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Environmental

Social

Governance

2023 —

Environmental, Social and Governance and Sustainability Report



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Objective of the Report:
This is the first Environmental, Social and Governance (ESG) report released by China State Construction Engineering Corporation Limited. It aims to disclose the strategy, management systems, management policies, actions, and key performance of the Company's ESG efforts and to respond to key ESG topics of concern to stakeholders.

This report is guided by the United Nations Sustainable Development Goals (UN SDGs), the Global Reporting Initiative Standards (GRI Standards) published by the Global Sustainability Standards Board (GSSB), the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), and Guidelines No. 1 of Shanghai Stock Exchange on Self-regulation for Listed Companies – Standard Operation, as well as the disclosure principles of material, quantitative, balance, and consistency.

This is an annual report for the period from January 1, 2023 to December 31, 2023 (the "Reporting Period"). Some of the content looks backward or forward to make

Source of Data:

The information and data in the report are from the Company's official documents, statistical reports, publicly available information, and relevant internal data collection systems, and have been summarized and reviewed by the Company.

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CSCEC's Stakeholder Communication Mechanism

Stakeholder	Expectations for CSCEC	CSCEC's Communication and Response	
Customers (owners)	 Ensuring product quality Responding to customer needs Customer relationship management services 	 Enhancing safety and quality inspections Improving service quality Customer satisfaction surveys Customer visits and communication meetings Bidding and business negotiations Business correspondences Contract performance 	
Suppliers	Fair and just procurementSustainable supply chainStable partnerships	 Sunshine procurement (transparent procurement), green procurement, and enhancing qualification audit Supplier behavior management Bidding and business negotiations Business correspondences Contract performance and fulfilment as scheduled 	
Contractors	 Protection of legitimate rights and interests Health and safety Stable partnerships 	 Protecting the legitimate rights and interests of contractors' employees Prz8jsc92t2JhSc92t663124cS/8aTdi2a d694 3 2M6SS3-1 	1iTu[S88 d2



In 2022, we revised our IR management regulations and optimized and adjusted our institutional framework. As part of these efforts, we incorporated "Environmental, Social, and Governance (ESG) Information" into our investor communications. We also hosted special promotion events for specific categories of international investors for the first time, communicating with Singaporean investors on topics related to ESG and the domestic market landscape. Such events allowed more international investors and partners to understand and monitor CSCEC's ESG performance. In 2022 and 2023, we hosted six earnings presentations for global investors. These presentations featured a format combining on-site participation, conference calls, announcements calling for questions, live text updates, and audio/video broadcasts, which attracted more than 340,000 online views.

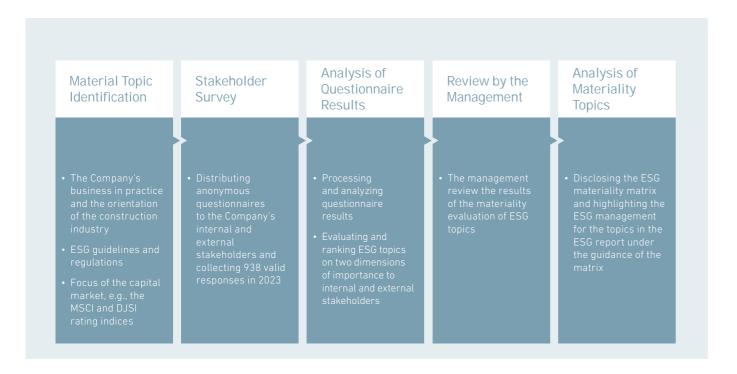
On May 15, 2022, we officially launched the "CSCEC IR" WeChat official account (hereinafter referred to as the "WeChat official account") to facilitate the Company's ESG disclosure to the capital market. On the WeChat official account, investors can access the Company's latest announcements, Board meeting information, investor communications, ESG management, investor protection, and other latest capital market news, in Irdé thereby keeping abreast of the Company's value dynamics.

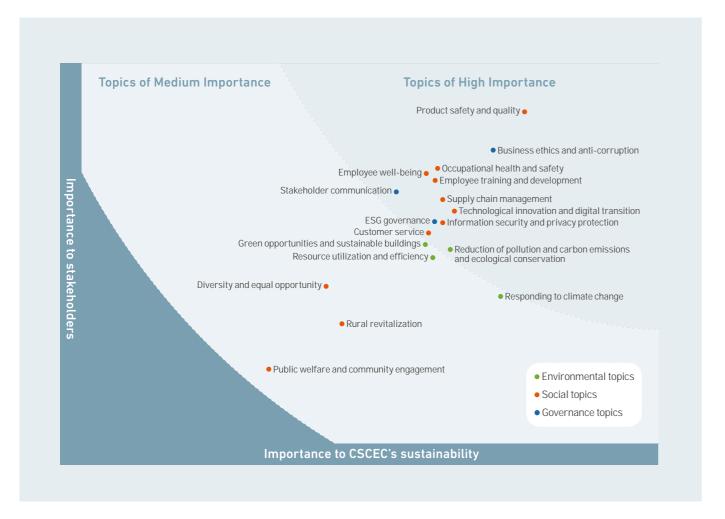
In 2022 and 2023, our IR WeChat official account made solid and orderly progress, releasing posts on business performance promotion, latest research reports, hot topics, ESG management, and investor protection. It has served as a quality information access channel for various stakeholders and won several recognitions from the domestic capital market. As of the end of the Reporting Period, the WeChat official account had made 529 posts and received a total of 150,000 views. It has operated well with a steady readership and stable growth in views.

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At CSCEC, we are committed to soliciting opinions and suggestions from our stakeholders and enhancing our ESG management in every aspect. In the two years during the Reporting Period, we distributed questionnaires to the management, employees, investors, suppliers, partners, and other internal and external stakeholders, and collected 1,555 valid responses. This feedback served as the foundation for the development of CSCEC's ESG materiality matrix for 2023, responding to stakeholders' concerns and expectations for our ESG management in a targeted manner.







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At CSCEC, we have actively responded to the United Nations Sustainable Development Goals (UN SDGs) and satisfied the requirements of SDGs in light of our business characteristics. In our ESG efforts, we continue to practice compliance, innovation, and foresight.

Chapter	Material Topics	Corresponding SDG	Our Action	Key Performance in 2023
		6 Matroin TE DR	We continuously optimize our wastewater discharge measures and install wastewater treatment equipment and facilities in compliance with mandates to ensure that our wastewater discharge adheres to established standards. We employ technical methods to enhance wastewater disposal and reuse for higher water efficiency.	We continuously optimize our wastewater discharge measures and employ technical methods to enhance wastewater disposal and reuse. We continue our efforts in water conservancy, environmental protection, and pumped storage. Moreover, we guide our subsidiaries to launch innovative models and championing green development on all fronts. Throughout the Reporting Period, no incident of adverse impacts on biodiversity caused by sewage discharge occurred to the Company.
		7 MARIN ACUR	We vigorously promote the adoption of PV power generation, air-source heat pumps, ground-source heat pumps, and other clean energy technologies,	 In 2022, 58% of the projects newly acquired by China Overseas Land & Investment, a subsidiary of CSCEC, used renewable energy sources such as solar and a energy, wherever feasible. In 2023, we actively launched projects in clean energy.
Pr		'%	providing new options for green and clean energy for the Company's sustainable development.	 water, and environmental protection to promote gre development on all fronts. From 2021 to 2023, our R&D investment in clean technology R&D was RMB 23.664 billion, RMB 30.06 billion, and RMB 32.269 billion, respectively.
omoting	• Responding to climate change		The promotion of green building certification and the R&D of	 As of the end of the Reporting Period, we had completed over 2,000 green building-certified proje of which 215 were three-star green buildings.
Sustaina	 Reduction of pollution and carbon 		We are dedicated to promoting large-scale development of green buildings, expanding green building investments and construction, and increasing the proportion of ultra-low-energy	 In 2023, we initiated ten investment, construction, o operation projects as near-zero energy/zero-carbon building demonstration projects.
bility wit	emissions and ecological conservation	↑ ■		 As of the end of the Reporting Period, we had more than 80 zero-energy building projects under construction and more than 50 projects completed.
ability with Environme Environmental	Resource utilization and efficiency			 In 2023, we undertook several major livelihood proje in Beijing, Shanghai, and Guangzhou. Particularly in Guangzhou, we invested in three representative urb renewal projects in succession, with a total investm of more than RMB 65 billion.
Promoting Sustainability with Environmental Protection Environmental	 Green opportunities and sustainable buildings 			We have established a corporate-level Leadership Gr on Carbon Peaking and Carbon Neutrality led by the Chairman, with a subordinate Working Group on Cart Peaking and Carbon Neutrality, responsible for drivin progress towards the "dual carbon" goals and releva tasks in every aspect.
			We, as an industry leader, are advancing towards the "dual carbon" goals. In this journey, we continue our efforts in	We have formulated and released CSCEC's Action Platfor Carbon Dioxide Peaking. By setting forth nine key tasks, we have defined CSCEC's objectives and strate paths for carbon peaking and carbon neutrality.
		13 气能行动	strengthening our resilience to climate risks and rationalizing our approach to greenhouse gas (GHG) emission reduction. In addition to reducing our own carbon emissions, we contribute	 In 2023, we officially launched a "ten hundred million project. We recorded 117 advanced scientific and technological achievements for carbon peaking and carbon neutrality and launched 50 demonstration projects for green and low-carbon technologies.
			to the carbon emission reduction efforts across the external industrial chain. Through these measures, we demonstrate our confidence in low-carbon development in every aspect.	We have participated in the preparation of carbon emission standards in the construction sector, include the Carbon Emission Calculation and Accounting Standard for the Urban-Rural Development Sector, an antional standard, and the Carbon Emission Calculation Stage of Industrialized Buildings, a standard of the China Association of Building Energy Efficiency.
				 In 2022, we completed a carbon inventory and preliminarily identified differentiated emission reduce paths for different types of projects.

Occupational health and safety <u>a</u> Information security and privacy protection

Corresponding Chapter Material Topics SDG

Our Action

Key Performance in 2023

We actively participate in major ecological restoration projects such as the Yangtze River Protection and the Yellow River Basin Protection and join forces in creating and sharing ecological returns in various segments of the value

• In the Hubei Zhijiang Jinhu National Wetland Park Ecological Restoration project, 668 ha of wetlands have been conserved and restored. Moreover, 510,016 m³ of water systems have been dredged, and 152,607 m² of aquatic plants have been cultivated.



community stakeholders to promote

in the community.

prosperity and sustainable development

• In 2022, 99% of the wood purchased in Hong Kong by CSCI, our subsidiary, was certified by the Forest Stewardship Council (FSC). The rate rose to 99.8% in 2023.



We are driven by our commitment to create a positive impact for the community. We have established and maintained open, transparent, and long-lasting communication channels. contributing to rural revitalization and collaborating extensively with

• In 2023, we provided non-reimbursable assistance to over 30 regions, including those under targeted assistance (Kangle, Kang, and Zhuoni Counties in Gansu Province) and those under paired assistance (Changting County in Fujian Province), benefiting a total of 317,175 people with a total investment of RMB 158 million.

• In 2023, we released a global volunteer service map. More than 1,800 volunteer organizations and 120,000 CSCEC young volunteers conducted more than 10,000 "Constructing the Future" volunteering activities, totaling more than 110,000 hours, focusing on helping the elderly and people with disabilities, flood control and disaster relief, and overseas public welfare.

Product safety

and quality

We take "zero liability accidents" as the • In 2022 and 2023, no major or above safe ultimate goal of safe production and production accidents occurred to the Company, insist on "starting from zero and striving for zero." We prevent and resolve major and the number of work-related fatalities of employees was zero for three consecutive safety risks at the source, and we have established a sound occupational health and safety management system and

 Technological innovation and digital

• We provide all basic social insurance for our employees and encourage member enterprises to provide supplementary medical insurance and enterprise annuity, thereby enhancing benefits and security.

transition

We have played an active part in the construction of the Belt and Road Initiative (BRI) We have launched campaigns such as the Constructing Happiness Library and the UP WE BUILD program and published books in Chinese

kept it running effectively. We persist

safety culture to ensure high-quality

development with a high level of safety.

in conducting safety supervision

and inspection and promoting a

and English, including the Constructing the Silk Road and Buildings Talk. These efforts have strengthened cultural exchanges with people in BRI countries and local education.

We uphold the principles of fairness

and impartiality in recruitment. During

recruitment, training, and promotion, we

never treat employees differently based

on region, age, cultural background, or

other factors.

 We have implemented the UP WE BUILD program in ten countries, including the United Arab Emirates and Sri Lanka, for more than 20,000 trainees and 6,000 local young people. boosting the local construction industry and economy.

Customer service

> • Throughout the year, no incidents of employment discrimination or illegal labor were found at the Company.

 Supply chain management

> • We hosted the Symposium on the Action of Women's Power in Scientific and Technological Innovation at Central Enterprises to promote the all-round development of female employees in their careers.



 We flexibly leveraging equity incentives for listed companies dividend incentives for tech companies, and other methods to stimulate the enthusiasm and initiative of our key teams.

mechanism in place, we uphold the principle of fair compensation distribution, ensuring double alignment between performance and compensation and scientific compensation levels, and implement

medium- and long-term incentives.

With a robust salary compensation

· Since the launch of restricted stock incentives in 2013, we have granted over 8,000 incentive

Chapter Material Topics

Corresponding SDG

Key Performance in 2023

We continue to improve our innovation management system. By developing scientific and technological innovation scientific and technological R&D and the transformation of achievements. We have established CSCEC scientific and technological innovation platforms and constructed the "2+6" system of scientific and technological innovation platforms

platforms, we continuously improve our

Our Action

including two at the national level. We were also recognized by the SASAC as an Outstanding Contributor to Scientific and Technological Innovation. During the Reporting Period, we have preliminarily completed the system of scientific and technological innovation platforms of CSCEC. • As of the end of the Reporting Period, we held 68,519 valid patents, including 6,177 invention patents and 61,865 utility model patents.

Upholding the principles of extensive consultation, joint contribution, and shared benefits, we adhere to the goals of high standards, sustainability, and benefiting the people. We continue to make community investments in charity, education, culture, and environmental protection, employee protection, health, and sports, actively fulfilling our social

• Our subsidiary China Construction Science and Industry constructed Butuka Academy, a China-Papua New Guinea (PNG) friendship School, in PNG. The project has addressed the educational issue of more than 3.000 primary and secondary school students and served as a bridge of cultural exchanges between China

• In 2023, we invested RMB 46.074 billion in R&D.

• 26 of our subsidiaries were recognized as

Specialized and Sophisticated Enterprises

· Employee wellbeing

opportunity

Faual

 Employee training and development

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Rural Revitalization

responsibility.

Guided by the ISO 9001 quality management system, we are committed to enhancing our organizational system, policy framework and supervision system for quality management. We have integrated total quality risk management and internal quality control requirements into our business management system and processes. Moreover, specific quality objectives are assigned to each level, ensuring product quality in every aspect.

We fulfill our social responsibility

in collaboration with our partners

green, and health, and accelerate

the construction of a supply chain

ecosystem characterized by mutual

trust and win-win cooperation

establish a sustainable and responsible

supply chain characterized by honesty,

compliance, openness, transparency,

- · As of the end of the Reporting Period, 189 of our subsidiaries had obtained the third-party certification of the ISO 9001 quality management system.
- In 2022 and 2023, 100% of personnel involved in projects under construction signed the Letter of Responsibility on Quality Management Obiectives.
- Throughout the Reporting Period, all completed projects achieved a 100% passing rate, with no quality accidents reported above the general level.
- In 2022 and 2023, we achieved a customer quality satisfaction rate of 95.94% and 95.86%, respectively, with a rectification completion rate
- We conduct various evaluations and

in accordance with the law

and professional experience.

- assessments of all of our partner suppliers. We supervise suppliers establish a sound safe production management system and incentivize them to contribute to safe production insurance
- We convene the Company's Project Management Conference and Project Managers' Conference, continuously improve our lean construction, and comprehensively promote cost reduction and efficiency enhancement for project. We effectively integrate services for society into the project implementation to create more betterquality construction products and environment-
- friendly construction sites. Independent directors account for more than 50% on the Board and have diversified expertise
- · We have established an ESG Working Group, encompassing 17 departments at the headquarters and our subsidiaries.
- We hosted six earnings presentations for global investors, attracting more than 340,000 online views.
- In 2022, we hosted 20 integrity training sessions and conducted over 100,000 regulatory talks on integrity for two consecutive years.

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- ESG governance
- Stakeholder communication
- Business ethics and anticorruption



We have established a corporate governance structure characterized by a clear division of powers and responsibilities, complemented by a sound anti-corruption and risk management system, striving for the stable and healthy development of the Company in the long run.

Environmenta

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At CSCEC, we always integrate environmental protection in our pursuit of highquality development and steadfastly follow a green and low-carbon development trajectory that places ecology at the forefront. We conscientiously fulfill our primary responsibility for environmental protection, implement the requirements for synergizing the reduction of pollution and carbon emissions, and regulate corporate management behaviors for the environment, energy conservation, and emission reduction. Through such a green transition, we champion sustainable development and perform our duties to facilitate the harmony between humanity and nature in our pursuit of high-quality development.



Feature

2023 Environmental, Social and Governance and Sustainability Repor

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We, as an industry leader, are advancing towards the "dual carbon" goals. In this journey, we continue our efforts in strengthening our resilience to climate risks and rationalizing our approach to GHG emission reduction. In addition to reducing our own carbon emissions, we contribute to the carbon emission reduction efforts across the external industrial chain. Through these measures, we demonstrate our confidence in low-carbon development in every aspect. We focus on the strategic goal of "one creation and five aspects of strength" and expedite the advancement of the "1+6+6" strategic initiatives. Oriented by green and low-carbon development, we ensure that our efforts towards carbon peaking are strong, organized, and effective. By embedding green and low-carbon concepts into our corporate development strategy, we are leading the construction industry's green transition and upgrading.

We have established a corporate-level Leadership Group on Carbon Peaking and Carbon Neutrality led by the Chairman, with a subordinate Working Group on Carbon Peaking and Carbon Neutrality, responsible for driving progress towards the "dual carbon" goals and relevant tasks in every aspect. Our secondtier subsidiaries have appointed leading officials, responsible departments, and specialized personnel for "dual carbon" to effectively guide the "dual carbon" indicators and targets at all subsidiaries to be incorporated into the performance appraisal system for subsidiaries. These metrics are directly linked to the performance-based compensation of individuals in charge.

We have formulated and released CSCEC's *Action Plan for Carbon Dioxide Peaking*. By setting forth nine key tasks, we have defined CSCEC's objectives and strategic paths for carbon peaking and carbon neutrality. Building upon these tasks, we are committed to progressing our initiatives against climate change across all fronts. In addition, we have launched a "ten hundred million" project³ in light of our current business status and future plans. In this project, we have broken down the systematic cause of "dual carbon" into a quantifiable and evaluable task list, progressed the implementation of CSCEC's *Action Plan for Carbon Dioxide Peaking*, and facilitating the implementation of the Company's "dual carbon" efforts in every aspect. In 2023,

The "ten hundred million" project for carbon peaking. The project consists of one action plan (CSCEC's Action Plan for Carbon Dioxide Peaking), one management platform (Carbon Emission Monitoring and Management Platform of CSCEC), and one action initiative (Initiative on Green and Low-Carbon Behavior of Employees of CSCEC); ten key low-carbon/zero-carbon demonstration projects and ten enterprises of the new segment of "dual carbon," 100 key green and low-carbon technologies, 100 green construction demonstration projects, and 100 green and low-carbon international cooperation projects; 1,000 green and low-carbon technology application scenarios, RMB 100 billion in green financial investments, and 1,000 green and low-carbon offices; 10,000 green and low-carbon construction sites, 10,000 green supply chain enterprises, and 1,000 "dual carbon" professionals.

we recorded 117 advanced scientific and technological achievements for carbon peaking and carbon neutrality, launched 50 demonstration projects for green and low-carbon technologies, selected 58 achievements in green and low-carbon practices on construction sites, and initiated 10 key low-carbon and zero-carbon demonstration projects. Furthermore, 50 enterprises were registered in CSCEC's self-operating section for green and low-carbon products. We also released a catalog featuring 290 "dual carbon" products and services operated by the Group.

To appropriately respond to various climate-related risk incidents, we require our subsidiaries to develop climate-related risk management systems, standardize management processes, and conduct regular screening and control of environmental risks. In daily management, we promote coordination among multiple departments to take responsive or mitigative actions tailored to specific climate-related risks to address practical management needs, thus laying a robust foundation for climate-related risk management. While climate change presents us with risks, it also creates unprecedented opportunities for value. These opportunities will be key to creating our differentiated core competencies.

CSCEC's Response to Climate-Related Opportunities

The Zheng'an-Xishui Expressway Project in Guizhou

ÖWe progress our R&D on zero-carbon buildings, near-zero-energy buildings, renewable energy operations, low-carbon management, intelligent construction, and smart city technologies to develop **key core technologies**.

We advance our R&D on new building materials (for example, toughness coatings for enhancing the durability of concrete structures) and low-carbon and carbon-neutral building materials (for example, carbon-fixation concrete) to develop supportive low-carbon materials.

We promote new energy contract management (for example, highway PV and urban streetlights), carbon-neutral smart communities, carbon-neutral smart cities (new energy smart transportation charging infrastructure and smart three-dimensional parking lots), and multi-tiered solutions encompassing carbon-neutral areas, parks, and communities.

We implement the digital transition and bring innovation to our production system through digital transformation, thereby upgrading our production methods.

©Embracing the concept of green finance, we utilize green bonds to acquire low-cost funds for green project construction, business investment, and technology R&D, setting a new model of cross-over integrated "dual carbon" development.

With an eye on forthcoming climate-related risks and opportunities, we remain resolute in our commitment to infusing "ecological priority and green development" into the entire process of investment, planning, design, construction, and operation, and performing refined management of energy consumption and carbon emissions. We have striven

to identify our potential for carbon reduction. Through initiatives like low-carbon technological innovation, the development of low-carbon product, the attainment of green building certification, the adoption of clean energy, and other emission reduction paths, we will minimize the interplay between climate change and our operations.





Orientations of CSCEC's Response to Climate Change

(SFF05FDI0PMPHZ 00PWBU₽0 We are constantly advancing green technology innovation. We establish dedicated scientific and technological innovation platforms, invest in technology R&D projects, and conduct technology optimization. Through these efforts, we actively explore and promote green construction techniques as well green and low-carbon building technologies to effectively confront the challenges posed by climate change and promote the Company's green transition.

For details, please refer to [1.3.1 Green Technology Innovation].

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We have incorporated green and low-carbon technology research into the Company's overall plan of science and technology development. We are actively engaged in the R&D of major and key technologies and products that are green and low-carbon and promote mass-production, thus enabling CSCEC's products to play a significant role in addressing the challenges posed by climate change.

For details, please refer to [1.3.2 Green and Low-Carbon Product R&D].

(SFFO₩MEØH \$SUÆÐBUÞO We have intensified our green building investment and construction and promoted green building certification, constantly expanding the green building sector. As a result, we have established several industry-benchmark and lighthouse projects of near-zero-energy and zero-carbon buildings. Moreover, our efforts have extended to urban renewal and renovation projects, injecting new vitality and ecological value into cities.

For details, please refer to [1.3.3 Green Building Certification].

MFBO&OFSHZ 6UMJBUPO Seizing the opportunities for clean energy development presented by the low-carbon transition, we plan and execute the development and utilization of clean energy such as PV and geothermal and continuously augment the proportion of clean energy use. Through these efforts, we play a significant role in energy structure adjustment, energy conservation, and emission reduction.

For details, please refer to [1.3.4 Clean Energy Utilization].

We have participated in the preparation of carbon emission standards in the construction sector, including the Carbon Emission Calculation and Accounting Standard for the Urban-Rural Development Sector, a national standard; and the Carbon Emission Calculation Standard for the Construction Stage of Industrialized Buildings, a standard of the China Association of Building Energy Efficiency. Through these efforts, we explore ways to improve the methodology for carbon statistics and accounting in the construction sector. We continually track our GHG emissions and improve our system of carbon emission statistics, monitoring, verification, and reporting. We have established a carbon inventory work camp consisting of 12 technical subsidiaries of the Company, and issued technical documents such as the Company's carbon inventory guidelines and carbon inventory Q&A manual. Moreover, we have engaged third-party agencies with professional qualifications to conduct GHG audits of the Company to map out carbon emission data in all aspects and identify our potential for carbon reduction. In 2022, we completed a carbon inventory, identifying the carbon emissions characteristics of six areas, including housing construction and infrastructure. Based on the results of

the carbon inventory, we analyzed the current status of carbon emissions in each area and preliminarily identified differentiated emission reduction paths for different types of projects. These outcomes provide an important data model and algorithmic basis for international benchmarking of China's construction companies in carbon emissions.

Furthermore, we utilize carbon assets to reduce emissions and engage in market transactions, where we offset carbon emissions by purchasing green electricity, green certificates, and carbon emission reduction credits. For self-owned and operated projects, we actively develop China Certified Emission Reduction (CCER) carbon assets. For clean energy projects such as hydroelectric power stations, energy storage power stations, and PV power stations that we invest in and construct, we promote environmental equity assets, including green electricity and CCER assets, to owners. Additionally, we have researched on internal carbon pricing mechanisms and have explored virtual carbon trading models, pursuing the incorporation of the construction industry into the carbon trading system as soon as possible.

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&OWSPONFOBM .BOBHFNFOBIEN

We comply with the latest national and local policies and regulations. We have formulated policies such as the Management Measures of CSCEC for Eco-Environmental Protection, the Management Regulations of CSCEC on Responsibilities for Eco-environmental Protection (for *Trial Implementation)*, and the *Project Management* Handbook of CSCEC. and we improve them from time to time. Additionally, we have established a Leadership Group on Eco-environmental Protection, with the Chairman as the leader, the President and leading official for project performance as deputy leaders, and principal heads of headquarters departments as members, along with an organizational working mechanism. We have also optimized environmental protection staffing at all levels as well as the regulation, constraint, and guidance for environmental management for subsidiaries at all levels and projects. These efforts are aimed at consolidating our environmental management system.

At CSCEC, we diligently fulfill our primary responsibility for environmental protection. In our environmental management, we adhere to the principles of "giving priority to protection, green development, focusing on prevention, conducting comprehensive treatment, engaging everyone, enforcing accountability for damage, and legal compliance." With the support of a robust environmental management system, we have strengthened our capabilities in every aspect of environmental risk management. Furthermore, we monitor ecological conservation efforts and launch ecological restoration projects, seizing new opportunities for corporate development in the eco-environment area.



Responsibilities and Working Mechanism of the Leadership Group on Eco-environmental Protection

Responsibilitie

Responsibilities of the Leadership Group

Ölmplementing national guidelines and policies on eco-environmental protection and pertinent national laws and regulations.

- Coordinating, planning, and deploying environmental protection, energy conservation, and emission reduction.
- Studying and determining major matters related to eco-environmental protection.
- Studying and solving major problems in ecoenvironmental protection.
- Recognizing and rewarding model collectives and individuals in eco-environmental protection.

Responsibilities of the Office of the Leadership Group

- Raising work recommendations to the Leadership Group and organizing the implementation of the Leadership Group's decisions and deployments.
- Drafting and revising the management system of ecoenvironmental protection and guiding subordinate enterprises in the formulation of eco-environmental protection work systems.
- Guiding and supervising the eco-environmental protection of subsidiaries.
- Organizing eco-environmental protection training and inspections
- ? Raising commendations and rewards for ecoenvironmental protection.

Working

- ÖThe Leadership Group convenes plenary meetings according to the needs of its work to study, deploy, and summarize eco-environmental protection efforts, and to resolve important issues in eco-environmental protection in a timely manner.
- in case of urgent and important matters, countersigning and deliberation in writing may be conducted upon the approval of the group leader.
- The meetings of the Leadership Group is presided over by the group leader, at which the resolutions are reached and divided for implementation.
- 2 For the meetings of the Leadership Group, the office of the Leadership Group convenes and organizes the meetings, collects and proposes meeting topics, and supervises decision-making matters.



Total environmental protection investment and expenditure 3.#

We have further broken down environmental management responsibilities. Moreover, we encourage our subsidiaries at every tier to conduct environmental protection assessments and evaluations and to link factors such as energy conservation and eco-environmental protection to the performance of the relevant persons in charge.

We actively pursue third-party environmental certification. As of the end of the Reporting Period, we, headquarters of our second-tier subsidiaries, and our third-tier subsidiaries, adding up to 189 companies, maintained valid certification of the ISO 14001 environmental management system ⁴ In 2023, we invested and expended a total of RMB 698 million on environmental protection.

CSCEC's Environmental Management

The scope of certification primarily covers the general contracting, design, construction of all kinds of industrial and civil buildings; design and construction of people's air defense and underground space engineering; general contracting of roads, bridges, and public utilities; urban planning; engineering survey; engineering supervision; and engineering consulting and related management activities



At CSCEC, we incorporate environmental risk identification and management into our investment, project construction, and operations. Major environmental risks we have identified include air pollution, water pollution, noise pollution, solid waste pollution, soil pollution, and ecological damage and associated risks resulting.

We mandate all projects to establish a complete environmental protection responsibility system, and we assign ecoenvironmental protection responsibilities to every section across the production and operation processes, thereby strengthening risk prevention and control. For all investment projects, we mandate enhancements in supervision during the process and evaluation after project conclusion. Particularly, we avoid investment projects in environmentally fragile areas. For construction projects, we expressly order our subsidiaries and projects to integrate environmental management risks into their overall corporate compliance management system. Our projects must identify, evaluate, and control environmental factors, make implementation plans, and implement all measures as per the environmental impact assessment (EIA) report and the mandates of the local government. In 2022 and 2023, we experienced no general and above environmental emergencies.

Initiatives of CSCEC's Projects for Preventing and Responding to Environmental Risks:

- Strictly implement red lines for environmental protection, minimum standards for environmental quality, ceilings on resource utilization, and environmental negative lists.
- Earnestly fulfill the legal obligations of environmental protection, complete environmental protection compliance procedures on time, and strictly implement the "three simultaneously⁵" requirements for construction projects.
- Make plans for eco-environmental protection and identify and assess environmental factors following EIA policies, as well as maintain risk records and develop response plans.
- Regularly screen pollutant sources and risk points in eco-environmental protection and control hidden perils; properly respond to environmental protection risk events; and timely locate problems and hidden perils and rectify and eliminate them.
- 2 Actively cooperate with external law enforcement and regulatory activities for eco-environmental protection, including national and local inspections and checks.

Pollution prevention facilities in construction projects shall be designed, constructed and put into use simultaneously with the main project. Pollution prevention facilities shall comply with the requirements of the approved environmental impact assessment document, and shall not be arbitrarily removed or left idle.



During the Reporting Period, we initiated a series of measures to strengthen our environmental risk identification and response, raise awareness of environmental risk prevention among all employees, and eliminate hidden hazards posed by risks.

• Enhancing work coordination and deployment:

We convened special meetings on eco-environmental protection to summarize and disseminate the progress and problems, thereby improving environmental risk management.

• Enhancing risk screening and rectification:

We launched special screening and rectification activities for environmental protection, general screening and rectification, and capacity enhancement in specific areas to improve our ability and performance of risk prevention.

• Enhancing training, promotion, and learning from demonstration:

We organized training on eco-environmental protection featuring lecture by experts, benchmarking, and field studies. Through these initiatives, we enhanced the environmental awareness and ability of managers at all levels in fulfilling their duties. In 2022 and 2023, we hosted more than 3,800 environmental protection training sessions for more than 134,000 trainees.

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At CSCEC, the green and environmental protection concept is practiced throughout the lifecycle of a project, including design, construction, and operation. We have established clear methodologies and standards for calculating and monitoring energy and resource consumption during our production and operations. Our priorities include design solutions, building materials, as well as clean production technologies, processes, and equipment that support environmental protection and resource conservation, underpinning green development with green management.

Design Stage

We develop standardized design technology, industrialized production technology, and prefabricated construction technology based on green design principles. The full adoption of construction techniques with lower energy consumption and emissions in projects is encouraged in the design stage. Additionally, we thoroughly integrate new ideas such as passive energy conservation in building design to optimize our design in every aspect.



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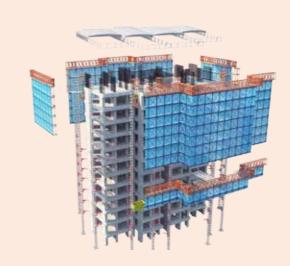
In its design stage, CSCEC's China Construction No. 1 Tower project adopted renewable energy sources such as PV power generation, PEDF (PV, energy storage, direct current, and flexibility), and ground-pump heat source. It has a PV area of about 7,000 m² with an annual power generation of about 1,060,000 kWh, reducing carbon emission by about 557.24 t annually.

Supported by nearly 50 low-carbon building technologies in six categories, the project perfectly meets the near-zero-energy and near-zero-carbon building standards in terms of comprehensive energy-saving rate, renewable energy utilization rate, and carbon reduction rate.

Social

The scientific and technological innovation platforms of CSCEC are aimed at promoting national strategies and industry changes and fostering the core technological competitiveness of the Company. In this course, we have located four basic objectives: identifying the direction of R&D, cultivating key technologies, building scientific and technological brands, and fostering emerging industries. As a result, we have promoted the improvement of our research capability and produced a number of scientific and technological innovations with competitive advantages in the industry.





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It is a series of ultra-high-rise construction equipment products developed by CSCEC Third Construction Bureau after more than ten years of R&D and continuous innovation and iteration. It provides comprehensive solutions for construction platforms for high-rise residential buildings to skyscraper structure over 500

meters high. The achievement was included in the *Catalog* of *Recommended Scientific and Technological Innovation Achievements of Central Enterprises (2020 Edition)* as the only achievement in the construction technology of house building engineering, and was covered by *The Pillars of a Great Power*, a program of China Central Television (CCTV).

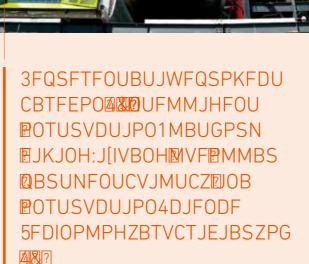
Building on continuous technological R&D and accumulation of achievements, CSCEC Third Construction Bureau has researched on lightweight platform pivots and standardized components, and developed the fifthgeneration (lightweight, generalized) building maker, the Universal Lightweight Integrated Platform. It shortens the installation cycle by 40% and reduces the overall cost by 35%. This product is known as "residential construction crane" for improving the work environment and efficiency in the construction of super high-rise residential buildings.

Digital and Intelligent Construction Management

At CSCEC, we have adopted digital management approaches to regulate the Company's product quality control processes and standards and enhance effective and timely product quality management. We have a core management system and control platform in place and implement unified data standards and technical

standards. We guide and encourage our subsidiaries to integrate technologies such as BIM 15, big data, mobile Internet, cloud computing, the Internet of Things (IoT), and artificial intelligence (AI) into quality control across the process, establishing an intelligent information application platform that addresses the needs of regular quality management, knowledge sharing, and data integration.

Building Information Modeling



CSCEC's Beijing Yizhuang Blue Collar Apartment Project is the highest and largest modular building complex in China, which is constructed using modular permanent buildings. The project relies on China Construction Science & Technology's intelligent construction platform for prefabricated buildings and utilizes intelligent construction technologies and equipment such as IoT, big data, cloud storage, and cloud computing. These tools provide support across the chain for the design, production, construction, operation, and maintenance of EPC general contracting for prefabricated buildings. The platform's free view allows users to directly browse the project view information from any angle, so as to effectively control the quality and completion of all segments of the project in real time. This function improves the quality and safety management of the project and facilitates efficient project performance.

In the project, prefabricated buildings account for 92%. The project has been recognized as an AAA demonstration project with an ultra-high portion of prefabricated modules in Beijing, won the first prize in the National Engineering Construction Industry BIM Competition, and become a key observation project of intelligent construction in Beijing.





Interface of the CSCEC Intelligent Construction Platform



Application process of the Intelligent Construction Platform



Innovative Construction Technologies

Guided by a commitment to independent R&D, we are forging ahead, charting paths for advancements in construction technologies. We have created a professional advanced technology system, represented by prefabricated building construction technology, green construction technology, and ultra-high-rise and large-

spanning construction technology. We have proactively driven technological innovations and applications, represented by urban rail transportation construction technology and urban road and bridge construction technology. Moreover, we have increased R&D efforts in marine engineering and super-large bridges and tunnels. We are actively deploying intelligent construction robots, initiating digital innovation projects, and promoting cutting-edge technological achievements, thus offering robust technological support to amplify the advantages of our core business in construction.



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Targeting the roughness and insufficiency of traditional rebar proofing technology, CSCEC Third Construction Bureau conducted the research and application of rebar BIM deepening design, intensive processing, IT-based management, and other technologies. It changed the traditional rebar operation mode, uniting the processes of rebar

sampling, processing, distribution, and tying with BIM technology and collaborative operation. The new mode improves the efficiency of rebar processing and raw materials and reduces the demand of workers as well as the backlog inventory of raw materials on site. The technology has been applied in multiple construction projects in Wuhan and surrounding areas in the form of centralized and single-project plants, promoting the effective utilization rate of raw materials to more than 99.5%.

The technology is applied to the parking building of the Tianhe Airport T3 Terminal and Its Overpass project, which has two underground floors, and the foundation form is an independent raft slab foundation. The project's rebar work adopts the model of intensive processing and distribution, with an application area of 11,040 m² for steel processing and distribution and a volume of 1,506 t of rebar work.

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At CSCEC, we actively align with national strategies for innovation-driven development and building an IPR power. We strictly abide by the Patent Law of the People's Republic of China and other pertinent laws and regulations. We have formulated the Management Measures of CSCEC for Scientific and Technological Achievements and other policies and have established a sound patent and copyright protection mechanism. We verify, publicize, commercialize, and reward achievements in patents. Moreover, we consolidate our presence of trademarks in both domestic and overseas markets, enhance the transformation of scientific and technological achievements, thus comprehensively improving the Company's IPR performance and effectively safeguarding CSCEC's rights and interests in brands and trademarks.

We offer training and promotion on trademarks, brands, copyrights, IPR concepts, and IPR risk, among other foundational elements. These programs are designed for departments overseeing IPR management and applicants involved in innovation results. The primary objective is to increase employees' awareness of IPR risks during their business activities and to enhance their knowledge of IPR protection and passion for technological innovation. In 2023, we hosted five training sessions on IPR protection for an audience of 300.

/68,519

As of the end of the Reporting Period, we held 68,519 valid patents, including 6,177 invention patents and 61,865 utility model patents.

IPR Acquisition by CSCEC in 2022 and 2023

IPR Indicator	Patent Type	Unit	2022	2023
	Total	piece	10,699	14,550
Patent applications	Invention patents	piece	3,137	4,456
	Utility model patents	piece	7,562	9,494
	Total	piece	8,291	12,276
Patent authorizations	Invention patents	piece	857	1,965
	Utility model patents	piece	7,434	11,130
Trademark	Trademark applications	piece	98	155
applications and	Trademarks registered	piece	99	23
authorizations	Accumulative trademarks registered	piece	1,156	1,179

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At CSCEC, we adhere to a development strategy oriented to customer needs. We have revised the Management Measures of CSCEC for Bidding and Tendering, requiring our subsidiaries to establish a sound customer satisfaction survey mechanism. We engage in effective communication with customers, employing a diversified approach, and prioritize customer privacy and information protection to create a stable and lasting trust relationship with them.

Customer Satisfaction

We continuously improve our customer service management system and enhance our services across the board. We prioritize the needs of our customers, maintaining a vigilant approach to customers' practical needs throughout every phase, from project bidding and preliminary preparation to construction and delivery. In this way, we provide comprehensive services spanning the entire lifecycle of the project.





To enhance our customer service, we and our subsidiaries regularly conduct customer satisfaction surveys. These surveys comprehensively span the entire lifecycle of our products and are executed through various methods, including face-to-face visits, telephone interviews, and questionnaires, either randomly or with targeted customers. The insights derived from these surveys are instrumental in improving and enhancing our customer each year. Based on the results of satisfaction surveys, we conduct tracking, feedback, and improvement every year, along with follow-up customer surveys to continuously enhance our service quality.

95.86_%

2022

We conducted 12,463 customer satisfaction surveys at different levels and achieved a customer quality satisfaction rate of 95.94%, with a rectification completion rate of 100%.

2023

We conducted 14,238 customer satisfaction surveys at different levels and achieved a customer quality satisfaction rate of 95.86%, with a rectification completion rate of 100%.

Information Security and Privacy Protection

At CSCEC, we strictly comply with the basic principles of information security. Under the commitment to securing customer privacy, we have defined information security and cybersecurity governance responsibilities at the Board of Directors level. We have established the CSCEC Leadership Group on Digitalization and Cybersecurity, which is led by the Chairman of the Board of Directors. The Leadership Group comprehensively coordinates the Company's implementation of national laws, regulations, and policies on cybersecurity; researches and develops plans and initiatives for information security and privacy protection; receives regular progress reports on these initiatives, supervises their implementation, and provides guidance for their promotion.

To continuously enhance our data security management and system construction capacity, we set out control measures for data collection, transmission, storage, processing, and destruction, as well as the requirements for cybersecurity incident reporting and handling and contingency plan management. We also conduct regular cybersecurity emergency drills. Cybersecurity training requirements have been set for employees, which shall be observed by the Company's dispatching organizations and subsidiaries.

In 2022 and 2023, we engaged a third-party professional institution to assess and file for the classified protection of cybersecurity and to conduct external information security audits on the information systems of the Company's headquarters. Our headquarters completed the filing of classified protection of cybersecurity for newly-launched systems and obtained filing certificates. It also completed the assessment for the classified protection of operating systems and obtained third-party assessment reports. The coverage of Class-3 protection systems remained 100% in the annual assessment. Moreover, we encourage our subsidiaries conduct third-party assessments. Throughout the Reporting Period, we did not experience any major information security incidents, and there were no reported complaints regarding violations of customer privacy or loss of customer data.





Big Data and Technology Platform Financial Integration Cloud Platform Platform Labor Real-Name Intelligent Security Registration System Platform 6 Video-Conferencing D E-mail System System System for "Three Major External Website and One Large" Matters System Centralized Procurement Human Resources System System

Unified Identity System

Responsible Marketing

We continuously enhance our compliance management mechanism. We strictly abide by the Advertising Law of the People's Republic of China. We have developed the Ten Prohibitions of CSCEC on Marketing and established a marketing management system with clearly defined powers and responsibilities. Through these initiatives, we enhance the management and control of marketing risks in all aspects, standardize our marketing behaviors, and improve the quality of our marketing efforts.

We impose rigorous review of advertisements and marketing collaterals. Moreover, we encourage our subsidiaries to sign the *Self-Discipline Convention of CSCEC on Marketing Behavior*. Through this commitment, we and our subsidiaries pledge to abstain from engaging in illegal and unethical practices, including deception, concealment, exaggeration, and embezzlement in the marketing process. We and our subsidiaries also commit to upholding basic principles and respecting red lines for marketing, and safeguarding the brand image and reputation of the Group. We actively promote responsible marketing training and education to continuously increase the awareness of marketing compliance and fair practices.

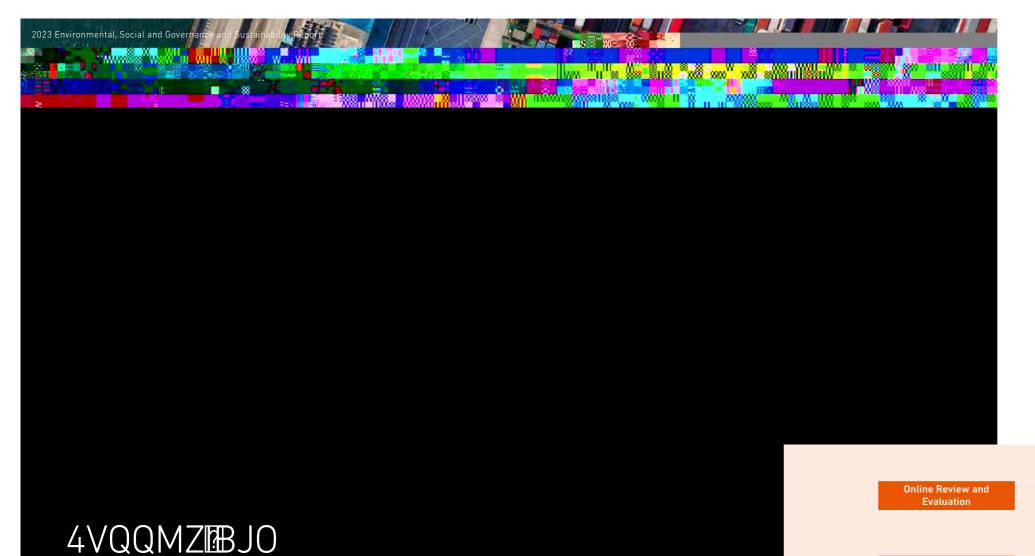
2022

We convened 2 meetings of marketing liaison staff, ensuring standardized daily communication in the marketing system and enhancing exchanges and collaboration among subsidiaries.

2023

We hosted 4 training sessions, providing over 1,500 main infrastructure managers with marketing training on relevant policies, regulations, and corporate management system.





Screening and Admission

We require all prospective suppliers to possess the necessary quality, measurement, safety, environmental protection certifications, and business licenses mandated by competent state departments, the relevant industry, or the Company. We prioritize suppliers with a good business reputation, a sound system, and authoritative green building material certifications, and avoid cooperation with suppliers having a record of serious misbehavior.

Classification and Assessment

We categorize suppliers into six categories based on their qualification type and main business: material supply, equipment supply, professional sub-contracting, labor sub-contracting (construction labor), professional services, and leasing services. Meanwhile, we have established a sound regular assessment system and evaluation mechanism, in which we perform comprehensive assessment of suppliers both online and offline. Based on assessment results, suppliers are classified into categories such as excellent, qualified, and unqualified. We respect the interests of our suppliers and have established unblocked and efficient communication channels.

Supplier Assessment Methods

- We adopt a real-time evaluation system characterized by "order-by-order review."
- We conduct at least one supplier assessment every year, which shall be a detailed, all-round assessment of all suppliers with whom we have cooperated during the year that evaluates corporate qualifications, business integrity, quality and services, and safe production.

Offline Tracking and Management

- **Before:** Before procurement, we conduct field inspection and agree on the handling plan and penalty mechanism for quality issues in the procurement contract.
- **During:** The construction subsidiary, the supervisor, and the constructor together accept the goods on site. Any unqualified materials, once identified, shall be immediately withdrawn from the site and be timely recorded.
- After: In the dynamic and regular assessments of suppliers, we focus on the assessment of compliance. And we strengthen the application of evaluation findings.

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At CSCEC, we are committed to practicing modern corporate governance and optimizing our supply chain management system. Suppliers are valuable to an enterprise. Therefore, we fulfill our social responsibility in collaboration with our partners, establish a sustainable and responsible supply chain characterized by honesty, compliance, openness, transparency, green, and health, and accelerate the construction of a supply chain ecosystem characterized by mutual trust and win-win cooperation.

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We prioritize the management of sub-contractors and sub-suppliers (hereinafter collectively referred to as "suppliers"), and we have established a supplier management system with the Project Performance Management Department of the headquarters responsible for overall coordination and the procurement management departments of subsidiaries at all levels responsible for concrete management. We insist on an approach safeguarded by policies and based on platforms, establish the Management Measures of CSCEC for Sub-supplier Resources and other policies in place and perform supplier management on the centralized procurement platform. We have set up a complete supplier management and review process, for the screening, admission, classification, and assessment of suppliers. Those who do not meet the standards will be penalized or ordered to be removed.

Penalty and Removal

We have created a list of suppliers with misbehavior. Those exhibiting subpar performance, including involvement in substandard product quality, safety quality accidents, dishonest performance, counterfeiting, or corruption, will face consequential measures such as a one-year ban on trading, a two-year ban on regional joint procurement, and even removal.

2022 Quality suppliers 722 2023 875

Number of Suppliers in 2022 and 2023

Region	2022	2023
Northeast China	4,243	4,001
North China	18,335	16,147
East China	42,135	40,452
Central China	19,793	17,243
South China	14,806	13,808
Southwestern China	13,386	12,952
Northwestern China	8,740	8,222
Total	121,438	112,825



Director	Title	Age	Commencement Date of the Term of Office	Pr	ofessional Backç	ground		Specia	al Comn	nittees	
				Environmental Dimension	Social Dimension	Governance Dimension	Strategy and Invest- ment Committee	Nomination Committee	Remuneration and Appraisal Committee	Audit and Risk Committee	Supervisory Committee
Zheng Xuexuan	Chairman	57	2021-11-26	Sustainable development	Human resources development, compensation and benefits, safe production, public welfare and philanthropy	Strategic planning, investment decision-making	Director	Director	/	/	/
Zhang Zhaoxiang	Director and President	60	2020-12-07	Sustainable development	Human resources development, compensation and benefits, safe production, public welfare and philanthropy	Strategic planning	Member	Member	/	/	/
Shan Guangxiu	Director	53	2023-08-21	Sustainable development	Human resources development	Strategic planning, corporate reform	Member	Member	/	/	/
Ma Wangjun	Independent Director	59	2023-05-19	Sustainable development and green finance	Public welfare and philanthropy	Strategic planning, in- vestment decision-mak- ing, financial manage- ment, risk management	Member	Member	Director	Member	Member
Jia Chen	Independent Director	68	2018-01-09	Sustainable development and green finance	Public welfare and philanthropy	Strategic planning financial manage- ment, risk man- t agement	Member	Member	Member	Director	Director
Sun Chengming	Independent Director	64	2021-05-13	Sustainable development	Safe production, public welfare and philanthropy	Strategic planning	Member	Member	Member	Member	Member
Li Ping	Independent Director	70	2021-05-13	Sustainable development and green finance	Technological R&D public welfare and philanthropy	Strategic planning, dissemination and communication	Member	Member	Member	Member	Membera623.021-13