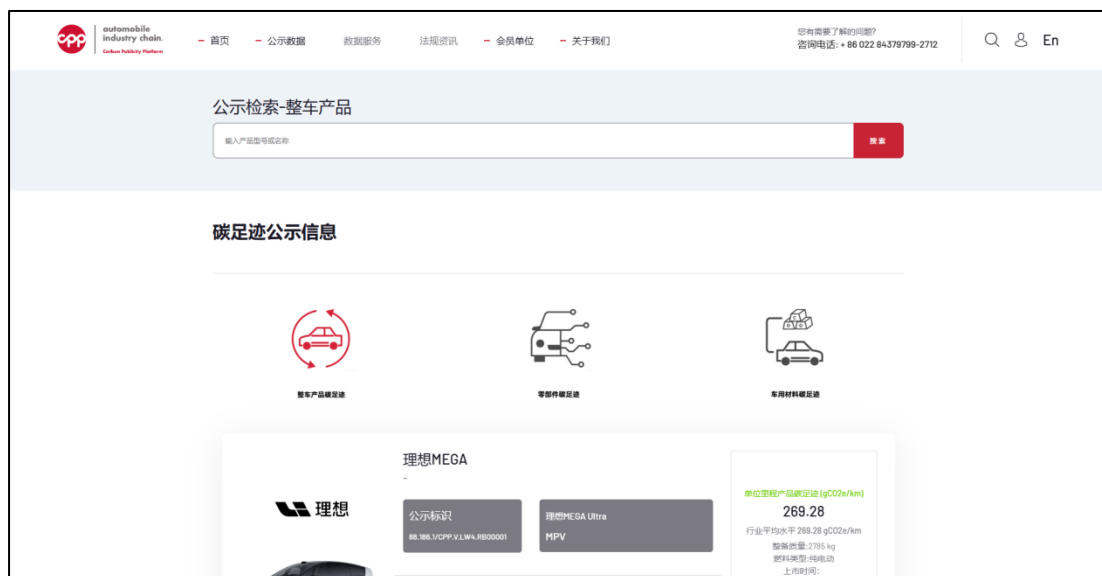


Figure 10 Carbon Disclosure Platform for Automotive Industry Chain

On May 19, 2022, under the organization and leadership of China Iron & Steel Industry Association (CISIA), the EPD platform for the whole steel industry chain was first launched on line, which became a landmark event in the history of green and low-carbon development of China's iron and steel industry. The EPD platform for the steel industry is committed to becoming one of the most important means for the steel industry to complete environmental performance assessment with high quality, helping downstream enterprises to obtain accurate environmental information on upstream steel materials and realize green procurement, and helping enterprises to formulate and realize carbon reduction roadmap more scientifically by carrying out the environmental performance assessment of the whole life cycle of their products. As of June 2024, steel companies have issued a total of 129 EPDs (Environmental Product Declarations) (103 EPDs for steel products, 21 EPDs for ore products, 3 EPDs for air separation products, and 2 EPDs for scrap recycling services).



Figure 11 Steel Industry Chain EPD Platform

China E&E Industry Dual Carbon Disclosure Platform mainly discloses the carbon footprint information of E&E products, aiming to promote the green and low-carbonization process of the E&E industry, and to ensure that the carbon emissions of products are transparent, traceable and verifiable. Currently, the platform has covered hundreds of products from over a hundred companies, forming a resilient and highly transparent dual-carbon information ecological network. The establishment of the platform responds to the national strategic plan on carbon peak and carbon neutrality, and meets the transformation needs of Chinese E&E enterprises in the face of increasingly stringent green and low-carbon standards at home and abroad.

序号	产品照片	产品名称/企业名称	碳足迹标准	核算周期	碳足迹	认证机构	报告
1		南孚聚能环4代7号碱性电池 净重11g, 50mA电流模式下电池最低容量为1235mAh 福建南孚电池有限公司	CFP	2023.01.01 - 2023.12.31	0.0500 kgCO <sub>2</sub> e 一节南孚聚能环4代7号碱性电池(净重11g, 50mA电流模式下电池最低容量为1235mAh)	TÜV南德	<a href="#">查看</a>
2		南孚聚能环4代5号碱性电池 净重24g, 50mA电流模式下电池最低容量为2880mAh 福建南孚电池有限公司	CFP	2023.01.01 - 2023.12.31	0.1023 kgCO <sub>2</sub> e 一节南孚聚能环4代5号碱性电池(净重24g, 50mA电流模式下电池最低容量为2880mAh)	TÜV南德	<a href="#">查看</a>
3		TECHSTORM 195 固化剂 195 通生天合材料科技(上海)股份有限公司	CFP	2023.01.01 - 2023.12.31	6.1921 kgCO <sub>2</sub> e 1 kg TECHSTORM 195 固化剂	SGS	<a href="#">查看</a>
4		TECHSTORM 190 环氧树脂 190 通生天合材料科技(上海)股份有限公司	CFP	2023.01.01 - 2023.12.31	6.0686 kgCO <sub>2</sub> e 1 kg TECHSTORM 190 环氧树脂	SGS	<a href="#">查看</a>

Figure 12 Double Carbon Disclosure Platform for China's Electrical and Mechanical Industry

#### (4) Other disclosure platforms

##### A. Sichuan Carbon Disclosure Platform

Sichuan Carbon Disclosure Platform is the first provincial-level greenhouse gas emissions disclosure platform in China. According to the provisions of the Notice on the Orderly Development of Greenhouse Gas Emission Information Disclosure for Enterprises (Affairs), issued by the Sichuan Provincial Development and Reform Commission, Sichuan Province is gradually expanding the coverage of greenhouse gas disclosure enterprises in three phases: In the first phase, that is, in 2018, enterprises (enterprises) with annual GHG emissions of 1.3 million tons of carbon dioxide equivalent and above (annual energy consumption of 500,000 tons of standard coal and above) took the lead in disclosing information on GHG emissions; In the second phase, i.e., 2019, thermal power generators (including captive power

plants) with annual GHG emissions of 26,000 tons of carbon dioxide equivalent and above (annual energy consumption of 10,000 tons of standard coal and above) will disclose information on their GHG emissions; In the third stage, that is, in 2020 and beyond, enterprises (enterprises) in key emitting industries with annual greenhouse gas emissions of 26,000 tons of carbon dioxide equivalent or more (annual energy consumption of 10,000 tons of standard coal or more) will disclose information on greenhouse gas emissions. It will also explore the disclosure of GHG emissions information by public organizations.

The disclosure area of the Sichuan Carbon Disclosure Platform categorizes industries according to public institutions, chemical, paper-making, and non-ferrous industries, and focuses on public disclosure reports on greenhouse gas emissions, which include annual greenhouse gas emissions data and greenhouse gas emissions control actions.



Figure 13 Sichuan Carbon Disclosure Platform

## B. Blue Map

Blue Map is a public welfare platform for environmental information disclosure developed by the Institute for Public and Environmental Studies (IPE), aiming to collect, organize and analyze environmental information disclosed by the government and enterprises, build an environmental information database and two application platforms, the Blue Map website and the Blue Map APP, to promote the disclosure of environmental information and the improvement of the mechanism of environmental governance, to improve the transparency of environmental information, and to further promote environmental protection and social supervision. It not only provides a corporate carbon information disclosure platform for companies to publicize their own carbon emission information, but also includes carbon footprint data of nearly 30,000 products for easy access by related parties and the public.

In addition, the Blue Map APP has also launched “Carbon Easy Check”, which allows you to check the carbon emission data implicit in products by taking a picture with your hand, linking to the public, helping the public to understand the carbon footprints of daily consumer products, and helping the public to consume in a green and low-carbon way.

产品碳足迹披露与检索平台  
27814

请输入您要搜索的产品名称、企业名称、品牌名称

全部 衣 食 住 用 行 工业 农业 服务

共27,814个产品碳足迹数据

编号	产品名称	碳足迹	核算边界	数据时间
1	DEEPAL S07 Battery Electric Vehicle	0.17kgCO <sub>2</sub> e/1千米, 运送1名...	摇篮到坟墓	2023
2	Lynk & Co 01 plug-in hybrid electric vehicle	0.20kgCO <sub>2</sub> e/1千米, 运送1名...	摇篮到坟墓	2022
3	MacBook Pro (13-inch, M2, 2022) 256GB st...	167.00kgCO <sub>2</sub> e/台	摇篮到坟墓	2022
4	ThinkStation P340 SFF	897.00kgCO <sub>2</sub> e/每台五年使用...	摇篮到坟墓	2022
5	iPhone 14 Pro 1TB	116.00kgCO <sub>2</sub> e/部	摇篮到坟墓	2022

在线咨询  
Live Chat

Figure 14 Blue Map Website Carbon Footprint Search

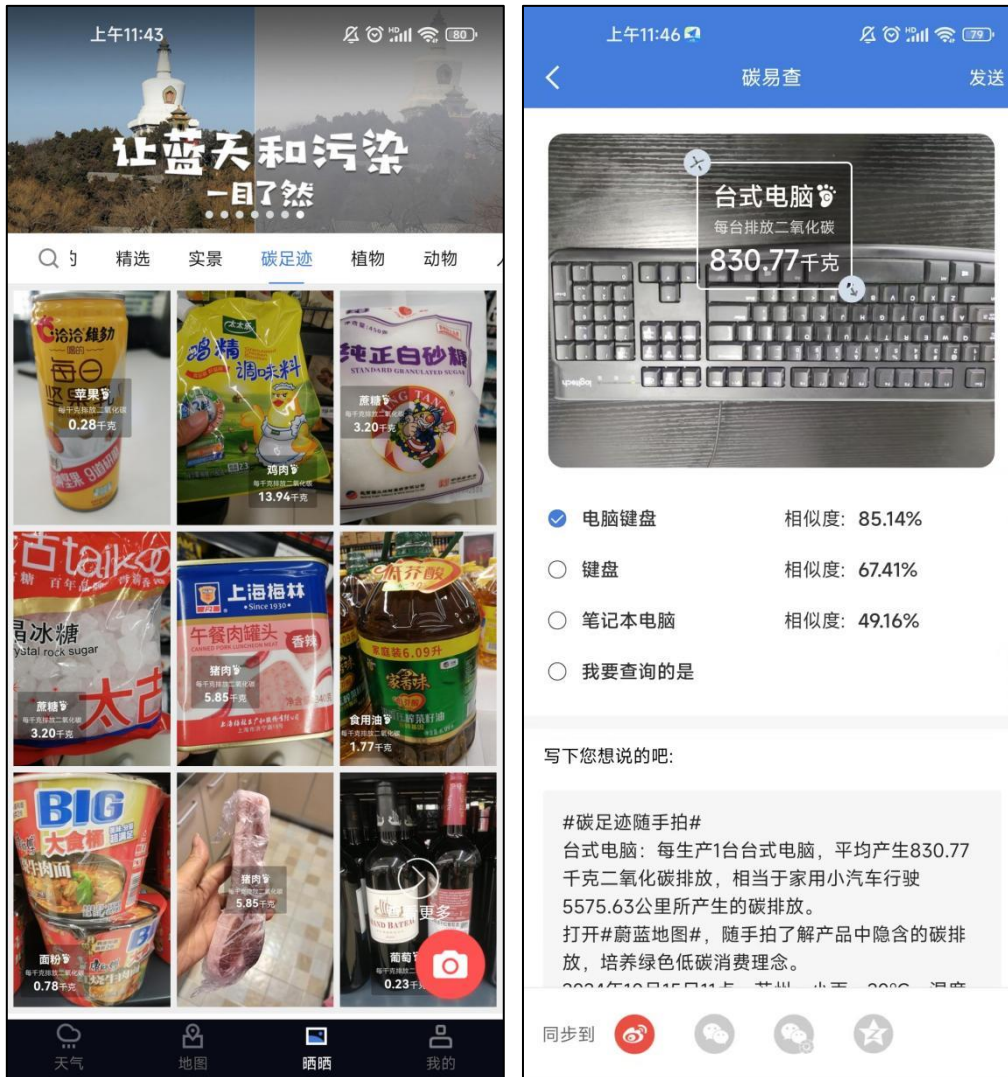


Figure 15 Blue Map APP “Carbon Easy Check”

## 2.2 Foreign Carbon Disclosure Platforms

International carbon disclosure platforms have grown significantly over the past few years, not only in number, but also in influence and application, with SBTi (Science-Based Carbon Targeting Initiative) and CDP (Carbon Disclosure Project) being two of the more well-known international platforms for carbon disclosure, but with different focuses.

SBTi focuses on helping companies set science-based emissions reduction targets, ensuring they are aligned with global climate goals, promoting



environmental sustainability and corporate competitiveness, avoiding empty carbon neutral commitments, and enhancing the credibility and persuasiveness of the targets. As of the latest statistics, more than 5,000 companies around the world have joined SBTi, committing to set science-based carbon reduction targets and make carbon disclosures. These companies are located in various industries around the world, including energy, manufacturing, finance, retail, technology and many other fields. In China, there are also many well-known companies actively participating in SBTi, such as Alibaba and Azure Holdings. By the end of September 2024, the total number of Chinese companies that have submitted/committed to submit science-based carbon targets has reached more than 800, accounting for 8% of the total number of SBTi.

COMPANY/FINANCIAL INSTITUTION	TARGETS			ORGANIZATION TYPE	View more
	NEAR TERM	LONG TERM	NET-ZERO		
(ACIP) Alexandria Company for Industrial Packages Egypt, Africa	WELL-BELOW 2°C	-	-	Small or Medium Enterprise	View more
& Co. Denmark, Europe	1.5°C	-	-	Small or Medium Enterprise	View more
10 to 2 Consulting, LLC United States of America (USA), North America	1.5°C	-	-	Small or Medium Enterprise	View more
100 Percent Group Limited United Kingdom (UK), Europe	1.5°C	-	-	Small or Medium Enterprise	View more
2 Sisters Food Group United Kingdom (UK), Europe	COMMITTED	-	COMMITTED	Company	View more
2 Sisters Storteboom B.V. Netherlands, Europe	COMMITTED	-	COMMITTED	Company	View more
2-Connect Denmark, Europe	1.5°C	-	2050	Small or Medium Enterprise	View more

**9799** Total no. of companies

**6353** Companies with approved targets

**Key**

- SBTi publicly discloses temperature alignment based on the ambition of a company's scope 1 and 2 targets. Scope 3 targets are also evaluated during the target validation process. We thoroughly review scope 3 ambition to ensure it meets the temperature alignment or supplier engagement specifications outlined in the SBTi criteria. We are carrying out a comprehensive review of our scope 3 target setting methods and criteria to ensure they are fully aligned with the Net-Zero Standard.
- Organizations whose target status is 'targets set' have had their targets independently validated by the SBTi.
- Organizations whose target status is 'committed' have made a public commitment to set a science-based target aligned with the SBTi's target-setting criteria within 24 months. The 'date' column reflects the date which the

Figure 16 SBTi official website

CDP (Carbon Disclosure Project) is the world's largest carbon emissions data disclosure platform with the world's most comprehensive collection of self-reported environmental data, attracting more than \$100 trillion in global investors, and collects corporate data on climate change, forest conservation, and water management through an annual questionnaire.

CDP's reach has grown year on year, with more than 13,000 companies

globally now disclosing their environmental data through CDP, again covering all major industries. In 2023, more than 23,000 companies globally will disclose their environmental-related performance on the CDP platform, an increase of approximately 25% from 2022. The number of Chinese (including Hong Kong, Macao and Taiwan) companies participating in CDP climate change related environmental information disclosure is also increasing year by year, with only 23 Chinese companies participating in 2012, but more than 3,439 in 2023.

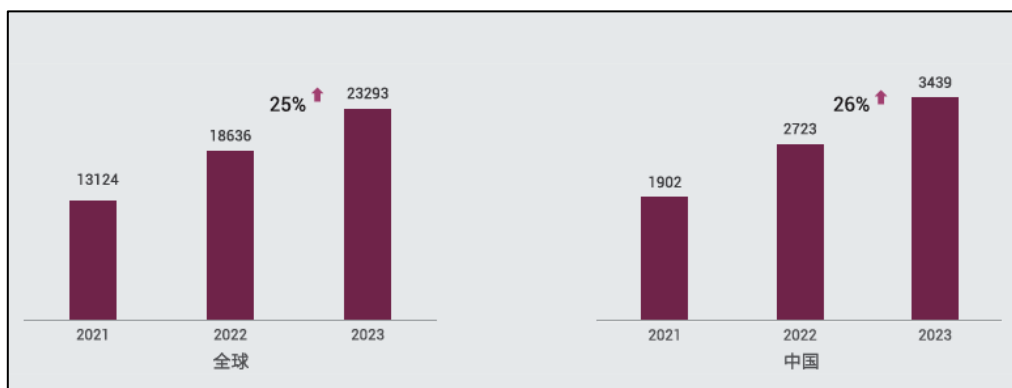


Figure 17 Global and Chinese CDP Disclosure Trends, 2021-2023

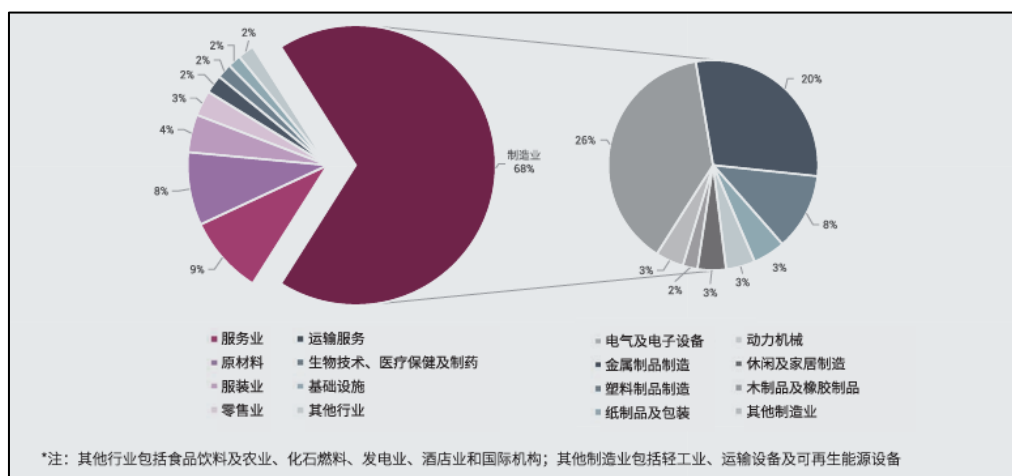


Figure 18 Industry Distribution of Chinese Companies Completing the CDP Questionnaire in 2023

The CDP Environmental Information Reporting Framework (EIRF) is one of the main ESG reporting frameworks and global disclosure systems, with other frameworks including those of the Task Force on Climate-related Financial Disclosure (TCFD), the GHG (Greenhouse Gas) Accounting System, the Global Reporting Initiative (GRI) organization, and the Science-Based Carbon

Targeting Initiative (SBTi) organization. The data collected from the CDP disclosure process allows the CDP to track the progress of companies and municipalities on multiple sustainability issues and to calculate a score for each disclosing entity, designed to provide a snapshot of an entity's environmental performance and to incentivize businesses to strengthen their management of environmental impacts. CDPs operate with self-disclosure and invited disclosure (responding to the disclosure needs of investors or clients).

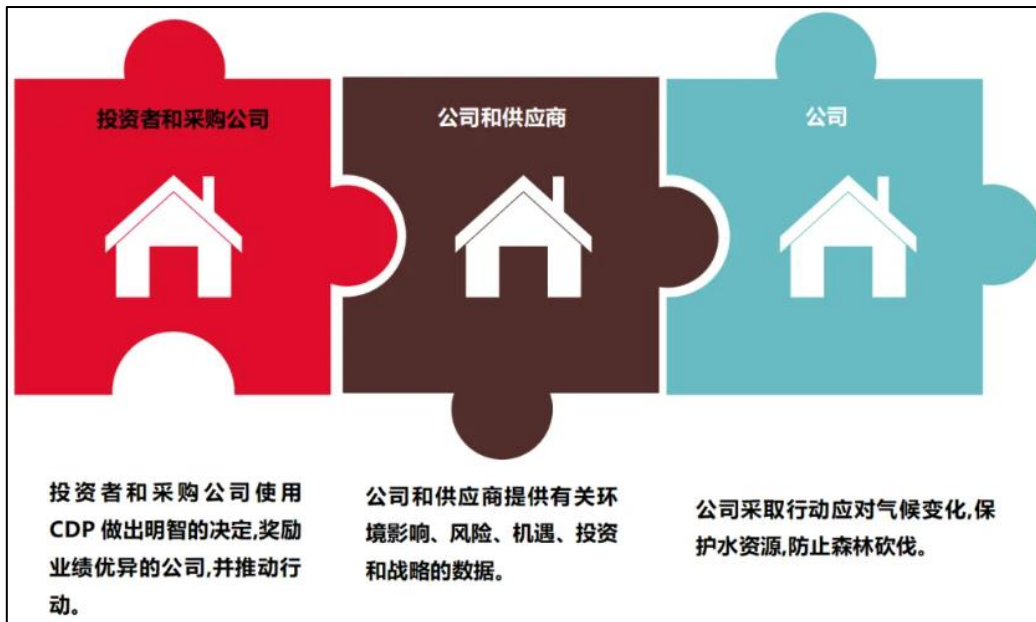


Figure 19 Autonomous disclosure

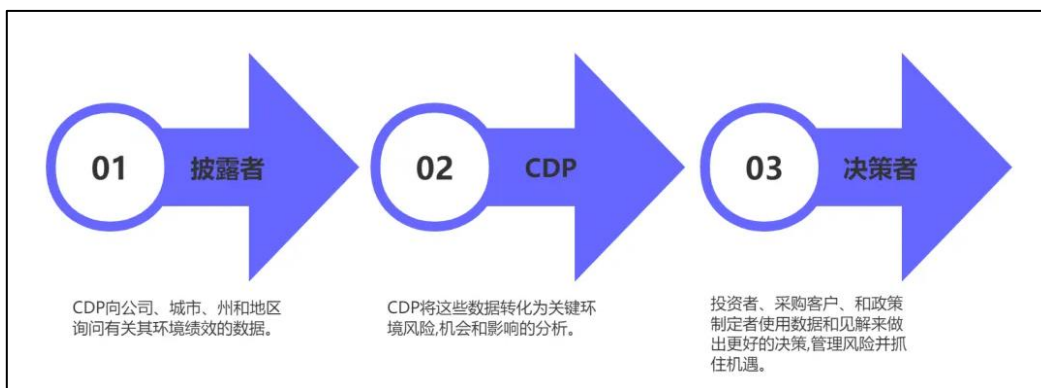


Figure 20 Invited disclosures

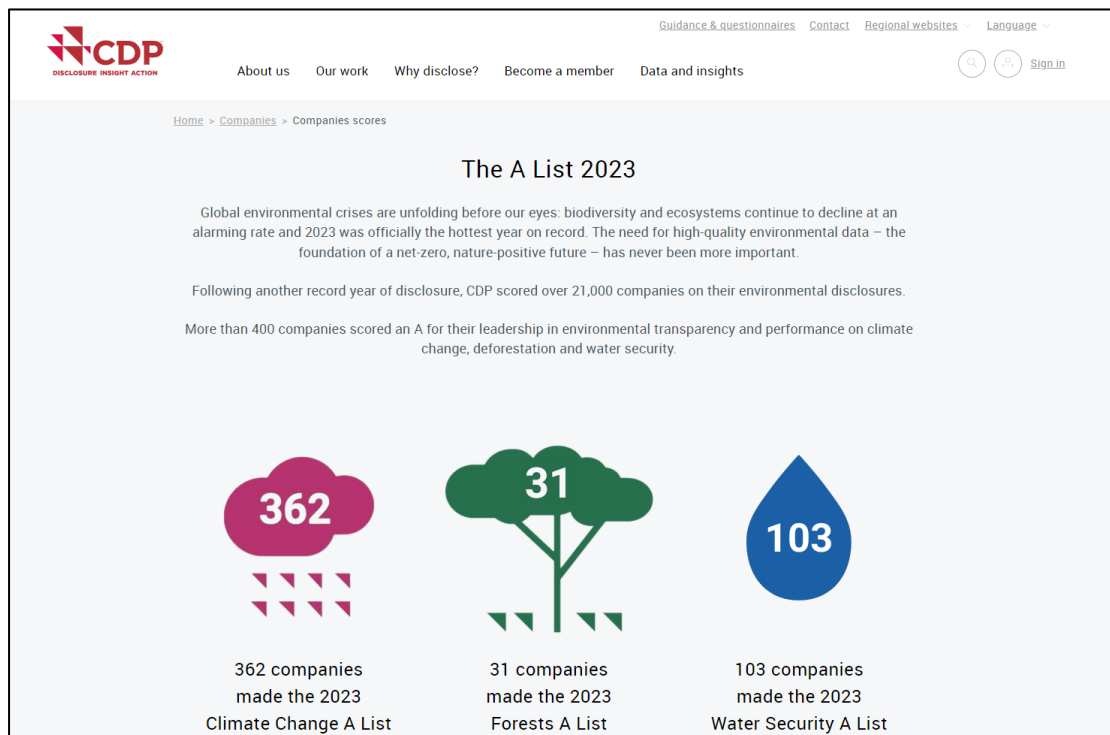


Figure 21 CDP official website

Carbon disclosure by domestic enterprises on the international platform not only enhances international competitiveness and brand image, but also adapts to the requirements of international trade and enhances recognition in the international market. By participating in information disclosure, enterprises can not only demonstrate their positive attitude and sense of responsibility in global climate governance, but also obtain international advanced carbon management and emission reduction experience, promote their own technological innovation and management improvement, improve operational efficiency and reduce costs. In addition, it will also help drive the green transformation of upstream and downstream enterprises in the supply chain, promote global climate governance, and contribute to the realization of global climate goals.

## 2.3 Summary

As global attention to climate change continues to deepen, carbon disclosure

platforms are developing rapidly at home and abroad. Domestically, various types of platforms, from governmental disclosure platforms to industry and public interest disclosure platforms, are being gradually improved, and play an important role in promoting carbon reduction and green development of enterprises while strengthening the management of carbon emission data and promoting public participation and social supervision.

Unfortunately, however, there are still some problems with the platforms, including problems with government platforms, such as limited access to information and system instability, while industry and public interest information disclosure platforms are based on voluntary disclosure by enterprises due to the absence of mandatory disclosure, and therefore the number of enterprises that have voluntarily disclosed relevant information is also limited.

Internationally, platforms such as SBTi and CDP have become an important force in pushing companies to emphasize emissions reduction and information disclosure. Although the number of Chinese enterprises participating in international climate information disclosure has been increasing year by year in recent years, it still only accounts for a minority in terms of the overall number of enterprises in the country. Therefore, it is crucial to improve the enthusiasm of enterprises to participate in climate information disclosure and expand the coverage of information disclosure.

### **3. Recommendation**

#### **3.1 Gradually expand the coverage of the carbon market, starting with key carbon emission industries**

When the national carbon emissions trading market was first launched, only

the power generation industry was mandatorily included in the market, which led to problems such as “limited participation in the industry” and “low market activity” as important factors restricting the development of the market, which also directly led to the restriction of the number of industries required to disclose carbon emissions information. This has also directly led to the restriction of the number of industries that are required to disclose carbon emission information on a mandatory basis. On March 5, 2024, Premier Li Qiang made it clear in the *Government Work Report* that the coverage of the national carbon market should be expanded. And on September 9, 2024, the Ministry of Ecology and Environment issued a draft consultation paper on the inclusion of cement, iron and steel, and electrolytic aluminum industries in the national carbon market, which is a positive response to the expansion of the scope of work.

The expansion work should not only grasp the rhythm and strength, but also scientifically and reasonably determine the time for different industries to be included in the carbon market, starting from the key industries of carbon emissions, and then expanding to all industries in a phased and step-by-step manner to ultimately achieve comprehensive coverage. This progressive strategy not only reduces the burden on enterprises, but also gradually raises the awareness and support of the whole society on the importance of carbon disclosure, and lays a solid foundation for the realization of long-term carbon emission reduction targets.

### **3.2 Enhancing public participation in carbon disclosure platforms**

In order to facilitate government regulation and corporate disclosure of carbon information, the country established a national carbon market management platform in 2023. However, access to the platform is not open to the public, resulting in the public not being able to access carbon emission data disclosed

by enterprises. And although provincial-level regions have successively established their own disclosure platforms under the guidance of the national policy, there are problems such as unstable systems, government authorization required for disclosure, and verification required for individual platforms.

Therefore, while establishing carbon information disclosure, the Government should also take into account functionality, practicality and public friendliness by opening up access rights and simplifying the process of public access to information. At the same time, it can also link up with other big data platforms to form a data-sharing mechanism and provide a reliable source of basic data for various types of organizations.

### **3.3 Improvement of legal and regulatory system**

In order to promote the effective implementation of China's carbon disclosure policy, it is crucial to establish a sound system of carbon disclosure laws and regulations. First of all, specialized carbon disclosure laws and regulations should be formulated to clarify the carbon disclosure obligations of all kinds of enterprises and ensure their mandatory and universality. Specifically, the laws and regulations should stipulate the content, timing, frequency and form of carbon information disclosure to ensure the timeliness and transparency of information, while emphasizing the disclosure of scope3. Secondly, a multi-level regulatory mechanism should be established to set up a specialized regulatory body responsible for supervising and managing carbon information disclosure, ensuring the effective implementation of laws and regulations, and forming a multi-departmental regulatory synergy.

At the same time, it is also necessary to strengthen the legal responsibility and incentive mechanism, impose administrative penalties on enterprises that fail

to disclose carbon information as required by law, and raise the cost of violating the law; and give policy support such as tax incentives and green credits to enterprises that actively fulfill their obligations of carbon information disclosure, so as to incentivize them to take the initiative to participate in carbon information disclosure.

Finally, promote local legislation and formulate implementation rules, encourage local governments to formulate specific implementation rules for carbon information disclosure in the light of local realities, ensure the effective implementation of laws and regulations at the local level, and support localities to carry out pilot demonstrations and explore carbon information disclosure models suitable for the characteristics of different regions. Through these measures, a sound system of carbon information disclosure laws and regulations can be established to provide a solid legal guarantee for the healthy operation of China's carbon disclosure platform, promote the active participation of enterprises in carbon information disclosure, and help realize the national goal of carbon peaking and carbon neutrality.

### **3.4 Promoting international harmonization**

In order to further enhance the effectiveness and international recognition of China's carbon disclosure policy, it is particularly urgent to strengthen the in-depth interface with international carbon disclosure standards and platforms. By actively participating in the international standard-setting process, we can not only ensure that domestic policies are highly consistent with international best practices, but also effectively circumvent trade frictions and market access barriers that may arise from differences in standards.

Drawing on advanced international experience and mature models, such as the standards and methodologies promoted by authoritative organizations



such as the ISO (International Organization for Standardization), will help us construct a more scientific, reasonable and transparent carbon disclosure framework, thereby enhancing the credibility and implementation of the policy.

Upgrading the internationalization of China's carbon disclosure platform not only means upgrading at the technical level, but also a comprehensive convergence in concept and practice. This will provide domestic and foreign investors with clearer and more reliable information on environmental performance, and enhance their confidence in and support for the green transformation of Chinese enterprises. At the same time, for Chinese enterprises, this means more opportunities to participate in the international green finance market, obtaining the support of capital, technology and management experience, and thus improving their competitiveness and sustainable development in the global market.