



CNBM

China National Building Material Company Limited

# 2023

## Environmental, Social and Governance (ESG) Report

Stock code: 03323



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# About the Report

The Report is the 8th ESG Report consecutively published by China National Building Material Company Limited (Stock Code: 3323) and all of its subsidiaries. The Report provides the latest information relating to the progress made by the Group towards achieving sustainable development in 2023. The Report mainly includes environmental, social and governance topics related to the Group's sustainable development and climate-related risks and opportunities which are addressed by the Group's stakeholders, in order to facilitate better understanding of Group's sustainable development concepts, measures and related performance.

The Report mainly covers three business segments of the Group, including basic building materials, new materials and engineering technology service, as well as logistics trade and other businesses. The Company also discloses key performance indicators as far as possible with supplemental explanations in the Report to set benchmarks for evaluation and facilitating comparisons.

The Report should be read in conjunction with the Company's 2023 Annual Report. All the governance documents of the Company disclosed on the website of the Stock Exchange ([www.hkexnews.hk](http://www.hkexnews.hk)) are also available on its official website ([www.cnbm.com](http://www.cnbm.com)) under the "Governance Documents" of "Investor Relations" section for a comprehensive understanding of the Company's relevant information.

## Reporting Period

Unless otherwise specified, the Report covers the period from 1 January 2023 to 31 December 2023. The information presented in the Report includes the Group's specific policies and performance in ESG

aspects. Considering the continuity and comparability of the information disclosed, the timeframe of certain contents is adjusted where necessary.

## Reporting Scope

The reporting scope of the Report is determined on the principle of materiality.

In 2023, CCCC Design & Consulting Group Co., Ltd. (Formerly known as: Gansu Qilianshan Cement Group Co., Ltd.) was no longer a subsidiary of CNBM, its controlling shareholder was changed to CCCC Co., Ltd., and is thus excluded from the reporting scope disclosed in this Report.

CNBM Graphite New Materials Co., Ltd. was established in November 2022, which is a subsidiary of CNBM, and is included in the disclosure of the Report. Unless otherwise specified, the material content of the Report covers and originates from CNBM and all of its subsidiaries.

## Reporting Guideline

- ◇ United Nations Sustainable Development Goals 2030 ( "SDGs" )
- ◇ The Environmental, Social and Governance Reporting Guide under Appendix C2 to the Listing Rules issued by the Stock Exchange
- ◇ The Guidelines on Fulfilling Corporate Social Responsibilities of Central Enterprises, the Guidelines to the State-owned Enterprises on Better Fulfilling Social Responsibilities, the Reference Indicator System for the ESG Special Report of Listed Companies Controlled by Central Enterprises issued by the State-owned Assets Supervision and Administration Commission of the State Council ( "SASAC" )

- ◇ The recommended disclosures framework by the Task Force on Climate-Related Financial Disclosures ("TCFD")
- ◇ The Sustainability Accounting Standards Board ( "SASB" ) standards (Engineering & Construction Services sector)

The Report followed the mandatory disclosure requirements and the "comply or explain" provisions in the ESG Reporting Guide issued by the Stock Exchange and was prepared based on the reporting principles of materiality, quantitative, balance and consistency.

**"Materiality":** During the preparation of this Report, major stakeholders and ESG issues of concern have been identified, and targeted disclosures have been made in this Report according to the importance of their concerns.

**"Quantitative":** This report presents key performance indicators at the environmental and social levels in the form of quantitative data and makes calculations according to national regulations or industry standards, such as the General Principles for Calculation of Comprehensive Energy Consumption, the Guidelines for Accounting Methods and Reporting Greenhouse Gas Emissions of China's Cement Production Enterprises, the Notice on the Report and Verification of Greenhouse Gas Emissions for Some Enterprises in Key Industries from 2023 to 2025, and the Annual Development Report of China's Electric Power Industry 2023. The measurement standards, methods, assumptions and/or calculation tools of the key performance indicators in this report, as well as the sources of conversion factors used, have been explained in the corresponding positions. Unless otherwise specified, the monetary unit is RMB.

**"Balance":** This report follows the principle of balance to objectively present the Group's ESG performance and management status.

**"Consistency":** Unless otherwise specified, this Report applies the same statistical method with the 2022 Environmental, Social and Governance Report of the Group.

### Assurance of the Report

This report has been authenticated by an independent third-party firm, Ernst & Young Hua Ming LLP, in accordance with the ISAE 3000 (Revised) Assurance Engagements Other than Audits or Reviews of Historical Financial Information and an authentication report has been issued.

### Confirmation and Approval

The Report was confirmed by the ESG working teams of the Group in March 2024. The Board and the ESG Committee have reviewed, confirmed, and approved the Report, and ensured the Report's content covers the specific policies and performance in key ESG aspects of the Group.

### Publication Form of the Report

The Report is published on the website of the Stock Exchange ([www.hkexnews.hk](http://www.hkexnews.hk)) in both traditional Chinese and English version. If there is any discrepancy in the content, the traditional Chinese version shall prevail. At the same time, the simplified Chinese version of the Report is available on the Group's official website (<http://www.cnbm.com>).

The Group seeks to improve the transparency of

information disclosure. Some subsidiaries also prepared and published ESG reports or sustainability reports based on stakeholders' needs for information. The ESG reports issued by the subsidiaries of the Group for the year 2023 are as follows.

2023 New Tianshan Cement Environmental, Social and Governance (ESG) Report

2023 Ningxia Building Materials Environmental, Social and Governance (ESG) Report

2023 BNBM Environmental, Social and Governance (ESG) Report

2023 China Jushi Environmental, Social and Governance (ESG) Report

2023 Sinoma Science & Technology Environmental, Social and Governance (ESG) Report

2023 Sinoma International Environmental, Social and Governance (ESG) Report

2023 Zhongfu Shenying Environmental, Social and Governance (ESG) Report<sup>1</sup>

The relevant reports are available on the Group's website [www.cnbm.com/col/col1313](http://www.cnbm.com/col/col1313)

### Other ESG Information

In addition to the Report, the Group has publicly released a series of ESG policy statements, including the Environmental Policy Statement, the Occupational Health and Safety Policy Statement, the Anti Corruption Policy Statement, the Code of Business Conduct, the Policy Statement of Human Rights, the Supplier Code of Conduct, the Sustainable Supply Chain Management Policy Statement, the Policy Statement on Biodiversity, the Board Diversity Policy Statement, and the Tax Policy

Statement, whose details are available on the Group's website

<http://www.cnbm.com/col/col1407/index.html>

More information about the Group's ESG performance can be obtained from the WeChat official account of CNBM.



### Feedback on the Report

If you have any comments on the Group's work relating to the ESG report, please contact us by the following e-mail.

Email: [esg@cnbm.com.cn](mailto:esg@cnbm.com.cn).

<sup>1</sup> China Composites affiliated to CNBM holds a 24.11% equity interest in Zhongfu Shenying.

# Chairman Statement

The year 2023 was the starting year to embark on a new journey of building a modern socialist country in an all-round way, and it was also an extremely momentous and remarkable year for the high-quality development of CNBM. Facing the treacherous international political and economic environment and the heavy and arduous task of domestic reform, development and stabilization, we have made steady progress in overcoming difficulties and garnered momentum and vigor in navigating challenges. On behalf of the Board of Directors, I would like to express my heartfelt gratitude to all the parties who have long cared for and supported the development of the Company.

**Improving corporate governance and exploring CNBM-practices for enhancing the quality of listed companies.** In 2023, we continued to refine our governance system and improve our ability and level of sound and compliant operation, sustainable and healthy development, and effective risk prevention and mitigation. We attached great importance to sustainable development; we joined the United Nations Global Compact ( “UNGC” ), actively practiced ESG concepts and enhanced ESG performance, and focused on integrating them into our corporate mission and the entire process of operation and management. The ESG Committee has reviewed and adopted the ESG strategy for 2023-2025, deployed six major tasks, and systematically advanced sustainable development from top to bottom with “1+N” as the core.

**Responding to the “Dual Carbon” goal and providing CNBM-support for green and low-carbon development.** In 2023, we released the Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality, integrating “Dual Carbon” actions into the Company’ s overall development strategy in an all-round way and assuming the significant responsibility of achieving carbon peaking and carbon neutrality. We have established a sound carbon management system, led the establishment of a carbon policy research group for the cement industry; promoted transformation of carbon dioxide monitoring technology, green and low-carbon firing technology, alternative fuel built-in combustion technology, and assisted the diversified development of green energy with green kinetic energy, wind energy, and green building materials; promoted a numerical and intellectual energy management system, which controls energy consumption in real time, and injects kinetic energy into the “Dual Carbon” development. By strengthening resource recycling, reducing pollutant emissions from multiple dimensions, and vigorously promoting collaborative disposal, we made every effort to develop a circular economy; we strived to realize the

greening of full life cycle, including green design, green products, green services and green investment, leading the global building materials industry in its transition towards green and low-carbon practices, and acting as a “Dual Carbon” forerunner.

**Firmly adhering to scientific and technological innovation and laying a solid CNBM-foundation for high-quality development.**

By integrating resources to tackle the key challenges of core technologies with unstinting efforts and accelerating the industrialization and application of scientific and technological achievements, a series of remarkable results have been achieved in areas such as materials, products, processes, and equipment. Aiming to achieve new industrialization, we have strived to assume the responsibility of the “national team” of scientific and technological innovation. With the vision of “digital leadership in material creation” , we have taken the lead in the research and application of green and low-carbon technology equipment to basic building materials and new materials. Hundreds of intelligent demonstration production lines for new dry-process cement, glass fiber, carbon fiber, and lithium battery separators have been built successively, accelerating the formation of new quality productive forces and strengthening new drivers of growth.

**Diving into the “Belt and Road” and making a CNBM-contribution to building a community with a shared future for mankind.**

The year 2023 marked the 10th anniversary of the Belt and Road initiative proposed by China, and it was also the first year of the internationalization development of “building another CNBM overseas” . While adopting a global perspective, we have focused on local cultivation, adhered to the three principles of “go global” for win-win cooperation, accelerating globalized industrial deployment and resource allocation with high-quality building materials, advanced technology and mature experience, and actively built an ecosystem that develops in a benign way with the environment, society and the upstream and downstream of the industry. We have strived to be good corporate citizens and deeply participated in infrastructure construction, poverty alleviation, community services and education development in the countries where we operate, contributing to building a community with a shared future for mankind. Always adhering to the people-oriented principle and regarding talents as priority, we have constantly improved the mechanism for identifying, employing and fostering talents, and strengthened the environment for talent growth, so as to continuously cultivate talents to meet the goal of “great material of the country” .

As a traditional Chinese saying states, carrying forward the cause and forging ahead into the future with years rolling on. Standing at a new starting point, we will adhere to the corporate mission of “materials create a beautiful world” and strengthen both basic building materials and strategic emerging industries. Empowering industrial upgrading with digital intelligence, brightening the ecological foundation with greenness, and promoting open cooperation with internationalization, we aim to write a “CNBM answer sheet” for China’ s modernization journey with practical efforts and achievements, as well as a new chapter of creating a world-class material enterprise.



Chairman of the Board

Beijing, China

2024.3.28



# Highlights of CNBM

## ESG Awards

2023 "Leading Enterprise"  
in China's industrial carbon  
emissions peak sector



"ESG Pioneer 100 Index of  
Central Enterprises"



Selected into the first edition of the  
Sustainability Yearbook (China  
Edition) by S&P Global and honored  
with

"the Best Progress Enterprise in the  
Industry"



"ESG Pioneer 100 among  
China's ESG Listed Companies"



## ESG Performance

Total greenhouse gas emissions **197.35 million tonnes**  
a year-on-year decrease by **14.5%**

Nitrogen oxides emissions **62,934 tonnes**  
a year-on-year decrease by **22.8%**

Sulfur dioxide emissions **5,877 tonnes**  
a year-on-year decrease by **9.4%**

Industrial particulates emissions **6,649 tonnes**  
a year-on-year decrease by **32.4%**

Comprehensive energy consumption intensity of **994 MW·h/million yuan of operating revenue**  
a year-on-year decrease by **5.1%**

Comprehensive energy consumption of cement clinker per tonne decreased by **3.9%**

Photovoltaic power generation  
**160 thousand MW·h**

Waste heat power generation  
**6.56 million MW·h**

Alternative fuels consumption  
**1.05 million tonnes**

Reducing carbon dioxide emissions  
by **93 thousand tonnes**

Reducing carbon dioxide emissions  
by **3,742 thousand tonnes**

Reducing carbon dioxide emissions  
by **233 thousand tonnes**

The income of green products **33,326.29 million yuan**

Safety, environmental and health inspections  
**69,125 times**

Investment related to safety and health  
**1.493 billion yuan**

Correction rate of hidden dangers  
**99.2%**

Safety education and training  
**1.551 million person-times**

Average training hours for all employees **49 hours**, a year-on-year increase by **4.3%**

Total investment in philanthropy **70.57 million yuan**

Volunteer activities **30,078 hours**

# Board Statement

The Group is committed to practicing the concept of sustainable development. The Board attaches great importance to ESG management and has established an ESG management system in which the Board takes responsibility, the management organizes, all departments cooperate and the subsidiaries are linked upward and downward.

- ◇ The Board regularly listens to and reviews the ESG work progress report of the ESG Committee, and guides the ESG work guidelines;
- ◇ The ESG Committee is mainly responsible for evaluating the Group's corporate governance, environmental and social responsibility management and the risks and opportunities faced, formulating and reviewing the corporate governance, environmental and social responsibility management vision, objectives and strategies, and regularly reporting to the Board on major topics related to ESG work;
- ◇ Management is responsible for the specific implementation of ESG strategies and objectives, and regularly reports to the ESG Committee on major topics related to ESG work;

- ◇ All departments establish ESG management norms and processes, submit relevant information in a timely manner and assist in the implementation of the Company's ESG program, and carry out ESG publicity and training;
- ◇ Affiliated companies actively set up corresponding support departments, gradually build and improve internal ESG management systems, and carry out customized ESG fulfillment practices in combination with their own business models.

The Group attaches great importance to the evaluation of the materiality of ESG issues, optimizes the way of stakeholder engagement, identifies, evaluates, and manages material ESG issues, and compares the differences with the evaluation results in previous years. The specific assessment process and results are detailed in the "Establishing the Foundation of Sustainable Development" section of this Report and reviewed by the Board.

In respect of ESG risk management, the Group has integrated ESG risk management into its daily risk management system. All departments and subsidiaries of the Group identify and prevent significant ESG risks in the

daily operation and production process. The ESG Committee regularly reviews such risks and reports the risk management to the Board on a regular basis.

The Group has developed effective strategies to maintain a balance between the Company's environmental and social impact and the achievement of its business objectives to promote sustainable development. The ESG Committee reviews and evaluates the Group's ESG strategy on a regular basis to review and ensure alignment with the Company's development strategy. During the Reporting Period, the Group also established environmental objectives associated with its business operations and reviewed the achievement of the objectives in the previous year. The establishment of objectives and the results of the review are detailed in the "Green technology empowers new quality productive forces" of this Report and reviewed and discussed by the Board.

This Report discloses in detail the progress and effectiveness of the Group's 2023 ESG work, which has been reviewed and approved by the Board on March 28, 2024.









# About CNBM

## Company profile

With Parent, BNBMG, CNBM Trading, Cinda and Building Materials Academy as promoters, the Company was converted into a joint stock limited company on 28 March 2005. The Group's H Shares under the initial public offering were listed on the Stock Exchange on 23 March 2006 (Stock Code: 3323). As of the end of the Reporting Period, the Group owned six A-share listed companies with approximately 145,277 employees.

The Group is mainly engaged in basic building materials, new materials and engineering technology service businesses. As regards the current market positions (in terms of the production capacity or contract amount as of 31 December 2023), the Group is:

**The World's largest**

 cement producer	 commercial concrete producer	 glass fiber producer	 electronic cloth producer
 gypsum board producer	 light steel stud producer	 wind power blade producer	 cement engineering system integration service provider

## Business overview

The business segments and the major operating entities of each business segment for the Group as of 31 December 2023 are as follows:

Business segments	Major operating entities	Direct and indirect equity interests attributable to the company	Main products and services
Basic building materials	New Tianshan Cement	84.52%	Cement, Commercial concrete, Aggregate
	North Cement (Entrusted in New Tianshan Cement)	100%	Cement, Commercial concrete, Aggregate
	Ningxia Building Materials	49.03%	Cement, Commercial concrete, Aggregate, Digital logistics
New materials	BNBM	37.83%	Gypsum board, Stud, Waterproof system, Coating
	China Jushi	26.97%	Glass fiber
	Sinoma Science & Technology	60.24%	Glass fiber, Wind power blade, Lithium battery separator, Hydrogen energy storage and transportation equipment
	China Composites	100%	Wind power blade (equity participation), Carbon fiber (equity participation)
	Sinoma Graphite	100%	Graphite fine powder, Spherical graphite, Graphite anode material
Engineering technology service	Sinoma International	40.96%	Cement and mining technical equipment and engineering services, Transportation and repairment
Logistics trade and others	CNBM Investment	100%	Overseas warehouse (including overseas chain stores), Centralized procurement supply chain

Note: The environmental and social data disclosed in this Report is the sum of the data of affiliated companies, regardless of shareholding proportion.



# Awards and Recognition

The Group always adheres to implementing the strategy of sustainable development and has been recognized by Chinese government and various foreign governments and institutions in many areas.

In 2023, the Company and its subsidiaries received a number of honorable awards, including but not limited to the following:

## Comprehensive awards

- ◇ The Company was ranked No.58 in Fortune (Chinese edition) “List of China’s Top 500 Listed Companies”
- ◇ The Company, New Tianshan Cement, BNBM, China Jushi, Sinoma Science & Technology and Sinoma International were selected as the “Listed Companies of Global Building Materials in 2023”. BNBM, Sinoma Blade and Beijing Composite affiliated to Sinoma Science & Technology, and China Standard Sand, affiliated to CNBM Investment, were selected as the “Top Ten Leading Enterprises in Scientific and Technological Breakthrough in the Building Materials Industry in 2023”
- ◇ The Company was honored as “Excellent Issuer of Corporate Bonds” by Shanghai Stock Exchange
- ◇ BNBM was selected into the “Top 100 Main Board Listed Companies” list in the 17th China Listed Companies Value Selection organized by the Securities Times
- ◇ BNBM was selected into the “Top 100 Health Index of Listed Companies in China” list
- ◇ BNBM was awarded the “China Top 100 Enterprise Award” and the “China Top 100 Special Contribution Enterprise Award” at the 23rd China Business Top 100 Forum, while China Jushi was recognized with the “China Top 100 Enterprise Award” and the “Top 100 Growth Enterprise Award”
- ◇ BNBM, China Jushi, and Sinoma Science & Technology were awarded the 25th “Golden Bull Award of the Most Valuable Investment” for listed companies
- ◇ China Jushi was selected into the “Top 50 Chinese Enterprises in Multinational Operation” list by Forbes China
- ◇ China Jushi and Zhongfu Shenying, affiliated to China Composites, were selected by SASAC as the “World-Class Specialized and Innovative Demonstration Enterprises”
- ◇ BNBM and China Jushi were selected as benchmark enterprises of the State-owned key enterprises of SASAC for benchmarking the world-class management improvement action



### ESG awards

- ◇ The Company was awarded the title of 2023 "Leading Enterprise" in China's industrial carbon emissions peak sector
- ◇ The Company, BNBM, China Jushi and Sinoma International were selected into the list of "ESG Pioneer 100 Index of Central Enterprises". Besides, the Company's report titled Enhancing Sustainable and High-Quality Development Capabilities to Build a World-Class Material Enterprise was recognized as an the ESG excellent case
- ◇ The Company was selected into the first edition of the Sustainability Yearbook (China Edition) by S&P Global and honored with the "Best Progress Enterprise in the Industry"
- ◇ The Company and BNBM were selected into the "ESG Pioneer 100 among China Listed Companies" list
- ◇ The Company won seven awards including "Best Management Team in Asia 2023" by Institutional Investor for the best environmental, social and governance performance in the basic materials sector
- ◇ New Tianshan was selected into the "2022 Forbes China Sustainable Development Industrial Enterprises"
- ◇ New Tianshan Cement's case titled "Enhancing ESG Information Disclosure and Advancing Low-Carbon Transformation Management in Traditional Enterprises" and Ningxia Building Materials' case titled "Promoting Transformation and Efficiency to Comprehensively Implement Green and Low-Carbon Development" were selected into the "2023 ESG Excellent Practice Cases of Listed Companies" by the China Association for Public Companies
- ◇ BNBM won the "Sustainable Development Contribution Award" in the 2023 Changqing Award for sustainable development series of Caijing
- ◇ BNBM and China Jushi were selected into the "2023 Top 100 ESG Listed Companies in China" list
- ◇ BNBM and Sinoma Science & Technology were selected into the first "National New Cup ESG Golden Bull Award Top 50" list
- ◇ BNBM, China Jushi and Sinoma International were selected into the "CSI China Reform Central-SOEs ESG Growth 100 Index" list
- ◇ BNBM's case titled Integrating ESG Values to Steer the Excellence of the New Building Materials Industry and China Jushi's case titled Embrace Green Fibers and Harmonious Growth: To be a Pioneer for Sustainable Fiber Production were selected into the "2023 China's Excellent ESG Cases of Enterprises"
- ◇ Sinoma International won the "2023 Responsible Benniu Award - ESG Dual Carbon Pioneer Award"
- ◇ Sinoma International was selected into the 2023 "ESG+8 Value 100" list of the Easy Board
- ◇ Zhongfu Shenying won the "2023 Responsible Benniu Award - ESG Public Welfare Pioneer Award"



### Outstanding practice awards

- ◇ The Company's project titled "Development of a Comprehensive Compliance Oversight Closed-Loop Management System Focused on Risk Prevention and Control for Building Material Enterprises" was awarded the "Twenty-ninth Second-class National Enterprise Management Modernization Innovation Achievement"
- ◇ New Tianshan Cement's report titled "Standardization System Construction of Southern Cement Intelligent Plant and Digital Control Platform" was selected into the "Typical Cases of the Digital Transformation Among Listed Companies in 2023"
- ◇ Ten reform achievements of the Company and its subsidiaries were honored with 2023 Outstanding Achievements in China's Enterprise Reform and Development
- ◇ The Company won the "Best Capital Market Communication" and "Best Emerging Company of the Year" awards at the 7th China Excellence IR Awards
- ◇ New Tianshan Cement's report titled "CNBM Zambia Industrial Park Facilitates the Steady and Sustainable Progress of the "Belt and Road" Initiative", and China Jushi's report titled "Forging a New Benchmark for the 'Belt and Road'" were selected as the top 100 best practice cases of Chinese listed companies in the decade of jointly building the "Belt and Road" Initiative
- ◇ New Tianshan Cement and Ningxia Building Materials were selected into the "Excellent Practice Cases in Rural Revitalization of Listed Companies in 2023" list

### Outstanding practice awards

- ◇ Jiahua Special Cement, a subsidiary of New Tianshan Cement, was awarded "Green Innovative Product" by the World Cement Association
- ◇ Hefei Institute, a subsidiary of Sinoma International, and New Tianshan Cement won one second prize and two third prizes of "2023 Building Material Machinery Industry Science and Technology Award"
- ◇ BNBM's case titled "Practices Based on Value Stream Optimization" and China Jushi's case titled "Experience in Implementing the 12350 Quality Management Method Focused on Full Value Chain Development" were selected into the "2023 National Quality Benchmarking List"
- ◇ BNBM won the "Second Prize for Excellent Research Achievements in 2023" from the Party Construction and Political Research Association of Central Enterprises
- ◇ BNBM awarded 2023 National Quality Benchmark in Building Materials Industry
- ◇ China Jushi's case of "Socially Responsible Industrial Investment Helps Egyptian Industry Upgrade" was successfully selected into "The Fourth Global Best Poverty Reduction Cases"
- ◇ China Julishi won the "Intellectual Property Award - Patent Award in Zhejiang Province" and "Science and Technology Progress Award in Zhejiang Province".
- ◇ China Jushi won the "National Excellent Quality Management Team Gold Award", the highest honor for national quality management team activities
- ◇ Sinoma Blade, a subsidiary of Sinoma Science & Technology, won the "Second Prize of Science and Technology Progress Award in Hebei Province", "Second Prize of Science and Technology Progress Award in Jiangxi Province", and "Second Prize of Science and Technology Progress Award of Machinery Industry in the Year of 2023"
- ◇ Suzhou Limited, a subsidiary of Sinoma Science & Technology, won the "First Prize of China Occupational Safety and Health Association Science and Technology Award"
- ◇ NRDI, a subsidiary of Sinoma Science & Technology, was awarded "The First Patent Award in Jiangsu Province", "2023 China Textile Industry Federation Science and Technology Award for Scientific and Technological Progress" and two awards of "China National Textile and Apparel Industry Association Patent Award"
- ◇ TCDRI, a subsidiary of Sinoma International, was awarded the "Second Prize in the Professional Competition for Digital Scene Innovation Among State-Owned Enterprises" for its Digital Management Platform for the Entire Lifecycle of Building Material Equipment Manufacturing
- ◇ Sinoma International's case titled "Flexible Utilization of a Comprehensive Medium- and Long-Term Incentive Toolkit to Spark Vibrant and Sustainable Enterprise Growth" was awarded the first prize in "The Second Practice Achievements in Deepening the State-Owned Enterprises Reform"; TCDRI, a subsidiary of Sinoma International, was awarded the second prize for its report titled "Elevating Technological Innovation Capabilities to Shape a New Paradigm of High-Quality Development"
- ◇ Sinoma International, Sinoma Suzhou and TCDRI (both affiliated to Sinoma International), China Standard Sand (affiliated to CNBM Investment), CUCC Dongying and, Nanfang Cement (both affiliated to New Tianshan Cement), and Huzhou South Mining were selected as typical cases of intelligent manufacturing digital transformation in the building materials industry in 2023
- ◇ The ZAHANA project in Algeria, BECHAR project in Algeria, and SOKOTO3 project in Nigeria undertaken by CBMI Construction, as well as the 5000t/d new dry process cement resource comprehensive utilization and environmental protection demonstration production line for poverty alleviation in Ningxia's building materials industry undertaken by Sinoma Suzhou, won the National Quality Engineering Award for 2022-2023
- ◇ The 6,500 tonnes per day clinker cement production line project of Fauji (DG Khan) in Pakistan, which was contracted by Hefei Institute and constructed by Sinoma Handan, was selected as one of the "Top Ten Overseas Wonderful Moments of Central Enterprises in 2023"
- ◇ Sinoma International (Nanjing)'s Yaqu Project in Shigatse was awarded the Guinness World Records
- ◇ TCDRI, affiliated with Sinoma International, received two awards of "Tianjin Science and Technology Progress Second Prize" and two awards of "Second Prize of Scientific and Technological Award for Building Materials"
- ◇ CBMI Construction and Hefei Institute, affiliated with Sinoma International, won three awards of "Scientific and Technological Progress Awards of China Building Materials Machinery Industry Association"
- ◇ The project undertaken by Sinoma Intelligent Technology, a subsidiary of Sinoma International is the world's first clinker production line using 90% alternative fuels, and was selected as a "Typical Case of China-EU Green and Low-Carbon Development Cooperation in 2023"
- ◇ Zhongfu Shenying was awarded the "First Silver Award of Jiangsu Patent", the "Silver Award for Excellent Patent of China National Textile and Apparel Industry Association", and the "First Prize for Scientific and Technological Progress in Qinghai Province"



# Establishing the Foundation of Sustainable Development



China National Building Material Company Limited formally joined the United Nations Global Compact ( “UNGC” ) in August 2023. The Group is committed to the Ten Principles of the UNGC based on the United Nations Convention and is committed to integrating the ten principles into the strategic management.



## Sustainability strategy

As a practitioner of international social responsibility and a leading enterprise in the integrated building materials industry both at home and abroad, the Group adheres to its core philosophy of “Make good use of resources and serve the construction” and core values of “Innovation, Performance, Harmony, Responsibility” , forging a unique corporate culture.

### Corporate Culture

#### Core philosophy

Make Good Use of Resources and Serve the Construction

#### Mission

Materials Create a Beautiful World

#### Core values

Innovation, Performance, Harmony, Responsibility

#### Code of conduct

Reverence, Gratitude, Modesty, Propriety





In 2023, the Group collectively advanced the implementation of the “1+N” sustainable development strategy, culminating in a strategic model that encompasses CNBM, along with six listed subsidiaries and two unlisted companies. This strategic framework spans all operational sectors, underpinning our commitment to sustainable growth.

CNBM has formulated the “2463” sustainable development strategy, keeping firmly the corporate mission of “Materials Create a Beautiful World” in mind and adhering to the core values of “Innovation, Performance, Harmony, and Responsibility”. The Company is committed to realizing the corporate vision of “Build a World-class Material Enterprise, Committed to Value Creation and Shareholder Return”. By promoting green technology, building a renowned brand, and enhancing modern governance, the Company actively contributes to green transition and the development of emerging industries, aiming to achieve sustainable development for the enterprise, society, and nature.

## 2 Two insistences

### Adhering to the corporate mission of “Materials Create a Beautiful World”

Taking material science innovation as the cornerstone, promoting scientific and technological progress, using environmentally friendly materials and optimizing processes, providing advanced, convenient, and efficient products and services to society, and helping to create a green and beautiful world.

### Upholding the corporate vision of “Build a World-class Material Enterprise, Committed to Value Creation and Shareholder Return”

Pursuing excellent quality in the fields of technology, research and development, production, etc., with the creation of social value as the core, achieving maximum shareholder benefits, providing stable returns through efficient management and stable profits, reflecting the development philosophy of comprehensive optimization and integrated development.

## 4 Four values

### Leveraging the value of innovation

Deploying the innovation chain around industrial chains and development trends, effectively enhancing the sustainable innovation capability of the industry, deeply laying out the green innovation development, leading the forward-looking and fundamental R&D with the goal of scientific and technological innovation, and leading the development of the industry by driving transformation with technological innovation to support the upgrading of main business and the growth of new businesses.

### Leveraging the value of investment

Increasing ESG investments, actively disclosing ESG information, and striving to improve ESG performance, while paying attention to and benchmarking against excellent international ESG practice cases, enhancing external ESG evaluation, and promptly responding to investment institutions’ considerations for ESG during decision-making process, seeking better performance in capital market.

### Leveraging the value of brand

Strengthening brand culture construction and continuously enhancing brand value, incorporating the ideologies and corporate culture of being green, innovative, safe, honest, and fulfilling global citizenship responsibilities throughout the enterprise and its industrial chain, promoting the long-term and stable development of the fundamental business of the enterprise.

### Leveraging the value of internationalization

Actively promoting internationalization strategies, participating in global market competition and cooperation, and establishing strategic partnerships with internationally renowned companies and research institutions, jointly developing new products and technologies through these collaborations, sharing global resources, and enhancing the popularity and influence of the brand in the international market.

## 6 Six stakeholders

Actively responding to the expectations and demands of the six major stakeholders: government and regulatory bodies, shareholders and investors, employees, suppliers, customers, the public and the community.

## 3 Three strategic pillars

### Green technology empowers new quality productive forces

Through green and technological innovation, seizing opportunities in low-carbon economy and green development to build the new quality productive forces, supporting the growth through five key domains as green productivity: green products and solutions, green manufacturing, circular economy, tackling climate change, and biodiversity conservation, becoming a benchmark for central enterprises to implement green and low-carbon development of the “Belt and Road” .

### Outstanding brands promote international cooperation

Prioritizing comprehensive improvements in talent, quality, community, and other aspects, attracting talents and establishing a prestigious corporate image by fostering four critical domains in employer brands, market brands, quality brands, and responsible brands, supporting the remarkable achievements of various business segments in the internationalization process, striving to become a world-class material enterprise.

### Modern governance promotes high-quality development

Continuously deepening the modern corporate governance for state-owned enterprises with Chinese characteristics, with a scientific, standardized and efficient corporate governance system as the cornerstone of development, operating in accordance with the law and regulations, adhering to business ethics, attaching great attention to areas of corporate governance and business ethics, safeguarding a positive corporate reputation and providing robust support for high-quality development by strengthening risk prevention and compliance management.



## Sustainability governance

The Group has established a sound ESG governance structure and policy system, so as to achieve balanced development of the enterprise and society, promote sustainable development.

### ESG governance structure

The Board, as the highest decision-making body of the Group's ESG work, is responsible for the Group's ESG strategy and reporting. The Board receives and reviews regular reports from the ESG Committee on the progress of ESG work and provides guidance on ESG issues.

The ESG Committee is a professional ESG management committee, which supervises ESG matters and regularly reports to the Board on major topics related to ESG work. The main responsibilities of the ESG Committee include:

- ◇ Studying and formulating the overall ESG management objectives, management strategies and management policies of the Company, including the process of evaluating, prioritizing and managing material ESG-related issues (including climate change, employee safety and health, labor management, waste management and pollutant discharge, information security, business ethics and sustainable supply chain construction);
- ◇ Monitoring and reviewing the Company's ESG policies and practices to ensure that these policies and practices keep pace with the times, meet the needs, and comply with applicable laws, regulatory requirements and international standards;
- ◇ Assessing and defining the risks and opportunities of CNBM and all its subsidiaries in relation to ESG, and ensuring that the Company has set appropriate and effective ESG risk management and internal control systems;
- ◇ Reviewing material ESG management issues, including but not limited to reviewing and approving the annual ESG report and reviewing the progress of the annual ESG overall objectives, and explaining the relationship between the relevant objectives and the Company's business;

- ◇ Evaluating the way the Company communicates with stakeholders on ESG issues and ensuring that appropriate engagement policies and channels are in place.

ESG working group is a working group under the ESG Committee, it is authorized by the Board to assist the ESG Committee in guiding and supervising the Group to implement the management of ESG issues. Members of the working group consist of directors of the Board or senior management, functional departments related to ESG, and specialized personnel in charge of ESG works. Its main responsibilities include:

- ◇ Organizing and implementing ESG works, setting up related policies and procedures and report to the ESG Committee for approval;
- ◇ Coordinating and supervising the Group's implementation of ESG works;
- ◇ Reviewing the progress of achieving ESG targets and assisting the ESG Committee to review;
- ◇ Reporting the ESG management works to the ESG Committee regularly;
- ◇ Urging and inspecting the implementation by functional departments related to ESG and specialized personnel in charge of ESG, etc.

Functional departments related to ESG and specialized personnel in charge of ESG work. Their responsibilities include:

- ◇ Establishing and improving the norms and procedures of ESG management;
- ◇ Taking charge of collecting, merging and reporting relevant information and materials;
- ◇ Taking the responsibility of implementing ESG projects and assisting with the organization of related practical activities;
- ◇ Contributing to the advocating and training of ESG and the communication with stakeholders, etc.



**Case: Chairman lectured on ESG concepts and actions to deepen the awareness of green development**

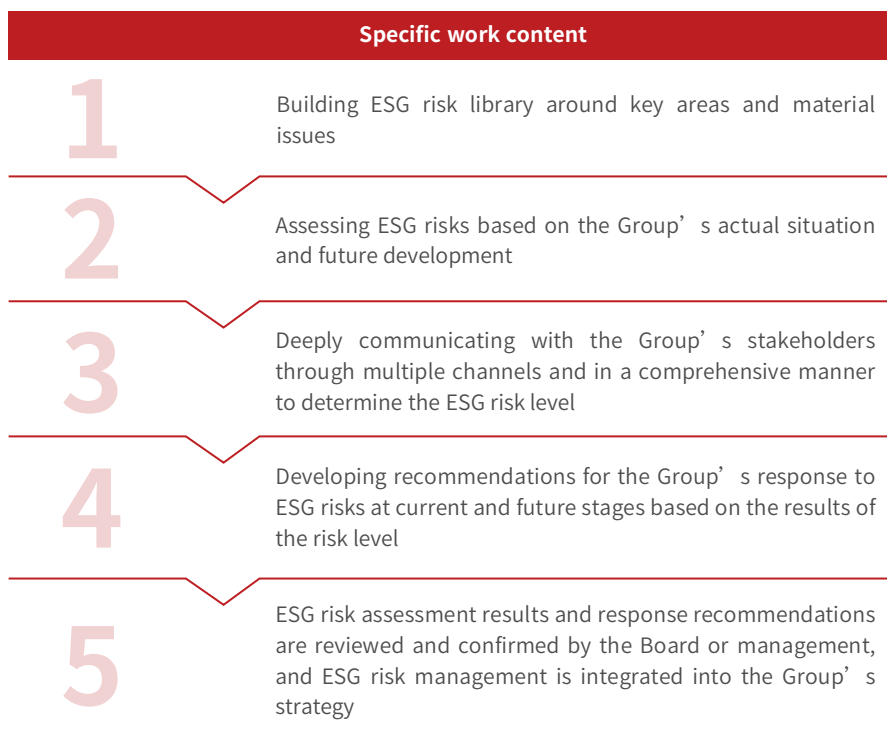
The Group regularly carries out ESG capacity building, deeply cultivates and implements ESG concepts. In November 2023, Chairman Zhou Yuxian, who serves as the Chair of the ESG Committee, provided a focused presentation on ESG concepts and actions to the management teams across various levels within the Group. Through the analysis of global policy trends, expectations from various stakeholders, and our own requirements, he underscored the critical importance of ESG as a global benchmark for evaluating a company's sustainable development and future investment potential. Additionally, he discussed the Group's efforts and outlook in continuously implementing ESG concepts, enhancing ESG leadership, and engaging in practices and disclosures, etc. These initiatives are aimed at fostering the sustainable and high-quality growth of the Group.



Lecture on “Practicing ESG Concepts for Sustainable Development”

## ESG risk management

The Group integrates ESG risk management into its daily risk management system, and actively carries out special risk identification and assessment in the areas of climate change, environmental protection, technological innovation, production safety, employee growth, social responsibility and business ethics. The work flow of ESG risk identification and assessment carried out by the Group is as follows:



In 2023, the Group released the 2023 Annual Risk Assessment Report, which assessed the policy risks of dual-control of energy consumption such as “Dual Carbon” and “Two Highs”, as well as ESG risks such as safety, environmental protection and quality risks, and formulated corresponding control objectives and measures. Please refer to relevant chapters for details.



## Stakeholder engagement

The Group identifies the key stakeholders who are related to the Group's operation, keeps communication with them to understand their expectations for, interests in and requirements for the Group's development process and future, and strive to respond and meet the requirements.

### Establishing a stakeholder grievance mechanism

The Group has established a stakeholder grievance mechanism to ensure that all stakeholders can feedback their opinions and suggestions through appropriate channels. For example, in the preliminary design stage of various projects, the Group will openly consult and widely collect the opinions of the residents around the project location on the project, and thoroughly understand the key concerns of the relevant residents. At the same time, the Group appoints a professional environmental assessment agency to conduct a comprehensive environmental impact assessment of the project and formulate an impact mitigation plan, so as to minimize the potential impact of the project on the surrounding environment and community.

Mainly identifying relevant individuals or groups as the Group's key stakeholders through the following three criteria:

- ◇ whether they have invested or will invest in the Group;
- ◇ whether they influence the business operation of the Group;
- ◇ whether they have interests in or are affected by the business, products, services, and relationships of the Group.

The main stakeholders identified by the Group and the main engagement channels and frequencies are as follows:

Key stakeholders	Main engagement channels	Frequency
Board members, executive, and employees	Employee meeting/forum	Annually
	Employee performance appraisal interview	Regularly
	Employee satisfaction survey	From time to time
	On-site investigation and research	
	Recreational activity and voluntary activity for employees	
Governments/regulatory authorities	Telephone/email	Regularly
	Meeting and interview	From time to time
	Stakeholder ESG surveys	
Clients	Telephone/email	Regularly
	Meeting and interview	From time to time
	Stakeholder ESG surveys	
Suppliers/contractors	Issuance of invitation for bids on procurement of products/services	Regularly
	Inspection and supervision of work	From time to time
	Supplier/contractors conference	
	Telephone/email	
	Meeting and interview	
	Stakeholder ESG surveys	

Key stakeholders	Main engagement channels	Frequency
Shareholders/investors	General meeting	Annually
	Investor conference	Regularly
	Press release/announcement	From time to time
	Annual/interim result presentation	
	Analyst seminar	
	Roadshow	
	Meeting and interview	
	Corporate Day	
Members of communities/ organizations	Stakeholder ESG surveys	
	Telephone/email	Regularly
	Meeting and interview	From time to time
Media	Stakeholder ESG surveys	
	Press release/announcement	Regularly
	Media interview	From time to time
Business partners	Stakeholder ESG surveys	
	Inspection and supervision of work	Regularly
	Telephone/email	From time to time
	Meeting and interview	

The Group obtains opinions and suggestions from various stakeholders through the above channels, transforms them into practical experience applicable to operation management and business development through analysis and judgment, and summarizes and publicizes them at various meetings, so as to maximize the engagement effect among stakeholders and promote the sustainable development of the Group.

## Materiality assessment

The Group integrates the materiality assessment into the overall risk management process. In order to identify the ESG issues that were critical to the Group's main stakeholders, during the preparation of the Report, the Group, by referring to the standards and guidelines, including the ESG Reporting Guide issued by the Stock Exchange, the Reference Indicator System for the ESG Special Report of Listed Companies Controlled by Central Enterprises issued by SASAC, SASB standards (Engineering & Construction Services sector) and recommended disclosure framework by TCFD, through questionnaires, reviews and summaries, and exchange meetings, actively understands and responds to stakeholders' concerns, adopts the "Double Materiality" principle that combines financial importance and the impact of business activities on the environment and society, to assess the materiality of the issues, and takes it as an important reference for defining the scope and boundary of issue disclosure.

### Specific work contents

1

Updating the database of ESG issues and screening out potential ESG material issues

2

Identifying the most relevant ESG issues for the Group

3

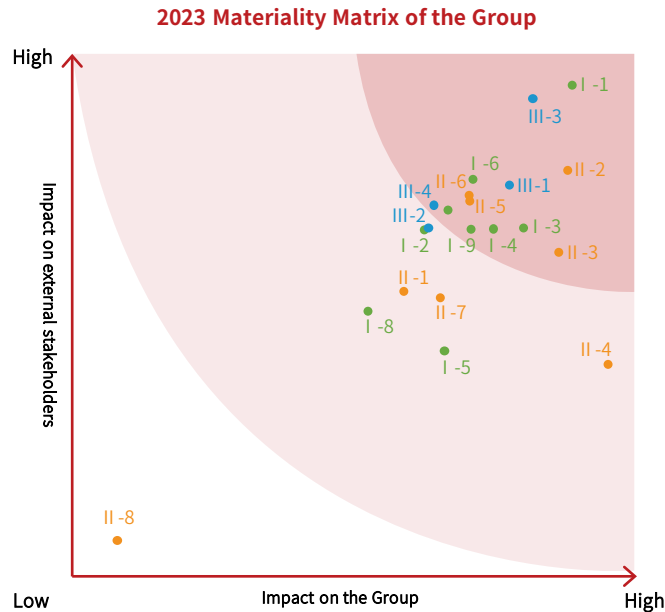
Conducting stakeholder surveys in the form of online questionnaire

4

Identifying material issues by drawing a materiality matrix based on the survey results

5

Reviewing and confirming the results of identification of material issues



The Group conducted a comprehensive analysis of the data collected during the assessment of substantive issues, obtained the results of the survey on materiality as shown in the above matrix, and identified 13 material issues that were of greatest concern to key stakeholders. This Report will focus on the Group’s management systems, initiatives, indicators and objectives on these material issues to respond to the information needs of these key stakeholders.





Environmental	Social	Governance
I-1 Emission management	II-1 Human resource management	III-1 Anti-corruption
I-2 Upgrading solid waste utilization	II-2 Occupational health and safety of employees	III-2 Anti-unfair competition
I-3 Greenhouse gas emission and management	II-3 Employee career development and training	III-3 Compliance
I-4 Energy use and efficiency	II-4 Child labor and forced labor	III-4 Corporate information disclosure
I-5 Promoting raw material substitution	II-5 Supply chain environment and social risks	
I-6 Use and efficiency of water resources	II-6 Product and service quality	
I-7 Ecological environment protection and biodiversity conservation	II-7 Scientific research investment and innovation	
I-8 Tackling climate change	II-8 Community investment and participation	
I-9 Green products		


Subject area	Material issues of most concern to stakeholders	Corresponding reporting location
Environmental	1.Emissions management	Insisting on green manufacturing
	2.Greenhouse gas emission and management	Tackling climate change
	3.Energy use and efficiency	Tackling climate change
	4.Use and efficiency of water resources	Integrating into circular economy
	5.Ecological environment protection and biodiversity conservation	Protecting ecological conservation and biodiversity conservation
	6.Green products	Creating green products
Social	7.Occupational health and safety of employees	Caring for employee development and building an employer brand
	8.Employee career development and training	Caring for employee development and building an employer brand
	9.Supply chain environment and social risks	Guaranteeing quality excellence and casting a quality brand
	10.Product and service quality	Guaranteeing quality excellence and casting a quality brand
Governance	11.Anti-corruption	Integrity system building
	12.Compliance	Internal control compliance and risk management
	13.Corporate information disclosure	About the Report

## UN SDGs alignment

In 2015, the United Nations Sustainable Development Summit formally adopted 17 Sustainable Development Goals ( “SDGs” ) to guide global sustainable development efforts from 2015 to 2030. The Group has responded positively to the goals and diversified our actions to achieve sustainable development.

SDGs	Actions of the Group
	<ul style="list-style-type: none"> <li>The Group pursues the common development and growth of the enterprise and the region where it is located, and carries out a number of investment activities in the territory to promote the development of local economy, education, culture, science and technology, and help to eliminate poverty and hunger.</li> </ul>
	<ul style="list-style-type: none"> <li>In 2023, the Group donated a rural revitalization fund of 64.39 million yuan.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group has established a sound employee health and safety system, actively improved the supporting facilities and first-aid equipment in production sites, and organized regular health checkup for employees.</li> <li>The Group helps employees achieve work-life balance and conducts fun sports and cultural activities to promote their physical and mental health.</li> <li>In 2023, the Group conducted 69,125 safety, environmental and health inspections of various types such as emergency drills and fire drills, covers 39,810 person-times, with annual safety and health-related investment amounting to 1.493 billion yuan.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group provides regular and comprehensive development training and career planning advice to its employees, with 49 training hours per employee in 2023.</li> <li>The Group is committed to promoting inclusive and equitable quality education, reducing educational inequality, and providing assistance to students with financial difficulties through the establishment of scholarships.</li> <li>In 2023, the Group set up 4 special scholarships, with a total annual scholarship of 240 thousand yuan.</li> </ul>

SDGs	Actions of the Group
	<ul style="list-style-type: none"> <li>The Group ensures that there is no gender discrimination in the process of recruitment and work process, and that there is no form of unequal treatment of employees on the basis of gender.</li> <li>By the end of 2023, the Group’s female employees accounted for 23.5% and the proportion of women among senior staff reached 8.2%.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group strictly complies with the relevant laws and regulations on sewage and waste discharge and has formulated internal rules and regulations on sewage and waste management.</li> <li>By strengthening leadership, improving systems, implementing responsibilities and strengthening supervision, the Group has achieved remarkable results in measurement management, water saving system construction, sewage treatment and reclaimed water reuse.</li> <li>By the end of 2023, the Group's recycled water consumption was 1,363 million tonnes and the recycled water utilization rate was 92%.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group has accelerated the establishment of a clean, efficient, safe and sustainable energy supply system, and a number of subsidiaries were engaged in the development and construction of clean energy in their operating sites.</li> <li>The Group actively deploys photovoltaic and wind power generation devices to continuously increase the proportion of clean energy usage.</li> <li>In 2023, the Group consumed 160 thousand MW·h of photovoltaic power generation, equivalent to 93 thousand tonnes of carbon dioxide emission reduction, and 6.56 million MW·h of waste heat power generation, equivalent to approximately 3.742 million tonnes of carbon dioxide emission reduction.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group is committed to creating a diverse and inclusive corporate culture, continuously improving the scientific system of talent retention, promotion and development, and designing a welfare system that runs through the entire life cycle of employees in the workplace, so as to protect the career development and workplace experience of employees in an all-round way.</li> <li>By the end of 2023, a total of 9,068 employees of the Group participated in the satisfaction survey with a satisfaction rate of 96.5%.</li> </ul>

SDGs	Actions of the Group
	<ul style="list-style-type: none"> <li>Relying on the high-level research and development platform, the Group strives to promote the research, development and application of new products, new technologies and new equipment.</li> <li>By the end of 2023, the Group had accumulated 15.2 thousand valid patents, including 3,637 invention patents.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group adheres to the principle of equal employment, while respecting and protecting the special rights and interests of female workers in accordance with the law. In addition, the Group requires suppliers to safeguard the legal rights of their employees.</li> </ul>
	<ul style="list-style-type: none"> <li>By producing green, low-carbon and sustainable building materials, the Group actively assumes the relevant responsibilities related to the construction of sustainable cities and communities, and contributes to the construction of sustainable cities and communities.</li> <li>By the end of 2023, the Group has 239 green factories, of which 160 are national green factories; has 137 green mines, of which 43 are national green mines.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group actively promotes the use of alternative fuels and alternative materials in its products, and is committed to providing high-quality, safe, healthy, green and environmentally friendly basic building materials and new material products, so as to contribute to the sustainable development of the whole society.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group regularly calculates and discloses greenhouse gas emissions data to assess the impact of our business activities on climate change.</li> <li>In order to cope with the short-term, medium-term and long-term impacts of climate change, the Group has taken targeted measures to control related climate risks.</li> </ul>

SDGs	Actions of the Group
 	<ul style="list-style-type: none"> <li>The Group carries out environmental impact assessment on the project in strict accordance with national laws and regulations, and strictly demonstrates the site selection and layout of the factory, protects natural habitats, wetlands, forests, wildlife corridors and agricultural land in the project construction, thus avoiding damage and impact on the habitats of surrounding organisms due to project operation and protecting biodiversity.</li> </ul>
	<ul style="list-style-type: none"> <li>The Group strictly abides by the national laws and regulations on anti-corruption, anti-money laundering and anti-fraud, and formulates internal rules and regulations related to the construction of a clean and honest administration.</li> <li>In 2023, the Group held and organized 4,149 anti-corruption training sessions. The coverage rate of anti-corruption training for directors was 100%, and the coverage rate of anti-corruption training for employees was 100%.</li> </ul>
	<ul style="list-style-type: none"> <li>By establishing long-term, stable and sustainable cooperative relationships with suppliers, the Group has achieved sustainable win-win development and promoted the progress of the industry.</li> <li>In 2023, 26,954 suppliers established long-term cooperation with the Group, of which 18,031 suppliers passed environmental and social risk screening and control, and 10,795 suppliers passed quality, occupational health and safety, environmental or energy management system certification.</li> </ul>





# Spotlight

- ◇ Delving into the “Belt and Road” Initiative to craft a comprehensive global blueprint together
- ◇ Working on “both ends” to serve as the nation’s industrial pillar strength

# Delving into the “Belt and Road” Initiative to craft a comprehensive global blueprint together

With a firm belief and unwavering courage, we can overcome all obstacles and achieve our dreams. The year of 2023 marks the 10th anniversary of the “Belt and Road” Initiative. Over these 10 years, while consistently deepening the principle of “Planning Together, Building Together, and Benefiting Together”, CNBM has vigorously implemented the internationalization strategy, actively fulfilled the corporate social responsibilities, and propagated positive culture. Through technology exports and international cooperation, CNBM has strengthened connectivity and economic integration with various countries, and improved the level of local economic development and the well-being of local people. CNBM is committed to supporting the goal of the initiative to open up a “road of happiness” that benefits the whole world.



“We have outlined three guiding principles for win-win international cooperation: make meaningful contributions to the local economy, foster collaborative relationships with local enterprises, and provide services beneficial to local residents.”

“We have evolved from exporting products to implementing the EPC (Engineering, Procurement, and Construction) model and now jointly exporting technology, services, and standards. Looking ahead, we will transition from merely ‘going global’ to deeply ‘engaging locally’, with the aim of making significant contributions to enhancing the quality of life for the people in our partner countries.”



— In 2023, the Chairman of the Group, Zhou Yuxian, granted an exclusive interview to China Global Television Network (CGTN), sharing insights on the Group’s overseas integrated development along the “Belt and Road” Initiative.

## A prosperous future -CNBM’ s “go global” practices

As CNBM ventured into the global arena, it traversed three pivotal stages. Each stage represents a significant milestone in the Group’ s sustained growth and strategic evolution within the global building materials industry. From exporting products to implementing the EPC model, and expanding globally in technology, services, and standards, CNBM has solidified its position as a significant player in the global building materials industry.

### Leveraging strengths of the full industrial chain

- ◇ The Group has strategically established manufacturing bases for cement, aggregate, and commercial concrete in countries participating in the “Belt and Road” Initiative, including Zambia, Nigeria, and Mongolia. With a combined cement production capacity of 3.5 million tonnes, an aggregate production capacity of 2 million tonnes and a commercial concrete production capacity of 200 thousand cubic meters, the Group is actively contributing to the infrastructure development of these countries, furthering the “Belt and Road” Initiative's objectives.
- ◇ By leveraging strengths of its full industrial chain, the Group is dedicated to elevating its new materials businesses, including glass fiber, carbon fiber, wind turbine blades, and lithium battery separators to a higher level of sophistication, mass production, and global reach.

The “Belt and Road” Initiative has witnessed the creation of numerous remarkable projects by the Group. These include the largest and most technologically advanced new dry cement production line in Central Asia, featuring cutting-edge equipment and a focus on energy efficiency and environmental sustainability. Additionally, the Group has built the largest glass fiber production base in Africa, the largest and most advanced gypsum board production line in Central Asia, the world’ s largest single oil refinery, and the largest waste liquid alkali recovery boiler in the global paper industry, and secured the first building materials project to win the highest international and domestic honors within the industry.



Cement production capacity

**3.5**  
million tonnes

Aggregate production capacity

**2**  
million tonnes

Commercial concrete production capacity

**200**  
thousand cubic meters

### Pioneering an innovative international development mode

- ◇ With its ever-growing technological prowess, the Group has seamlessly shifted its focus from exporting primarily building materials to offering state-of-the-art technical equipment for the building materials industry. Concurrently, it has successfully executed numerous overseas engineering projects on a general contract basis, further cementing its global presence. On the basis of opening up the whole set of systems such as technology research and development, engineering design, equipment manufacturing, construction and installation, and technological upgrades, the Group has aggressively expanded its value-added services to include spare parts, operational maintenance, and smart industrial solutions, so as to realize the transformation from a pure player in production line construction into a diversified engineering integration service provider. By the end of 2023, Sinoma International have a total of 56 production lines on service with an annual production capacity of over 1 hundred million tonnes on average.



Production lines on service

**56**

Annual production capacity over

**1**  
hundred million tonnes



Indonesia BAYAH's clinker cement production line with a capacity of 10,000 tonnes per day



**Pioneering an innovative international development mode**

- ◇ The Group has strategically expanded its footprint in Zambia, Nigeria, Mongolia, and other nations and regions. It has also established overseas industrial parks and pioneered an innovative overseas development model that seamlessly integrates “technology, industry, and services” .
- ◇ Focusing on the basic building materials industry chain, the Group strives to invest in the development of industrial parks in Zambia. By leveraging advanced technology, competitive production capacity, industrial synergies, and exceptional services, the Group aims to build robust local supply, industrial, and value chains.



Night view of CNBM Zambia industrial park

- ◇ The Group has established a glass fiber production base in Egypt, pioneering an international model that “prioritizes market development before plant establishment” , while adhering to the principle of “supplying local markets with localized products” . This not only marks the completion and commencement of production at the base but also represents a significant collaboration with Egypt. Together, the Group has co-founded a joint laboratory to facilitate the localization of raw materials and process supply, achieving a localization rate of over 95%.
- ◇ Represented by BNBM and CNBM Investment, the Group has achieved a seamless integration of global supply chain services, encompassing warehousing, logistics, distribution channels, and marketing. Through innovative exploration, the Group has successfully forged a new business model that links supply chain with overseas warehouses and logistics. This integrated approach ensures the stability of the global industrial chain and supply chain.

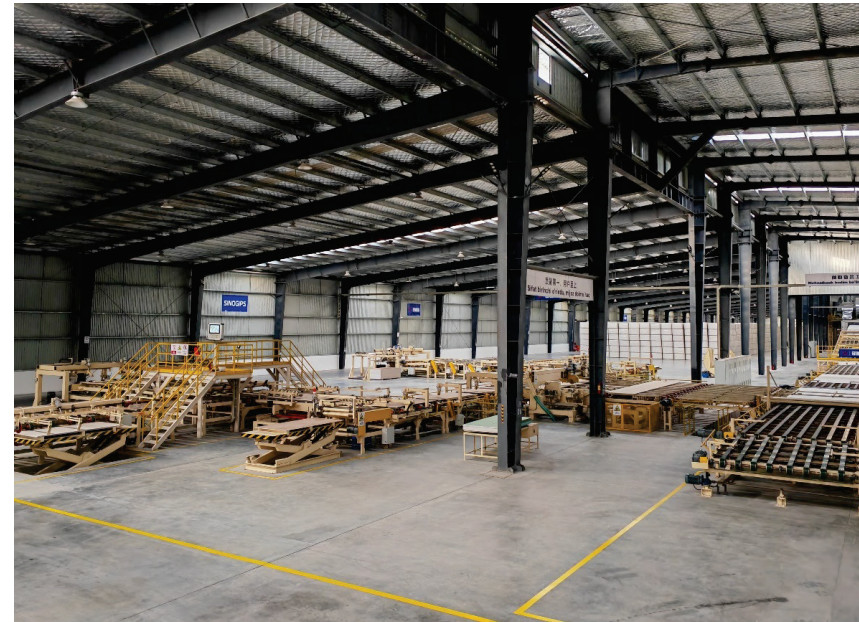
**Case: The gypsum board production line of BNBM put into production to accelerate silk road cooperation with Central Asia**

In August 2023, BNBM's Central Asia Gypsum Board Production Line, which was invested and constructed in Uzbekistan, was successfully started. This production line has the largest capacity and most advanced technology in Central Asia. In terms of production capacity, the line is designed to produce up to 40 million square meters per year, catering to the diverse construction and decoration needs of the region. Besides, it contributes to sustainable economic growth and employment opportunities for the local community.

Designed annual production capacity

**40**

million square meters



BNBM Central Asia's gypsum board production line

**Case: Sinoma International implementing the EPE concept in Silk Road to forge a masterpiece in building materials engineering**

The Nigerian SOKOTO Third Line Project, developed by Sinoma International, exemplifies the EPE concept (i.e. “Efficiency in Organization, Precision in Management, Excellence in Operations”), and features a daily clinker cement production capacity of 6,000 tonnes. It not only embodies the company's deep commitment to digitalization and intelligent construction but also exhibits groundbreaking strategies in safety production, cost control, localized management, and client relations. For its exceptional execution and significant contributions to the industry, the project won the 2022-2023 National Quality Engineering Award. After being put into operation, this production line has been serving the cement market in the northwestern region of Nigeria and neighboring countries well. This not only serves as a shining exemplar of the “Belt and Road” Initiative but also proudly demonstrates our Group’s unwavering “great craftsman” spirit.

Daily production capacity of clinker cement  
**6,000**  
tonnes



The night scene of Nigerian SOKOTO clinker cement production line

**Case: From the South Pacific to the globe, loading building materials into supermarkets**

After 30 years of deep engagement in Papua New Guinea, the Group has grown its business there from a humble beginning with an initial investment of USD 250 thousand to a substantial operation with assets worth RMB 800 million. This remarkable journey has seen the establishment of 18 chain supermarkets for building materials and home furnishings, as well as 2 large distribution centers. These efforts align with the infrastructural aspirations of Papua New Guinea, including the construction of houses, schools, churches, shopping malls, and office buildings. As a result, we have been able to serve a significant 70% of the local population, fulfilling our commitment to creating a better world through materials and enhancing the quality of life in the region.

Number of chain supermarkets for building material

**18**

Number of large distribution centers

**2**

Services cover the local population of

**70%**



The first building materials store in Port Moresby - Kennedy store

## Social responsibility fulfillment - CNBM's local integration efforts

CNBM strives to establish a strong foothold in local markets across various countries, and embraces the integration of culture, attitude and ideas, in order to create more employment opportunities and support the sustainable growth of local economy. The Group has not only collaborated with local enterprises to establish cement and glass fiber plants, but also invested in joint laboratories, scientific research, and raw material substitutions. Through these initiatives, the Group aims to nurture local talent, enhance residents' skill levels, improve the overall well-being of the community, and foster sustainable social and economic development in the region.



The proportion of local labor in Sinoma International

exceeds **60%**



The localization rate of Jushi Egypt employees

reaches **98%**



For overseas building material and furniture chain supermarkets and overseas warehouses of CNBM Investment, the localization rate of employees

exceeds **80%**

### Case: Win-win cooperation between BNBM Tanzania and territorial community

As a central enterprise, BNBM Tanzania actively fulfilled the social responsibility. While introducing the China's products, technologies and standards into Tanzania, it purchased bulk raw materials such as natural gypsum and coal as well as security, consulting and other services from local enterprises, thus injecting vitality into local economic development. In addition, BNBM Tanzania actively participated in public benefit activities. In 2023, it provided construction materials and donated funds to six schools, five governmental agencies and one disaster-stricken region. These efforts of BNBM Tanzania strongly supported community development and education, and put into practice the spirit of "Belt and Road" of mutual benefit.



Public benefit activities held by BNBM Tanzania

### Case: Jushi Egypt contributes to the "Belt and Road" Initiative with high-quality work

For a decade, Jushi Egypt has been a consistent driver of glass fiber industry in Egypt. With its unwavering commitment, it has opened up new horizons for local development and established a new platform for international economic cooperation.

Jushi Egypt has accomplished the construction of four glass fiber production lines and supporting auxiliary projects. This milestone has effectively catalyzed the upstream industries such as mineral raw material processing and packaging material production. Simultaneously, it has driven the downstream sectors like wind power generation, glass fiber product manufacturing, pipe manufacturing, bathroom fixture production, and logistics transportation. These accomplishments have attracted numerous supporting enterprises to Egypt and fostered robust growth throughout the industrial chain. Consequently, Jushi Egypt has created approximately 2 thousand direct jobs and 3 thousand indirect jobs, thus significantly propelling the local economy forward.

Over the years, Jushi Egypt has made significant progress in talent development, with three Egyptian executives. The middle-level management localization rate is 76%, and over 98% of employees are Egyptian. The company actively promotes cross-cultural integration, fostering harmony among its diverse workforce. This integration aligns with the "Belt and Road" Initiative, supporting the company's overall growth and development.

Completed the construction of **4** glass fiber production lines

Provided  
**~2,000**  
direct jobs

Provided  
**~3,000**  
indirect jobs



The main building of Jushi Egypt

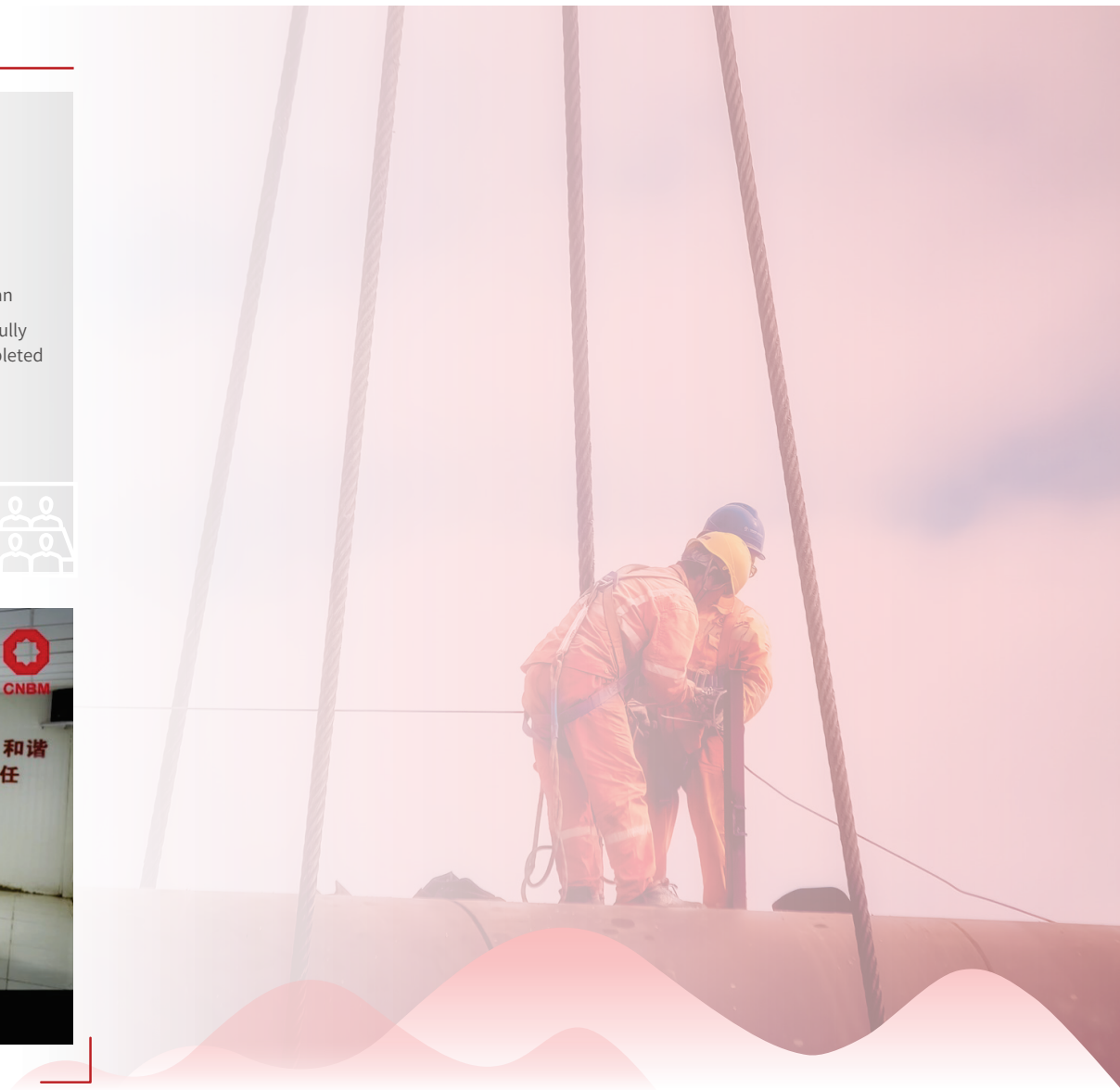
### Case: Talent cultivation practice of Sinoma International in Nigeria

The Nigerian subsidiary of Sinoma International, in partnership with Jiangxi College of Applied Technology, has created a new model of online training that combines “Chinese language education with professional skills development”. This program offers a range of courses vital to the company's operations, including Chinese communication, logistics customs clearance, and business negotiation skills, all tailored to support the company's growth objectives. It has involved 132 local Nigerian employees who have fully participated and completed the courses. After that, they achieved career growth with their professional capabilities and Chinese proficiency significantly enhanced. This program not only benefits the long-term sustainability of the company but also aligns with the country's “Belt and Road” strategy, providing valuable intellectual support for its implementation.

**132** local Nigerian employees who have fully participated and completed the courses



“Chinese Workshop” of Nigerian subsidiary of Sinoma International



# Working on "both ends" to serve as the nation's industrial pillar strength

Those who do not go for easy things will succeed and those who do not avoid difficulties will make progress. CNBM insists on focusing on “both ends”, grasping three major elements of basic building materials including “cement+”, internationalization and “Dual Carbon”, and consolidating four major foundations of strategic emerging industries including ideology, construction blueprint, development mode and institutional mechanism. Following this instruction, CNBM has overcome a few “stuck neck” key material technologies and will continue to promote the formation of an industrial layout that old growth drivers are replaced by new ones, exert the force of building materials industry in realizing the new industrialization goal and make a new effort in making us building material power.



## Upgrading basic building material industry

Basic building materials industry is an important part of China's real economy, and it is also the bedrock business of CNBM. CNBM has been increasing its efforts in transforming and upgrading its business. On the one hand, it tries to obtain more profits space with “cement+” and expand the market with internationalization. On the other hand, it promotes sustainable development under the guidance of “Dual Carbon”, improves cross-cycle operation capability so as to accelerate high-end, intelligent and green development. By doing this, CNBM can consolidate its leading position in traditional industries, and take the initiative of high-quality development to better serve the construction of new development pattern.

### Case: Producing novel cement that will change the world through breakthrough and innovation

Cement opens a new chapter for a brilliant future for the building material industry. The Group continued to innovate the operating pattern of cement business and spared no efforts to carry forward the “cement +” strategy, developing high-end basic building materials such as special cement, special cementitious materials and new low-carbon cement. Moreover, the Group helps to accelerate the industry's green manufacturing and convert the green concept and green advantages into endogenous momentum for the industry's transformation and upgrading. Currently, the Group has mastered the self-developed second-generation intelligent technology and equipment for new dry-process cement production, and developed energy-saving and low-carbon cement firing and grinding technology as well as equipment for thorough treatment of pollutant. Furthermore, the Group has developed the largest domestic slag cement vertical mill, the largest single intermediate cement clinker cooler, and other advanced technologies and equipment. With the above equipment and technologies, the Group plays an important role in quickening transformation and upgrading of the basic building material industry.



Cement production line



Industrial parks in Zambia



## Accelerating the layout of strategic emerging industries

Strategic emerging industries represent the developing direction of technological innovation and even the whole industrial development. Based on the common demands for breakthroughs in “stuck neck” technologies and industrial development, CNBM has continued to enhance its ability to support new materials, new energy, and other key areas, accelerated the layout of new areas of value creation, and made efforts to deploy future industries ahead of schedule.

**Special Cement** ▶ “cement commandos”

**New Tianshan Cement** accelerates the layout of special cement and creates pilot demonstration enterprises by taking advantage of the existing production capacity and conducting joint reorganization and internal integration to further enhance the research and development of special cement.

**Glass fiber** ▶ “industrial PVC”

**China Jushi** strengthens the core of glass fiber business, prospectively lays out intelligent production lines for high-end glass fiber products, and accelerates the construction of zero-carbon glass fiber manufacturing base to maintain to be the global leader in glass fiber industry.

**Sinoma Science & Technology** has a complete glass fiber technology industry chain, and is striving to build a 10-billion-grade glass fiber industry pattern to provide a powerful engine for the high-quality development of the national manufacturing industry.

**Graphite** ▶ “one of 24 strategic mineral resources”

**Sinoma Graphite** strives to become a technologically leading enterprise in natural graphite industry chain and graphite new materials industry. It takes graphite powder raw materials, graphite anode material, expanded graphite, and special graphite as the focus of development. South Graphite actively studies the characteristics of microcrystalline graphite mechanism, to explore the high value application of microcrystalline graphite.

**Gypsum board** “soul of modern architecture”

**Waterproof materials** ▶ “protective barriers for buildings”

**Coating** “colorful dress for architectures”

**BNBM** focuses on gypsum board and strives for progress in waterproof material industry in a stable manner. It strengthens the coating business through joint restructuring with Carpoly. Moreover, the company deploys strategic emerging industries centered on the strategy of “one body, two wings and global layout” and the industrial chain, during which it breaks through a number of core key technologies and equipment that are green, low-carbon or intelligent, and develops high-value-added and high-end functional products to cultivate a new industrial track.

**Carbon fiber** ▶ “black gold”  
▶ “king of new materials”

**Zhongfu Shenying** focuses its technical strength on R&D breakthroughs in a new generation of high-strength, high-modulus and high-performance carbon fibers. Moreover, it accelerates the construction of aviation-grade prepreg projects to extend the industrial chain, and invests more in the advancement, automation, and intellectualization of carbon fiber production equipment.

**Turbine blades** “wings of green energy”

**Separators** ▶ “cardiac valves” of lithium battery

**Hydrogen storage cylinders** “containers for clean energy”

**Sinoma Science & Technology** focuses on special fibers, composite materials, new energy materials, industrial mother machine and other strategic emerging industries, strives to build a gradient industry pattern with ten-billion-level build wind turbine blades, five-billion-level lithium battery separators, billion-level hydrogen storage cylinders, and one-hundred-million-level photovoltaic frames.

**Case: Facing the challenge to make swift progress in domestic glass fiber**

Developing fiber is like weaving fabric, which requires hard work to achieve great goals. China Jushi took active steps to research the high-performance glass fiber, and overcame the related “stuck neck” technology challenges. Since the Glass Research Center’s inception in 2010, it endeavored to launch the China’s first high-performance glass fiber formula, E7, to bridge the gap with the international advanced level, which has led to a reduction in the prices of relevant products. Following that, it went on to introduce the E8 and E9 formulas, positioning itself as a global leader in the glass fiber sector with its unparalleled technology. Nowadays, China Jushi has built five production bases around the world. These bases have an annual glass fiber production capacity of over 2.4 million tonnes, placing China Jushi at the top globally. Its glass fiber products have laid a solid material foundation for the advancement of aerospace, aviation, vessel, transportation, new energy and other industries.

Annual production capacity of glass fiber over

**2.4** million tonnes



Special glass fiber

**Case: Achieving technical breakthroughs to guarantee independent development of high-performance carbon fiber**

After a decade of focused effort, Zhongfu Shenying reflects on the eventful and tumultuous journey of carbon fiber development. It successfully overcame the key technical challenges of mass producing carbon fiber, and its independently developed dry-spray wet spinning technology won the first prize of National Science and Technology Progress Award. It successively achieved the technology for producing T700 and T800 thousand-tonnes grades, as well as T1000 and M40 hundred-tonnes grades, propelling China's ascent to become one of the three major countries in the world that have mastered the technology of high-performance carbon fiber. The 25 thousand tonnes high-performance carbon fiber project in Xining, Qinghai, renowned for its massive scale and state-of-the-art technology, is hailed as the “world’s largest single carbon fiber production base” and has been distinguished as a “flagship project” on the plateau.

High-performance carbon fiber project of

**25** thousand tonnes



High-performance carbon fiber

**Case: Striving to advance the high-quality development of wind turbine blade industry**

The journey ahead may be long and arduous, but with sustained actions, we will eventually reach our destination and embrace a brighter future. Sinoma Blade, a subsidiary of Sinoma Science & Technology, has been striving to build a leading enterprise in the wind power blade industry over the years. It successfully hoisted 123-meter wind power blade for the world's first super-large-capacity 16 MW offshore wind turbine, realizes the localization of more than 96% of the materials, and has 100% independent intellectual property rights, which upgrades China’s offshore wind power equipment to the latest technological level. Moreover, it has successfully taken down the world’s longest (nearly 100 meters) recyclable thermoplastic composite wind turbine blade, mastered the high-quality molding technology of thermoplastic blade, explored a recycling route of green design at the source for the industry, and provided a useful reference for the green recycling and low-carbon development of the wind power industry.



Lifting 123-meter wind turbine blades



Recyclable thermoplastic composite wind turbine blades rolled off the production line

### Case: Strengthening technical basis and expanding capacity to overcome the “last-mile” challenge of localization of key materials for lithium battery

Actions create a new landscape, sketching the portrait of the era. Sinoma Lithium Separator, a subsidiary of Sinoma Science & Technology, has overcome technical challenges through years of meticulous research, crafting innovative formulations and refining advanced processes. It now possesses the capability to produce 3-12 micrometer wet-process base films with synchronous and asynchronous technologies, as well as a variety of coated separators. These separators are characterized by their uniform coating distribution and exhibit superior and consistent performance. These products are widely applied in many fields such as new energy automobile power battery, 3C consumer battery and energy storage battery. They play a vital role in powering the transition to sustainable energy and green development.



Production process of lithium battery separators

### Case: Accumulating minor achievements to build a benchmark for the hydrogen storage cylinder industry

Sixty years of dedicated craftsmanship yielded a harvest of rich rewards. After nearly 60 years of technical reserve in the field of pressure vessels of compound materials, Sinoma Science & Technology has grown into a company with the most complete range of hydrogen storage cylinders in China, fully covering the specifications of hydrogen cylinders from 1.5 liters to 385 liters. Sinoma Science & Technology leads the industry in the molding technology for the liners of ultra-volume hydrogen storage cylinders and the development of 70MPa high-pressure domestic carbon fiber fully wrapped hydrogen storage cylinders. The company has established technical standards for domestic carbon fiber used in high-pressure hydrogen storage cylinders and systematically mastered the core technology of both designing and manufacturing high-pressure carbon fiber wrapped hydrogen storage cylinders. Its 70MPa carbon fiber storage cylinders for vehicles filled a gap and have promoted the high-quality development of hydrogen energy industry.



Hydrogen storage cylinder production line





# Green Technology

## Empowers New Quality Productive Forces

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- ◇ “Dual Carbon” pathway
- ◇ Tackling climate change
- ◇ Creating green products
- ◇ Integrating into circular economy
- ◇ Insisting on green manufacturing
- ◇ Protecting ecological conservation



## Statistics 2023



Total greenhouse gas emissions  
**197.35**  
million tonnes

Year-on-year decrease of  
**14.5%**



Comprehensive energy consumption of tons of cement clinker decreased year-on-year by  
**3.9%**



Green electricity purchased  
**33,696** MW·h



Comprehensive energy consumption intensity  
**994**  
MW·h/million yuan of operating revenue

Year-on-year decrease of  
**5.1%**



Photovoltaic power generation  
**160**  
thousand MW·h

Reducing carbon dioxide emissions  
**93**  
Thousand tonnes



Waste heat power generation  
**6.56**  
million MW·h



Nitrogen oxides emissions  
**62,934**  
tonnes



Sulfur dioxide emissions  
**5,877** tonnes



Volatile organic compounds emissions  
**14** tonnes



Industrial particulates emissions  
**6,649** tonnes



Integrated utilization rate of non-hazardous solid waste  
**95%**

Reducing carbon dioxide emissions  
**3.742**  
million tonnes

Year-on-year decrease of  
**22.8%**

Year-on-year decrease of  
**9.4%**

Year-on-year decrease of  
**71.4%**

Year-on-year decrease of  
**32.4%**



Alternative fuel consumption  
**1.05**  
million tonnes



Alternative raw materials consumption  
**26.58**  
million tonnes



Utilization rate of recycled water  
**92%**



Plants certificated by ISO 14001 environmental management system certification  
over **85%**



National green factories  
**160**

Reducing carbon dioxide emissions  
**0.233**  
million tonnes

Alternative raw materials consumption  
**26.58**  
million tonnes

Utilization rate of recycled water  
**92%**

Plants certificated by ISO 14001 environmental management system certification  
over **85%**

National green mines  
**43**



## “Dual Carbon” Pathway

In 2023, the Group announced CNBM Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality, to promote the optimization of the product structure and production capacity of basic building materials segment, accelerate the industrial development and layout of the new materials segment, promote the synergistic development of the equipment business in engineering technology service segment, and seize the opportunities for the development of the green and low-carbon engineering technology equipment business, so as to promote the green and low-carbon transition and high-quality development of the Group.

### “Dual Carbon” goals



The comprehensive energy consumption of tons of cement clinker in 2025 is reduced by **5%** year-on-year compared to 2022



In 2025, **40%** of clinker production capacity is above the energy efficiency benchmark level in the cement industry



Carbon dioxide emission intensity **continues to decline**

#### Key tasks



#### Optimization of industrial structure and layout

- Promote the optimization of the production capacity and product structure of basic building materials segment
- Accelerate the industrial development and layout of the new materials segment
- Promote the synergistic development of the equipment business in engineering technology service segment



#### Green and low-carbon energy transformation

- Increase the rate of fuel substitution
- Increase the use of new energy
- Clean and efficient use of fossil energy



#### Resource-saving and efficient use

- Promote the energy-saving technological transformation of enterprises
- Increase the proportion of low-carbon raw materials
- Strengthen the use of water and land resources



#### Green, low-carbon and circular development

- Promote the comprehensive utilization of industrial solid waste
- Improve the supply capacity of green building materials
- Strengthen the construction of green infrastructure



#### Digital and intelligent improvement

- Construction information infrastructure
- Improve the level of digital intelligence in production
- Build an information platform for carbon management

#### Main achievements

In 2023, New Tianshan Cement improved concrete performance using mineral admixtures such as fly ash and tailing powder, with a reduction of 2.7 million tonnes carbon dioxide emissions.

In May 2023, the high-performance carbon fiber project with an annual output of 25 thousand tonnes of Zhongfu Shenying was fully put into operation in Xining. The company actively cooperated with the surrounding hydropower and photovoltaic bases, and the proportion of wind, solar and hydropower reached 71% of the annual electricity consumption.

In 2023, the Group's operating revenue earned from green products was about RMB 33.326 billion, while the operating revenue from products in favor of the green development of society was about RMB 39.878 billion.


The online carbon metering technology for the cement industry jointly developed by Tianjin Cement Institute, a subsidiary of Sinoma International, and Sanming South, a subsidiary of New Tianshan Cement, can realize online monitoring of carbon dioxide emissions from cement factories, which has been calibrated in May 2023 by the National Institute of Metrology, China.

China Jushi officially launched the implementation of the EATNS carbon management system, marking that the company has become the world's first demonstration unit of the carbon management system implementation in the glass fiber manufacturing industry.

New Tianshan Cement has built a digital platform for carbon management that can realize the functions of carbon data collection and analysis, carbon verification, carbon trading, carbon emission reduction, carbon sink and carbon application value-added.


TCDRI, a subsidiary of Sinoma International, has independently developed a dual-carbon digital public service platform to provide one-stop green and low-carbon services for enterprises, parks and governments.

Key Tasks




**Green and Low-carbon technology innovation**

- Increase investment in R&D of green and low-carbon technologies
- Improve the R&D of key core technologies and equipment




**Strengthen green and low-carbon supply chain management**

- Strengthen the construction of a green and low-carbon supply chain system
- Carry out product carbon footprint data management and evaluation
- Implement green and low-carbon operations in the supply chain




**Consolidation and improvement of carbon sink capacity**

- End-of-line carbon sequestration technology project
- Enhance the ability to regreen, expand greening, and increase greening



**Green and Low-carbon capacity building**

- Establish a full-level carbon management system
- Construction of carbon management talent team
- Cultivate a green and low-carbon culture



**Strengthen international cooperation in green technology and economic and trade**

- Promote to build a green “Belt and Road”
- Strengthen international cooperation in green technology
- Promote international green economic and trade cooperation

Main achievements

“2023 Advanced and Applicable Low-carbon Technologies in Raw Material Industry” was released at 2023 Industrial Green Development Conference, and “Low-carbon and Energy-saving Integrated Technology and Application of Cement Clinker Firing System” independently developed by Tianjin Cement Design & Research Institute was successfully selected. According to the “Guidelines for Energy Conservation and Carbon Reduction Technology in the Cement Industry”, a new production capacity of 200 million tons with energy efficiency better than the benchmark level will be formed by replacing the current low energy efficiency production capacity in the cement industry. After the application of this technology, the integrated coal consumption of clinker unit product is below 94kgce/t.c.l, which can reduce carbon dioxide emission by about 22.48 million tonnes.

The CUCC Qingzhou Green Emission Reduction Demonstration Project with an annual output of 200 thousand tonnes of carbon dioxide capture and purification has been successfully ignited, and the project can capture about 200 thousand tonnes of carbon dioxide per year on average.

New Tianshan Cement was the first in the industry to compile and release the Cement Smart Factory 2.0 standard, and under the guidance of the standard, the Group has promoted the construction of a number of leading intelligent manufacturing production lines at home and abroad.

Yulong Tongli, a subsidiary of New Tianshan Cement, has completed the planting of 415 mu, and is expected to eventually build a 700 mu carbon sink forest farm, sequestering about 700 tonnes of carbon per year.

# Tackling climate change



The Group actively responds to the national “14th Five-Year Plan”, the “Dual Carbon” goal and the “Implementation Plan for Building Materials Industry to Reach the Carbon Peak”, and always firmly adheres to the path of ecological priority and green development. The Group grasps the opportunities for green development with practical efforts, actively addresses climate change to promote the high-quality development of the Group and the low-carbon transformation of society.



## Climate change management

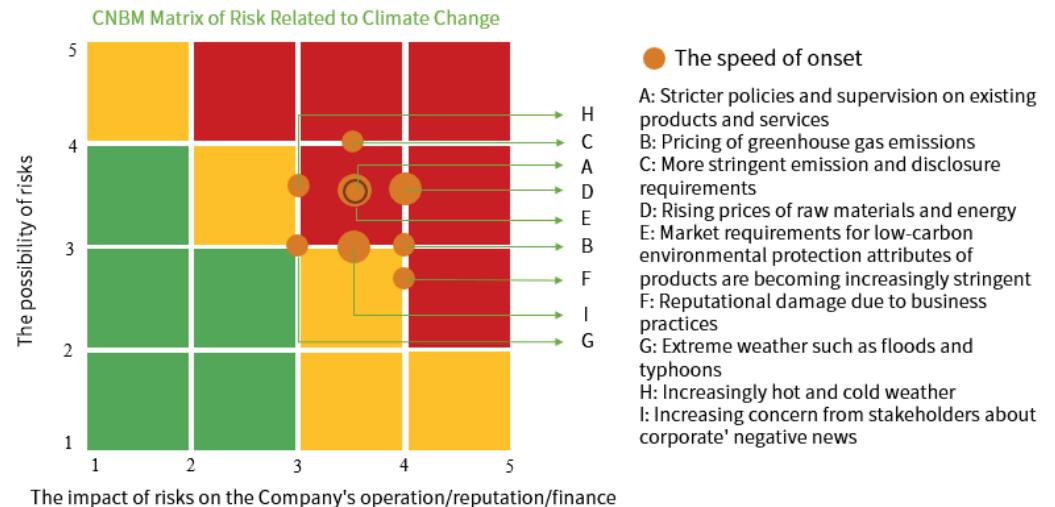
The Group discloses climate-related information in line with the disclosure framework of TCFD recommendation.

### Governance

The ESG Working Group is responsible for the Group’s climate change-related issues, which are also guided, reviewed, and monitored by the ESG Committee. For details of the management structure, please refer to the “Sustainability governance” section. The ESG Committee is briefed on climate-related issues by the ESG working group and participates and reviews in the identification and assessment of climate change related risks and opportunities based on actual business requirements. The ESG Committee also discusses and reviews the progress of targets related to climate change issues on an annual basis.

### Strategy

The Group’s exposure to climate change involves a wide range of areas, including the update of policies and regulations, the application of emerging technologies and the changes in market demand. The Group prioritizes climate risks according to their impact, likelihood of occurrence and speed of onset, and develops effective and efficient management measures.



In the above climate-related risk matrix, blocks with different colors represent climate-related risks in different levels, and the different sizes of the dots represent the velocity of happening of these risks, where the larger size indicates that the corresponding risk will happen in a shorter term of time.

The Group has adopted targeted plans and measures to deal with the short-term, medium-term and long-term impacts of climate change to avoid and adapt to adverse impacts brought by climate change and seize opportunities of climate change.

Climate change-related risks				
Category of risks	Climate change-related risks	Potential impacts of the risks on the Group	Time frame of impact	Response measures taken by the Group
<b>Transitional risks</b>				
<b>Policies and laws</b>	Stricter policies and supervision on existing products and services	<ul style="list-style-type: none"> <li>Requiring investment in low-carbon technological innovation and purchasing renewable energy certificates</li> <li>A more environmentally-friendly and low carbon business operation is needed to respond to regulatory requirements</li> </ul>	Long-term	Keeping an eye on the latest relevant laws, regulations, regulatory requirements, and national targets of the country and the place where the Group's operation is located, and developing corresponding plans and measures for newly introduced or updated requirements and targets
	Pricing of greenhouse gas emissions	<ul style="list-style-type: none"> <li>Higher operating costs due to increased carbon related taxes required by governments resulting from climate change</li> <li>Improving the management of carbon asset in order to cope with the cost pressure brought by the national carbon market</li> </ul>	Medium-term	<ul style="list-style-type: none"> <li>Increasing the use of renewable energy such as hydropower, wind power, and photovoltaic solar energy</li> <li>Focusing on and making good use of green finance continuously, and issuing green bonds and bonds related to carbon-neutral concept</li> <li>Paying close attention to carbon trading such as its mechanism and carbon price, selling excess carbon allowances in carbon exchanges, and enhancing carbon sequestration capacity to generate income from carbon trading</li> <li>Carrying out self-investigation and inventory of carbon emission data since 2020, organizing the filling of carbon emission data statistical system, and gradually establishing a carbon emission database</li> </ul>
<b>Technology</b>	More stringent emission and disclosure requirements	<ul style="list-style-type: none"> <li>Increasing investment in low-carbon energy-saving and environmental protection technologies</li> <li>Increasing investment in clean energy and circular economy</li> </ul>	Short-term	Actively promoting the construction of green factories, green mines and ecological factories, and increasing investment in research and development, popularization and application of environmental protection technologies
<b>Market</b>	Rising prices of raw materials and energy	<ul style="list-style-type: none"> <li>Developing alternative material technologies to reduce the exploitation and use of natural raw materials</li> <li>Adjusting, optimizing its energy structure and improving its ability to cope with energy risks</li> </ul>	Medium-term	Analyzing the substitution risk of products and the competitive advantages and disadvantages of other materials, improving the research and development mechanism of green products, and applying environmental protection technologies, including waste heat power generation, comprehensive energy-saving and consumption-reducing technological transformation, use of alternative fuels, alternative materials, etc.
	Market requirements for low-carbon and environmentally-friendly attributes of products are becoming increasingly stringent	<ul style="list-style-type: none"> <li>Existing products are facing the risk of substitution, so the Group needs to improve the research and development system of green products and increase the low-carbon environmental protection attributes of products</li> <li>Increasing the proportion of green procurement and managing supply chain environmental risks</li> </ul>	Long-term	

## Climate change-related risks

Category of risks	Climate change-related risks	Potential impacts of the risks on the Group	Time frame of impact	Response measures taken by the Group
<b>Transitional risks</b>				
Reputational risk	Reputation damage due to business practices	<ul style="list-style-type: none"> <li>Potential increased reputational risks if a corporate is classified as a heavy polluter or violations of environmental laws and regulations are found, which requires the Company to attach importance to the control of environmental pollution and greenhouse gas emissions</li> </ul>	Medium-term	<ul style="list-style-type: none"> <li>Establishing ESG Committee and ESG Working Group to maintain good and smooth communication with stakeholders regularly</li> <li>Establishing specific communication channels with various stakeholders</li> <li>Developing and implementing rectification plans to address identified issues promptly, clarifying rectification targets and measures and disclosing the rectification plans to the public</li> </ul>
<b>Physical risks</b>				
Acute	Extreme weather such as floods and typhoons	<ul style="list-style-type: none"> <li>Due to the increase in operating costs caused by the suspension of downstream construction operations due to extreme weather, the Group needs to plan in advance to deal with extreme weather</li> </ul>	Long-term	Comprehensively and systematically analyzing typical cases of dealing with extreme weather in recent years, scientifically summarizing experience and formulate physical climate risk response or adaptation plans (e.g. extreme weather contingency plans) for various types of factories. As of the end of 2023, 60% of the Group's existing factories have formulated physical climate risk response plans
Chronic	Increasingly hot and cold weather	<ul style="list-style-type: none"> <li>There are potential safety hazards in the working environment of employees, so the Group needs to increase the investment in the health and safety of employees</li> <li>Due to the decline in the stability of energy supply, the Group needs to adjust and optimize its energy structure</li> </ul>	Long-term	Continuously monitoring relevant climate change-related risks to reduce safety hazards in the work environment

The Group has also identified the following climate change related opportunities:

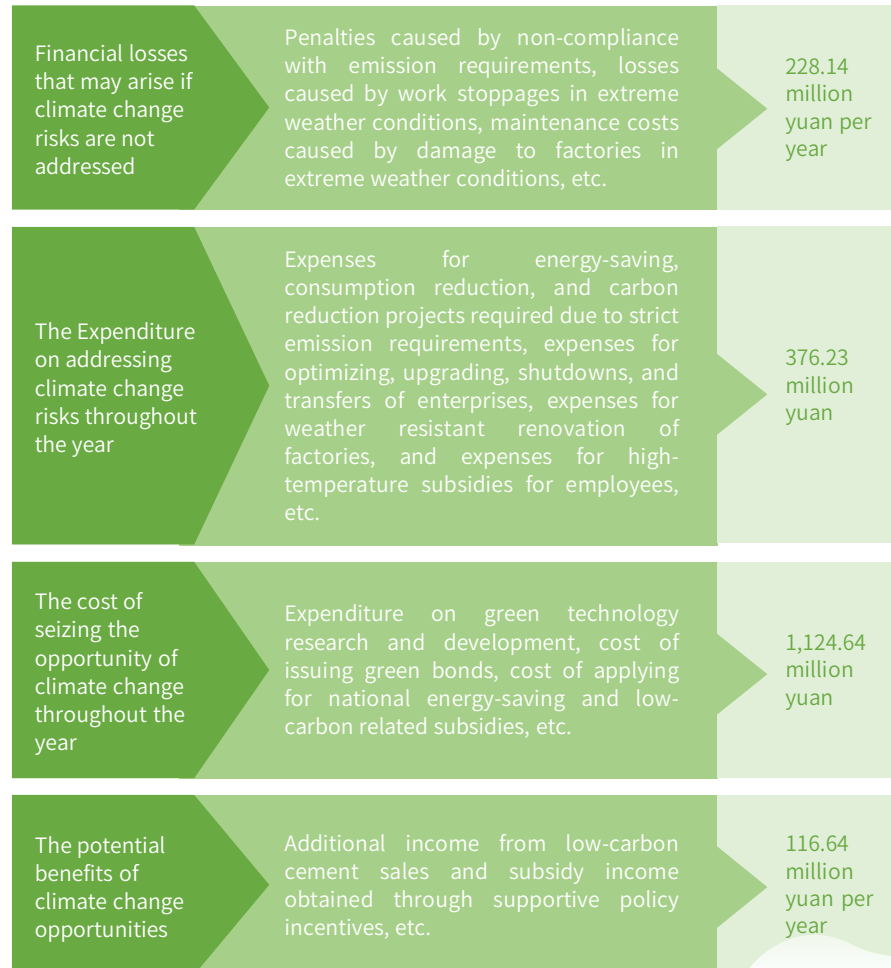
## Climate change-related opportunities

Category of opportunities	Climate change-related risks	Potential impacts of the risks on the Group	Time frame of impact
Resource efficiency	Production, transportation and distribution process with higher efficiency	<ul style="list-style-type: none"> <li>Optimization of production processes and technologies to increase production efficiency</li> <li>Higher revenues when following market trends</li> </ul>	Short-term
	Use of recycling technology and less resource consumption	<ul style="list-style-type: none"> <li>Reducing impact of operation and production on the environment</li> <li>Increasing resource efficiency</li> </ul>	Medium-term

Climate change-related opportunities			
Category of opportunities	Climate change-related risks	Potential impacts of the risks on the Group	Time frame of impact
Energy source	Use of low-emission or renewable energy sources	<ul style="list-style-type: none"> <li>Lowering operating costs to a certain extent</li> <li>The application of low-emission or green products is further widely used, and the distribution of green products can increase income</li> </ul>	Long-term
	Participation in carbon trading market	<ul style="list-style-type: none"> <li>New corporate profitability point</li> <li>Promoting the Company's green and low-carbon development</li> </ul>	Medium-term
	Use of new technologies	<ul style="list-style-type: none"> <li>Increasing energy efficiency and saving costs</li> <li>First-mover advantage in the industry and boosting reputation and social image of the Group</li> </ul>	Long-term
Product and service	Development and extension of low-emission products and services	<ul style="list-style-type: none"> <li>Enhancing corporate competitiveness and increasing revenues due to offerings of low-carbon products or services that respond to market demand</li> </ul>	Medium-term
	Development of solutions to climate change adaptation risks	<ul style="list-style-type: none"> <li>Increasing business revenues due to new adaptation solutions to climate change, which provide better adaptability and understanding of market needs</li> </ul>	Long-term
	Availability of new products or services through R&D and innovation	<ul style="list-style-type: none"> <li>Enhancing competitiveness due to response to market needs</li> <li>New corporate profitability point</li> </ul>	Long-term
	Enhancing ability to conduct diversified business activities	<ul style="list-style-type: none"> <li>Potential new business and revenue growth points due to investment in renewable energy and carbon offset projects, as well as participation in green finance and issuance of green bonds</li> </ul>	Medium-term
Market	Adoption of supportive incentive policies	<ul style="list-style-type: none"> <li>Seizing and utilizing national policies about incentives on low-carbon, energy-saving, emission reduction technology transition to obtain subsidies from government</li> </ul>	Medium-term
	Market demand and initiatives	<ul style="list-style-type: none"> <li>Enhancing corporate reputation and social image and increasing business demand</li> </ul>	Medium-term
Adaptability	Participation in renewable energy projects and adoption of energy efficiency improvement measures	<ul style="list-style-type: none"> <li>Improving adaptability of the Group to policy changes</li> </ul>	Long-term
	Energy substitution/diversification	<ul style="list-style-type: none"> <li>Improving resilience to changing and complex environment and exposure to fewer risks due to improved adaptability of the Group to policy changes</li> </ul>	Long-term



The Group is deeply aware of the importance of adopting a scientific approach in risk assessment management to quantify the impact of climate-related risks and opportunities on the Group's financial performance. In 2023, the Group preliminarily analyzed the impact of climate-related risks and opportunities on its finances from the following aspects, and will further consider methods such as scenario analysis to analyze potential risks and opportunities under different climate contexts, so as to adapt to and mitigate the impacts of climate change.



## Risk management

The Group has integrated the process of identifying, assessing and managing climate-related risks into its overall risk management system, which provides reference for the Group's strategic planning and business development.



Creating a database of climate change-related risks and opportunities based on the business and product characteristics, including the impact of climate change on the Group's finance, production, assets, supply chain and personnel;



Identifying and assessing climate change-related risks and opportunities via questionnaires, and analyzing the possible impact of climate change-related risks and opportunities on the Group;



Combining the results of identification and assessment to formulate targeted measures and action plans, and striving to smoothly resolve climate change-related risks and seize the opportunities brought by climate change;



Deeply understanding the stakeholders' opinions towards issues about climate change via questionnaires, meetings, etc.

## Implement the “Dual Carbon” goal

In line with the Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality, the Group takes deepening supply-side structural reform as the main line, considers total volume control as the foundation, regards improving the level of comprehensive utilization of resources as the key, and harnesses low-carbon technology innovation as the driving force. The Group follows the systematic ideas of carbon emission reduction at source, carbon emission decrease in the process, carbon sequestration at terminal and carbon management throughout the whole process, strictly implements the initiatives of “firstly achieve, secondly control, thirdly reduce, fourthly increase, with zero breakthroughs”<sup>2</sup>. Meanwhile, the Group strengthens the construction of green mines, green factories, carbon capture plants, factories and mines with zero purchased electricity. The Group achieved zero breakthroughs in zero-carbon emission factories and mines, so as to make positive contributions to the country's realization of carbon peaking and carbon neutrality as scheduled.

### Basic building materials segment

The companies in the basic building materials segment actively promote the low-carbon development of cement through the double control of total amount and intensity. On the one hand, in combination with market demand, these companies implement self-discipline production restriction to reduce the total amount of products; on the other hand, they accelerate the promotion of energy efficiency improvement, fuel substitution, power optimization, raw material substitution and low-carbon cement development in the basic building materials segment, fixed and buried carbon through CCUS and mine recover to achieve the continuous reduction of total carbon dioxide emissions.



<sup>2</sup> That is the peak of carbon dioxide emissions, the “double control” of total energy and total carbon dioxide emissions, the “three reductions” of energy consumption per unit of product, carbon emission intensity per unit of product, and fossil energy consumption, the “four increases” of the proportion of benchmark energy efficiency production capacity, the use of non-fossil energy such as wind and solar biomass, the proportion of raw fuel substitution, and green and low-carbon investment, and achieving “zero breakthroughs” in zero-carbon emission factories and mines.

#### Cement business

- Strict implementation of carbon reduction through staggered production
- High-efficiency clinker sintering equipment and technical application
- High-efficiency grinding equipment and technology application
- Alternative raw material/fuel technology application
- Application of low carbon clinker technology
- Promoting the application of “zero carbon” mine technology
- New energy technology carbon capture and purification technology pilot
- Doing a good job of co-disposal of hazardous waste, municipal domestic waste and municipal sludge in cement production line
- Strengthening the research on the application of digital technology in all aspects of production

#### Concrete business

- Reducing the consumption of cement in concrete
- Developing and popularizing ultra-high performance concrete
- Increasing the use of recycled aggregate and strengthening recycling
- Strengthening carbon drop and carbon reduction in the production process
- Gradually exploring the application of new cementitious materials
- Strengthening the research on the application of digital technology in all aspects of production

#### Aggregate business

- Speeding up the research on fine aggregate technology
- Exploring energy-saving and efficient modes of transportation
- Optimizing mining process and equipment
- Strengthening the comprehensive utilization of solid waste resources
- Strengthening the research on the application of digital technology in all aspects of production

### Case: CUCC Qingzhou carbon capture and purification demonstration project, promoting carbon sequestration and reduction in the industry

In January 2024, the green emission reduction demonstration project with an annual output of 200 thousand tonnes of carbon dioxide capture and purification of CUCC Qingzhou, a subsidiary of New Tianshan Cement, has successfully been put into operation. This project is the largest project in the global cement industry that applies oxy-fuel combustion coupled carbon capture technology and the first carbon capture and utilization technology project of CNBM. Besides, it has been recognized as a project with “top priority” for technological breakthroughs in the nation's building materials industry. With an average reduction of approximately 200 thousand tonnes of carbon emissions per year, this project pioneers and drives the low-carbon and sustainable transformation of the cement industry.



Successful launch of CUCC Qingzhou's carbon capture and purification green emission reduction demonstration project

### Case: Large-scale deployment of distributed photovoltaic projects of New Tianshan Cement accelerates the green and low carbon transition

New Tianshan Cement focuses on distributed photovoltaic power generation projects, and plans to build 164 MW of distributed photovoltaic power generation in seven subordinate regions, which can reduce carbon dioxide emissions by 177.3 thousand tonnes per year.

In June 2023, Zhongnan Cement, a subsidiary of New Tianshan Cement joined hands with China Sinoma Overseas and Huaneng Renewables to celebrate the signing ceremony for their photovoltaic projects in Hunan. The total installed capacity of the first batch of photovoltaic projects reached 31.5 MW. Making full use of the structures and mine space, Zhongnan Cement works to lay out green energy industries such as photovoltaic, wind power and energy storage. All these efforts are aimed at building a “photovoltaic +” factory that promotes a cleaner energy structure and accelerates the transition towards a “zero-purchase of electricity” and “zero-carbon” plant. Upon completion, the project is expected to generate an annual average of approximately 24 million kW·h of electricity, while reducing carbon dioxide emissions by 24 thousand tonnes per year. This project will effectively lower energy consumption and carbon emissions, thereby accelerating the transition towards a greener and more sustainable future.

## New materials segment

The companies in the new materials segment focus on the implementation of the target of “Carbon Peaking and Carbon Neutrality”, and actively strengthen the optimization and adjustment of energy structure. To this end, they develop photovoltaic power generation, increase the proportion of green power consumption and deploy low-carbon technologies. They also strengthen the construction of green factories, promoting the principles of energy conservation, environmental protection, and low-carbon circulation throughout the entire industry.

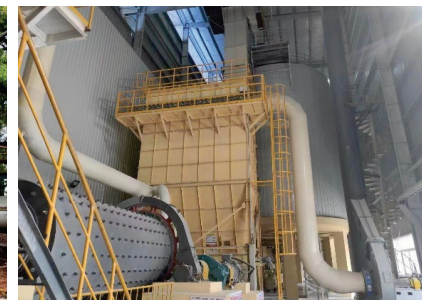
### Case: BNBM Hezhou pioneers green and low-carbon transformation with “Four-zero Factory”

The production line of paper-faced gypsum board and light steel stud that recycles desulfurization gypsum solid waste in BNBM Hezhou has reached the “Four-Zero” standards, which means that the project has realized zero fossil energy consumption, zero primary resources consumption, zero carbon emissions and zero waste emissions.

- ◇ The project uses secondary steam from electricity as its heat source and employs new energy electric forklifts.
- ◇ The project utilizes desulfurization gypsum solid waste produced by power plants, instead of natural gypsum ore as the raw material to manufacture gypsum boards.
- ◇ The project utilizes condensate water generated through heat exchange of secondary steam provided by electricity, cooling water from cooling towers of power plant, and condensed water collected from evaporation and cooling of free water in the gypsum boards during production as its water supply.
- ◇ The project achieves waste resources utilization by crushing and re-calcining of both the non-conforming gypsum boards generated by the project and the gypsum boards removed during renovation.



BNBM Hezhou “Zero Fossil Energy”



“Near Zero Waste Emission” plant

**Case: China Jushi Zero-Carbon smart manufacturing base, committed to implementing green development together**

In February 2023, China Jushi established the foundation for the Huai’ an Lianshui Glass Fiber Zero-Carbon Smart Manufacturing Base, marking the official commencement of the first phase of the project. This pioneering initiative will feature the installation of 47 wind turbines, each with a capacity of 5 MW, leading to a total planned capacity of 233 MW for the wind farm. Upon completion, the project is expected to generate an annual electricity output of 650 million kW·h, which will significantly reduce carbon dioxide emissions by approximately 370.7 thousand tonnes. By harnessing renewable energy sources, the manufacturing base will fully utilize green electricity for both production and daily operations, embarking on a collaborative journey towards a zero-carbon future.



Glass Fiber Zero Carbon intelligent manufacturing base

Total planned installed capacity of wind farms

**233**  
MW

Upon completion, the project is expected to generate an annual electricity output of

**650**  
million kW·h

Reduce carbon dioxide emissions by approximately

**370.7**  
thousand tonnes



**Case: Sinoma Science & Technology tapping into energy-saving technological transformation and optimizing energy structure**

In 2023, Sinoma Science & Technology actively promoted the optimization of energy structure, implemented energy-saving technological transformation activities, and utilized multiple channels and perspectives to drive carbon dioxide emission reduction. The company reached the annual target of 3% decline of comprehensive energy consumption and 2% decline of carbon emissions of 10,000 yuan of output value.

◇ Sinoma Science & Technology currently has an installed capacity of 44.49 MW for its photovoltaic projects, with a cumulative power supply of 33.64 million kW·h per year, equivalent to a carbon reduction of 25 thousand tonnes. In the future, a 100 MW wind power project will be built in Yulin, Shaanxi Province, which will provide about 222.4 million kW·h of on-grid electricity per year and reduce carbon dioxide emissions by 126.8 thousand tonnes per year.

◇ Sinoma Blade has purchased green electricity certificate of **7.606 million kW·h** Equivalent to a carbon reduction of **5,441 tonnes**

◇ Sinoma Lithium Separator initiated a special ECO (Energy Cost Optimization) project in October 2023. The consumption of water, electricity, and steam in the fourth quarter of 2023 decreased by **3%** compared to the average of previous three quarters, reduced carbon emissions of **34 thousand tonnes**

◇ NRDI innovatively utilized a set of complete technologies and equipment for electric smelting method with high-capacity and wide-range rock wool

production line, which achieved **100%** green energy substitution and **70%** natural mineral raw materials substitution in the production of

rock wool, representing a decrease of more than **40%** comprehensive energy consumption compared to traditional process

### Case: Zhongfu Shenying creating green benchmark for the industry by the project of high-performance carbon fiber putting into operation

In May 2023, the high-performance carbon fiber project with an annual output of 25 thousand tonnes of Zhongfu Shenying was fully put into operation in Xining, marking the completion of the world's highest altitude and largest single high-performance carbon fiber production base, setting a new benchmark for the construction of 10 thousand tonnes of carbon fiber industry, and making positive contributions to the independence and self-reliance of China's material industry. After the completion of the project base, Zhongfu Shenying actively cooperated with the surrounding hydropower and photovoltaic bases, prioritized the use of green and clean energy, and the proportion of wind power, solar power and hydropower reached 71% of the annual electricity consumption of 374 million kW·h, greatly promoting the development of the country's green and low-carbon economy.



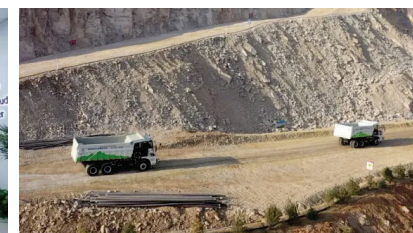
Xining 25,000 tonnes of high-performance carbon fiber project put into production

## Engineering technology service segment

Sinoma International is committed to the concept of green production, and actively promotes the construction of green mines focusing on "mining environment, resources development methods, comprehensive resources utilization, and energy conservation and emission reduction". Sinoma International also implements large-scale, specialized, brand-unified and new-energy-oriented equipment upgrades to achieve emission reduction, carbon reduction and electricity reduction. Additionally, Sinoma International vigorously implements the pilot project of "Zero-electricity Mines" and explores new business for green development.

### Case: Sinoma Mining promoting electrification of mechanical vehicles and enabling low carbon operations

Sinoma Mining, a subsidiary of Sinoma International, has introduced ten fully electric unmanned mine trucks in the Zoucheng Project, and purchased ten 105-tonne new energy mine trucks in the Mianchi Project for limestone transport operations in the mines. These initiatives not only save fuel consumption, but also achieve zero exhaust emissions, leading to a substantial reduction of carbon dioxide emissions, which demonstrates their commitment to constructing low-carbon, environmental-friendly, and sustainable green mines.



Zoucheng Fushan Mine driverless transportation system

As the world's largest integrated service provider of cement technology equipment engineering systems, Sinoma International focuses on the entire value chain, and conducts a series of research on low-carbon, green, and intelligent engineering technology service in the whole chain, such as ultra-low energy consumption, alternative raw materials and fuels, carbon dioxide capture and purification, and intelligent construction, so as to promote carbon emission reduction process in cement industry.

### Case: CBMI Construction signing oxyfuel project to mitigate global climate change

CBMI Construction, a subsidiary of Sinoma International, has been committed to researching carbon emission reduction technologies in the cement industry for many years. In February 2023, CBMI Construction signed a contract of the K6 oxyfuel project in France, which integrates an industrialized carbon capture system, including oxyfuel process technology, air separation system for oxyfuel combustion, as well as carbon dioxide capture, compression, storage and transportation. After the project is put into operation, it is expected to reduce carbon dioxide emission by 8.1 million tonnes in ten years, contributing "cement power" to mitigate global climate change.



K6 oxyfuel project plant

# Creating green products



The Group has accelerated the implementation of its “Dual Carbon” strategy, exploring opportunities for a low-carbon economy and green development through green innovation and technological innovation, and injecting green genes into the entire life cycle of its products.



## The power of technological innovation

The building materials manufacturing industry is in a critical period of industrial upgrading and high-quality development. The Group has continuously accelerated the replacement of old growth drivers with new ones, increased investment in R&D, and carried out original and leading technological research to accelerate the realization of building materials quality improvement and drive the industry forward.

### Construction of innovation system

The Group has continued to refine its innovation system by formulating the Management Measures for Scientific Research Projects (Trial) and Guidelines for Full Process Management of R&D Activities, and revising relevant rules and regulations such as the Management System for Scientific and Technological Work, Patent Management Measures, and Articles of Association of the Science and Technology Committee, so as to ensure the standardized operation of innovative work in technology R&D and equipment upgrading. The Group’s subsidiaries also continuously optimize innovation management, improve the innovation incentive mechanism, and efficiently gather scientific and technological innovation resources from R&D investment, talent training, platform construction and other aspects, and strive to create a source of original technology.

The Group actively explores the new mode of combining production and research between production enterprises and scientific research institutes, creating an effective platform for the independent innovation and the industrialization of R&D achievements. Meanwhile, through cooperation with multiple universities, the Group has cultivated high-level scientific and technological leaders to enhance the comprehensive strength of innovation. The Group takes possession of 1 national key laboratory, 1 national new material testing and evaluation platform, 4 national engineering (technology) research centers, 10 state-certified enterprise technology centers and 9 transformed research institutes. In 2023, there were 30 newly-recognized high-tech enterprises, with a total of 229 under the Group.



Newly-recognized high-tech enterprises

**30**

Total high-tech enterprises under the Group

**229**



**1** National key laboratory

**1** National new material testing and evaluation platform

**4** National engineering (technology) research centers

**10** State-certified enterprise technology centers

**9** Transformed research institutes

## R&D of innovative products

The stream strikes the water, and those who rush hard go advance. The Group has long been optimizing its product R&D system and actively investing significant funds in new product development. By leveraging the advantages of industrial concentration, the Group has actively promoted the effective integration of the innovation chain and industrial chain of all subsidiaries, successfully completing the joint R&D of a number of important products.

In 2023, the Group made significant product innovation breakthroughs in multiple segments, including basic building materials, new materials and engineering technology service, and won a number of national and industry awards for scientific and technological innovation.

### Basic building materials segment

The Group is actively engaged in the construction of raw material substitution, fuel substitution and photovoltaic power generation projects:

- ◇ Taking the lead in undertaking 2 projects with R&D funds provided by CNBMG, as well as 1 project under the National Key Research and Development Program of China;
- ◇ The full-oxygen combustion, capture and purification demonstration project with an annual output of 200 thousand tonnes of carbon dioxide by CUCC Qingzhou, a subsidiary of New Tianshan Cement, has been officially launched, and Jiahua Special Cement, a subsidiary of New Tianshan Cement, has won the 2023 World Cement Association Innovation Product Award.



Taking the lead in undertaking projects with R&D funds provided by CNBMG



Project under the National Key Research and Development Program of China

### New materials segment

The Group makes breakthroughs in a few original technologies, which helps the new materials business to become better, stronger and larger:

- ◇ The key technology of aramid fiber coating fills the domestic gap;
- ◇ Green technologies such as the “near-zero emissions” process for producing gypsum boards from coal-fired heat sources and biomass fuel substitution are fully applied;
- ◇ The 123-meter wind turbine blade has been successfully lifted and loaded, and the recyclable wind turbine blade made from thermoplastic composites has been smoothly off the production line;
- ◇ The 70Mpa type IV hydrogen storage cylinder has obtained the special equipment production license;
- ◇ Four achievements led by Sinoma Science & Technology, including “Key Technology Research and Industrialization of High-reliability Large Wind Turbine Blades with Low LCOE”, won the second prize of Science and Technology Award for Building Materials by China Building Materials Federation – Chinese Ceramic Society, the second prize of Science and Technology Advancement of Hebei Province, the second prize of Science and Technology Advancement of Jiangxi Province, and the second prize of Science and Technology Advancement of Jiangsu Province.

### Engineering technology service segment

Focuses on the research of firing, grinding and emissions reduction:

- ◇ the low-resistance and high-efficiency with preheating and pre-decomposition technology has achieved demonstration applications for the conversion from five to six stages in preheaters, reducing the standard coal consumption of clinker to 94 kg/t.cl;

- ◇ The 10 thousand tonnes cement clinker grate cooler has been put into engineering application;
- ◇ The low-carbon grinding technology experiment for cement classification has achieved a carbon emission of no more than 470 kg per tone of 42.5-grade cement;



42.5-grade cement has achieved a carbon emission of **no more than**

**470 kg**

- ◇ Continuous optimization of the efficient and precise Selective Non-Catalytic Reduction (SNCR) technology has been conducted and treatment technology and engineering application of flue gas have been deeply implemented;
- ◇ The hydrogen coupling alternative fuel technology route to form hydrogen-organized combustion technology for cement kiln inlet has been proposed;
- ◇ Sinoma International has been awarded four first prizes, five second prizes, and six third prizes in the China Building Materials Machinery Industry Technology Innovation Award. Additionally, the "Key Technology and Application of Multi-source Solid Waste for Low-carbon Preparation of Sulphoaluminate/Ferrite Series Cementitious Materials" project has received the second prize for technological invention in the Outstanding Achievement Award for Scientific Research in Higher Education.

### China Building Materials Machinery Industry Technology Innovation Award

First prize

**4**

Second prizes

**5**

Third prize

**6**



**Case: Sinoma Science & Technology's Type IV hydrogen storage cylinder obtains production license and technological breakthroughs lead industry development**

In July 2023, the 70Mpa plastic liner hydrogen storage cylinders made from carbon fiber of Suzhou Limited, a subsidiary of Sinoma Science & Technology, successfully obtained the special equipment production license for the Type IV hydrogen storage cylinder, becoming the first company in China that masters the key core technologies of 70Mpa Type IV hydrogen storage cylinder with independent intellectual property rights as well as automated mass production capabilities, thus to effectively promote the vigorous development of the hydrogen energy industry.



Hydrogen storage cylinder production process

**Case: Self-developed cement classification and separate grinding technology to help reduce the industry's carbon emissions**

Equipment Group, a subsidiary of Sinoma International, took the lead in uniting various innovative resources of production enterprises such as CUCC and colleges and universities. Together, they construct a semi-industrialized test platform for high-efficiency grinding, develop key technologies and complete sets of equipments for raw material activated calcination and cement graded and separately ground, and realize the reduction of raw material flammability f-CaO by more than 10% and the proportion of clinker by 56% in the production of 42.5 grade of cement, which achieves the effect that the production of 42.5 cement with the carbon emission intensity is less than or equal to 470 kg/tonne. Compared with the traditional grinding technology, the carbon emission intensity of this technology has decreased by about 27%, which is of great significance to the green, low-carbon and high-quality development of the cement industry.



Key technology application of cement classification and separate grinding

In the production of 42.5 grade of cement:

Reduction of raw material flammability f-CaO

**>10%**

Proportion of clinker

**56%**

Carbon emission intensity

**≤470 kg/tonne**

Compared with traditional grinding technology, the carbon emission intensity of this technology has decreased by

**~27%**



## Digital intelligence development and transformation

In the rapid development of global digital economy, digital transformation has become an indispensable “must-answer question” for the long-term development of companies. Taking full advantage of its leading edge in science and technology, the Group continuously strengthens digital intelligence technology innovation and establishes the digital transformation vision of “Digital-oriented in Material Creation” .

In 2023, CNBM used the construction of three major systems of “Process, Data and Digital Governance” and digital base construction as the entry points to solve deep-seated problems and drive the process of digital transformation.


Focus on changes, develop process management system and clarify relationship between business, organization and IT to achieve the pattern that “Organization Adapts to Process, Process Carries Business, and IT Solidifies Process” .

Concentrate on value-added services, develop data governance system and construct data governance system in terms of data sharing, data quality, data value and data security.

Highlight capability improvement, develop digital governance system, build an independent and controllable digital base and promote all-level infrastructure to achieve the pattern of “Application Modernization, Hardware Standardization, Security Systematization and Governance Integration” . The Group has built the “CNBM Cloud” to promote its application of “Migrating to Cloud, Using Digital Tools and Enabling Intelligence” ; the Group has also integrated the network resources to construct a “network” , which can ensure network connectivity among affiliated companies; as well as promoted the Internet platform construction for raw materials industry to provide ecological synergy and sharing services and empowerment for the upstream and downstream of the building materials industry chain.

### Case: Optimizing intelligent factory standards to promote global intelligent manufacturing


The Group is committed to accelerating the development engine of digital transformation and intelligent manufacturing, focusing on promoting the integration of the building materials industry with the new generation of information technology, and concentrating on the strategic choice of grasping the new opportunities of the new round of technological revolution and industrial change. In the current year, New Tianshan Cement was the first enterprise in the industry to compile and release the Cement Intelligent Factory Standard 2.0. Under the guidance of this standard, the Group promoted the construction of a number of leading intelligent manufacturing production lines both at home and abroad.

◇ <b>In the basic building materials segment</b>	Established intelligent factories	Digital mines	
	<b>26</b>	<b>11</b>	

◇ **In the new materials segment**, China Jushi has successfully created the “Future Factory” in the fiberglass industry, which has been replicated in subsidiaries in Egypt, the United States, and elsewhere worldwide; Sinoma Science & Technology has initiated the “Lighthouse Factory” at its Taiyuan base.

Completed <b>71</b> smart production lines	Established the country's <b>first</b> automated and intelligent production line for 70 Mpa hydrogen energy Type IV cylinders	
Independently owned intellectual property		

◇ **In the engineering technology service segment**, Sinoma International has launched the Smart Factory Comprehensive Solution 2.0, constructing a full-process solution that spans from basic equipment and intelligent platforms to transformation services.

In 2023, the number of completed digital intelligent factories for clients	In 2023, the number of completed digital mines for clients	
<b>9</b>	<b>20</b>	



The largest intelligent manufacturing base for glass fiber in the world



Glass fiber intelligent central control room of China Jushi



Manipulator in intelligent glass fiber factory

### Case: Sinoma Cement Green & Intelligence Summit, empowering high quality development of cement industry

In May 2023, the first Sinoma Cement Green & Intelligence Summit was successfully held in Tianjin. The summit focused on advanced technologies in the three main themes of green and low-carbon, digital intelligence, and high-end equipment throughout the entire lifecycle of the cement industry, fully showcasing new achievements in the development of China's cement industry. Furthermore, the summit established an international platform for cooperation in the theoretical experience and practical exchange of the cement industry, contributing wisdom and strength to the technological progress and sustainable development of the global building materials industry, and working together with the world to write a new chapter of high-quality development in the cement industry.

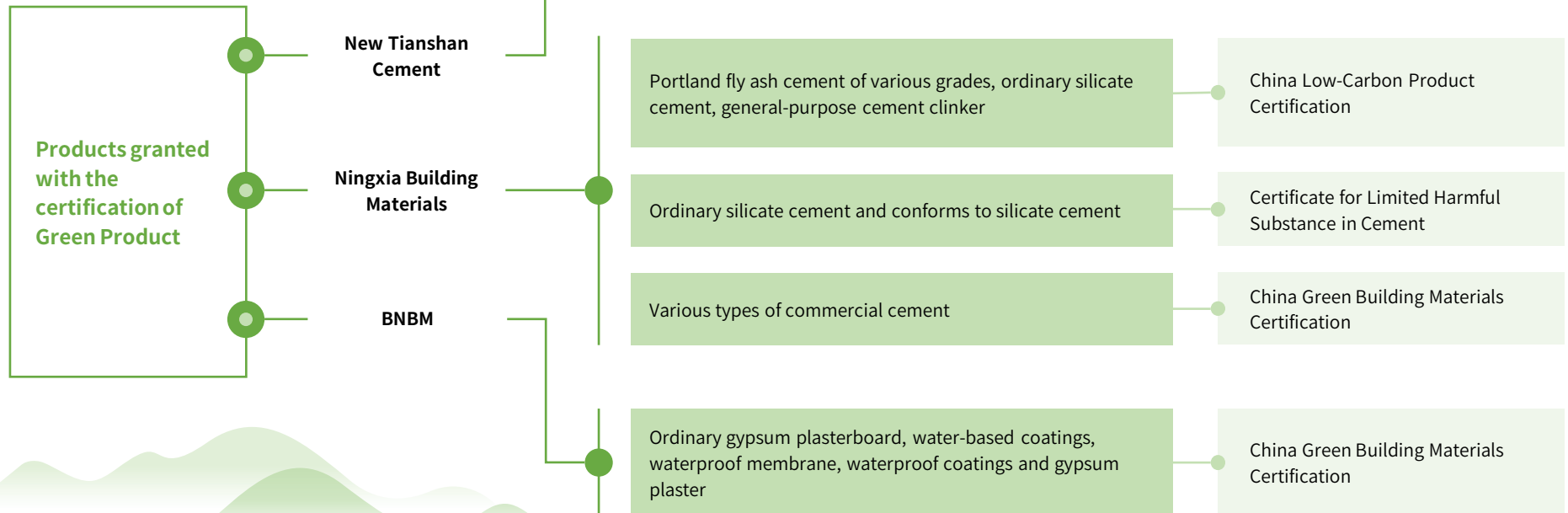


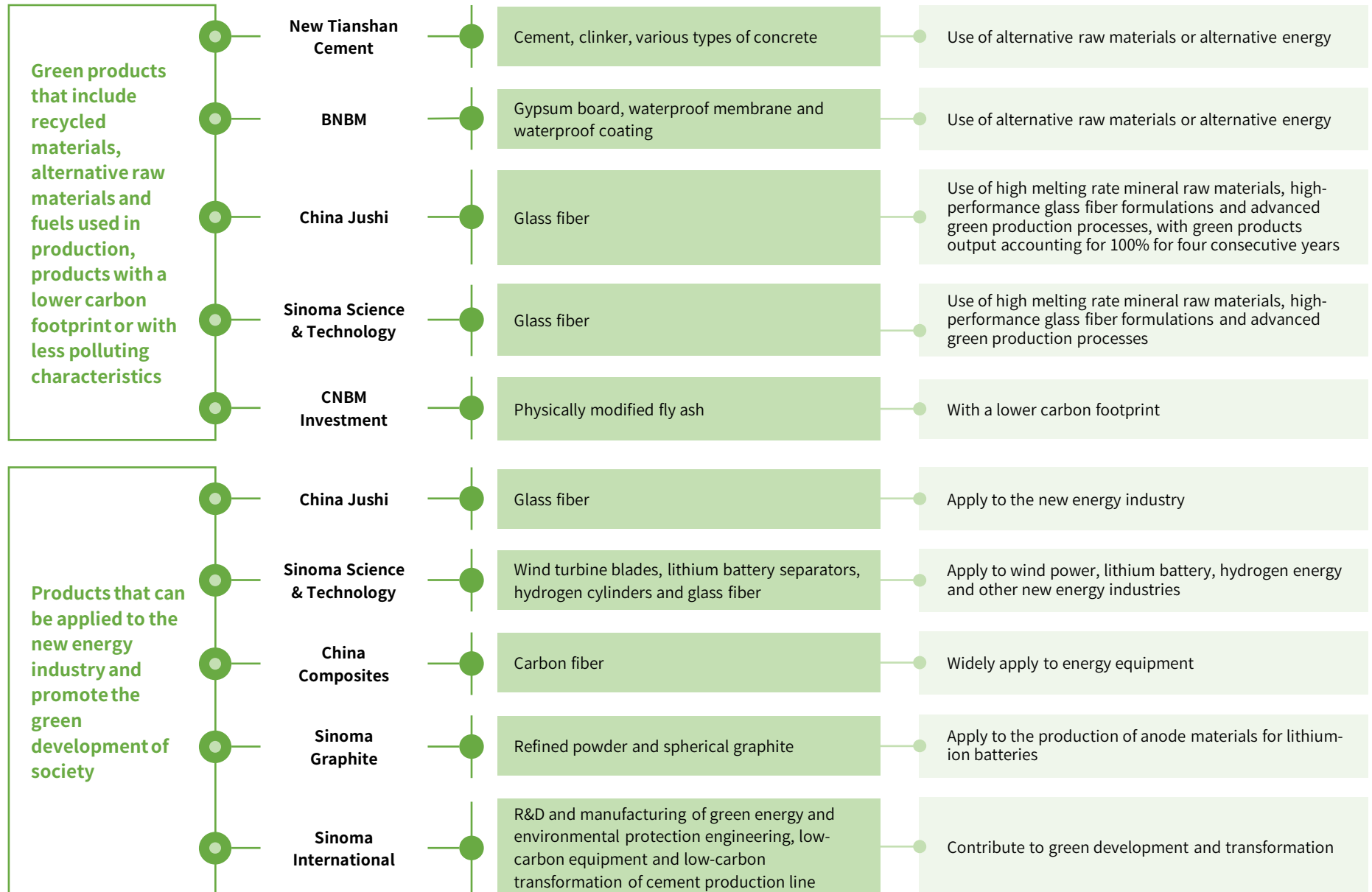
The release of digital processing platform shared for equipment manufacturing of Sinoma International in the summit



## Green solution

The Group have launched a series of basic building materials, new materials and engineering services characterized with green and low-carbon attributes that are helpful for the low-carbon development in society, to contribute to the sustainable development of the whole society. In 2023, the Group's operating revenue earned from green products was about RMB 33.326 billion, while the operating revenue from products in favor of the green development of society was about RMB 39.878 billion.





## Basic building materials segment New materials segment

The Group carries out energy efficiency improving and energy structure optimizing to enhance the energy-saving nature of product manufacturing, innovated the production of building materials by reusing industrial waste as raw materials and high calorific value waste as alternative fuels. With these efforts above, the Group has reduced the consumption of natural minerals and fossil energy and provided customers with high-quality green and low-carbon cement products. Furthermore, the Group takes active actions to propel the certification of green products, creating green and low-carbon brands.

### Case: Ningxia Building Materials actively promoting the certification of green products to create green and low-carbon brands

Ningxia Building Materials actively carried out the certification of green products. By the end of 2023, Wuhai Saima, a subsidiary of Ningxia Building Materials, passed the certification of limited harmful substance in cement, and its self-developed SMSN/42.5 cement products were awarded as green design products in Inner Mongolia Autonomous Region. The concrete produced by Saima Kejin has successfully passed the certification of China Green Building Materials, making Saima Kejin the first company in Ningxia that has this certification. In addition, Qingtongxia Cement, Sinoma Gansu Cement and Kharachi, which are the subsidiaries of Ningxia Building Materials, have all passed the certification of Low-Carbon Product.



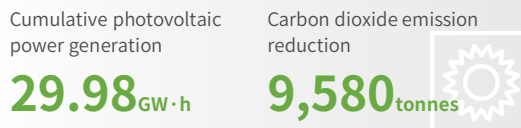
Wuhai Saima "Green Cement"

The Group develops green design of new material from the source of formula to vigorously develop energy-saving and low-carbon green manufacturing techniques and promote the green upgrade of new material products. Meanwhile, the Group promotes the application and contribution of innovative new materials in new energy, intelligence and other cutting-edge scientific and technological fields, effectively contributing to the green and sustainable development of the whole society.

### Case: BNBM deepening green production and advancing product upgrading

In 2023, BNBM actively carried out clean energy substitution plans, applied energy-saving and environmental protection processes, continuously reduced the energy consumption and emission level of the company's product production process, and promotes green and low-carbon product upgrades:

- ◇ the cumulative photovoltaic power generation capacity reached 29.98 GWh, equivalent to about 9,580 tonnes of carbon dioxide emission reduction;
- ◇ setting emission standards for sulfur dioxide, nitrogen oxides and soot that are stricter than national and industry standards, and 52 companies have achieved "near-zero emissions", which accounts for 50% of all level affiliated companies.



- ◇ the cumulative substitution volume reached 27.4 thousand tonnes, 183.3 thousand tonnes and 113.3 thousand tonnes of standard coal by using waste heat steam, biomass and natural gas from power plants, reducing carbon dioxide emissions by about 661.1 thousand tonnes annually;
- ◇ achieving a comprehensive energy consumption of 0.65 tons of standard coal per 10 thousand yuan of output value this year, representing a year-on-year decrease of 5.70%;



52 companies have achieved  
**"near-zero emissions"**  
which accounts for **50%** of all level affiliated companies



Coating products of BNBM

**Case: Sinoma Science & Technology expanding application of products and propelling green development**

Sinoma Science & Technology stepped up a construction of green and low-carbon industrial layout equipped with wind power blades, lithium battery separators, hydrogen storage cylinders and other new materials new energy.

Sinoma Science & Technology installed capacity of wind turbine blades exceeded 147GW, which is capable of reducing 41 million tonnes of carbon dioxide emissions, equivalent to the carbon sequestration capability of 107 thousand mu (equivalent to about 71.33 km<sup>2</sup>) of forests. Sinoma Blade, a subsidiary of Sinoma Science & Technology, was awarded as the fourth batch of “Industrial Product Green Design Demonstration Enterprises”, and its green design has been applied to more than 20 types of blades. Its self-developed nearly 100-meter wind turbine blades made from thermoplastic composites were successfully completed, which marks a breakthrough of Sinoma Blade in the application of new and green materials for wind turbine blades. By 2025, Sinoma Blade will develop nearly 50 green blade models, further enhancing the company’s green production ability.

Sinoma Lithium Separator, a subsidiary of Sinoma Science & Technology, continues to conduct in-depth research on new technologies and transform new processes, and continuously accelerates the research and development of green and low-carbon production lines. In 2023, two lithium membrane factories in Tengzhou and Ningxiang were awarded as national green factories. According to the emission reduction effectiveness of new energy vehicles and the projection of production capacity in 2023, the launch of Sinoma Lithium Separator’s products can help reduce carbon by about 150 thousand tonnes.

Suzhou Limited, a subsidiary of Sinoma Science & Technology, has continuously launched innovative products of multi-dimensional hydrogen storage cylinders. Its 320-liter hydrogen storage cylinders have been successfully applied in “Three Gorges Hydrogen Boat No. 1”, providing continuous green power for the ship. Its 385-liter ultra-large-volume hydrogen storage cylinders have been applied in the first “Ningdong” hydrogen-powered locomotives of CRRC, helping the green transformation of global rail transportation equipment. Moreover, it built the first intelligent and automated batch production line of 70 Mpa Type IV hydrogen storage cylinders in China. The company has continued to promote the innovation of hydrogen energy storage and transportation technology and equipment upgrading.

Cumulative installed capacity exceeded

**147**GW

Helping to reduce carbon dioxide emissions by nearly

**41**million tonnes annually

Equivalent to reforestation

**107**thousand mu

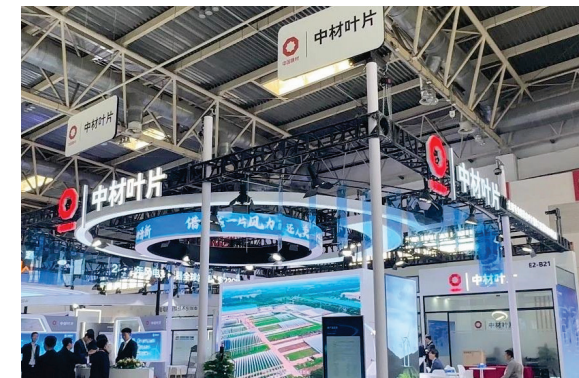
By 2025, Sinoma Blade will develop nearly

**50**green blade models



The launch of Sinoma lithium film products can help reduce carbon by about

**150**thousand tonnes



Sinoma Blade at 2023 China (Beijing) International Wind Energy Conference and Exhibition

## Engineering technology service segment

Sinoma International has accelerated green innovation by developing key technologies to enhance product performance, promoting the application of low-carbon and ultra-low emission technologies in cement production processes. It has made breakthrough progress in the research and development and manufacturing of low-carbon equipment, committed to providing owners with environmentally friendly, high-quality products and services.

### Case: CBMI Construction reforming technology of alternative fuels and providing a model for upgrading traditional cement plants

In the MK3 project in Toulouse, France, CBMI Construction, a subsidiary of Sinoma International, has achieved remarkable results in exploring the innovative application of alternative fuels and putting it into operation, as part of the company's efforts to optimize the energy structure and elevating energy efficiency. In this project, the company used over ten kinds of alternative fuels, including shredded tires, shredded wood and animal meat, to achieve 85% heat substitution rate of fuels, with an annual carbon reduction of 200 thousand tonnes. Additionally, this technology is capable to convert municipal waste into recoverable fuel, providing a model for upgrading traditional cement plants.

Heat substitution  
rate of fuels

**85%**

An annual carbon  
reduction

**200**

thousand tonnes



Factory of MK3 project

### Case: Sinoma Shangrao developing green and low-carbon equipment to empower green development of industry

Sinoma Shangrao, a subsidiary of Sinoma International, has deeply implements the development strategy of "green, low-carbon, digital and intelligent", and takes the establishment of "six-zero" factories as the ultimate development goal. It seizes opportunities of digital transformation to carry out energy-saving and low-carbon reforms in all stages of production. The SCD1200\*107076mm clinker conveyor developed and manufactured by Sinoma Shangrao can save 12,000 kW·h of electricity and reduce 11,964 kg of carbon dioxide emissions through the existing digital manufacturing technology, and the company has been awarded the Carbon Label Evaluation Certificates.

Electricity saving through the technology

**12,000** kW·h

Carbon dioxide reduction

**11,964** kg



Carbon Label Evaluation Certificates for clinker conveyor products

# Integrating into circular economy



The Group continuously standardizes waste treatment, conserves and utilizes resources, increases the recycling of resources, promotes the reuse of waste and water resources, and helps improve the level of circular economy in the whole industry.



In terms of waste treatment, the Group standardizes the management of various types of waste generated in the production and living processes to achieve “Recycle, Reduction and Harmlessness”. The comprehensive utilization rate of non-hazardous solid waste is 95%. With regard to hazardous waste disposal, relevant subsidiaries have signed the Hazardous Waste Disposal Contract with companies that have relevant hazardous waste disposal qualifications to conduct centralized disposals of hazardous waste generated from the Group’s production processes.

In terms of water resources conservation and protection, the Group’s water sources come from surface water, tap water and reuse water, and all companies have obtained water drawing permits in accordance with the law. We systematically track and monitor the availability of water sources in the regions where we operate, keep abreast of regulatory changes and water tariff changes in water withdrawals, assess the risk of water scarcity and policy fluctuations, and adjust the companies’ water usage strategy in a timely manner. In 2023, the Group continued to implement water resources management measures such as diversion of clean water and wastewater, diversion of rainwater and wastewater, segregated collection and pre-treatment of production wastewater and domestic sewage. The Group achieved remarkable results in water measurement management, water-saving system construction, waste water treatment, water reuse and other areas, with the utilization rate of recycled water reaching 92%. Throughout the year, there were no issues such as difficult access or insufficient water resources.



Comprehensive utilization rate of non-hazardous solid waste

**95%**



Utilization rate of recycled water

**92%**

Targets set in the previous year	Progress in 2023	Future targets
The utilization rate of recycled water maintains at above 90%.	The utilization rate of recycled water reached 92%.	The utilization rate of recycled water maintains at above 90%.
Maintain the comprehensive utilization rate of non-hazardous solid waste at above 90%.	The comprehensive utilization rate of non-hazardous solid waste reached 95%.	<ul style="list-style-type: none"> <li>By 2025, the recycling rate of solid waste resources shall not be less than 96%;</li> <li>By 2025, zero emissions of stripped soil and waste rock from mining will be achieved;</li> <li>By 2025, Achieve 100% comprehensive recycling of gypsum board production;</li> <li>By 2025, Achieve a solid waste absorption capacity of 130 million tonnes.</li> </ul>



## Basic building materials segment

In the basic building materials segment, the Group vigorously promotes the comprehensive utilization of resources, and a large amount of industrial waste residues such as fly ash, tailing slag, ore powder, acid slag, desulfurized gypsum and carbide slag are used for cement production and clinker sintering. We also recycle desulfurized gypsum and phosphor gypsum for the production of light building materials and use high calorific value wastes as alternative fuels to improve the efficiency of resource utilization. In addition, the Group develops co-disposal projects of cement kiln for disposing of foreign solid waste such as domestic waste, as well as sludge, sewage, and hazardous wastes, which not only achieves proper disposal of waste, but also reduces the use of coal, thus contributing to the construction of harmonious relationship between industrial production and social life.

### In 2023



The Group's substitute raw materials consumptions reached

**26.58 million tonnes**



The substitute fuels consumptions reached

**1.05 million tonnes**



**48** cement kiln co-disposal waste projects in operation, with an

annual disposal scale of **4.83 million tonnes**, including

Hazardous waste

**2.83**

million tonnes

Solid waste

**1.21**

million tonnes

Household waste

**0.79**

million tonnes



Saved coal

**78.1 thousand tonnes**

Reduced carbon

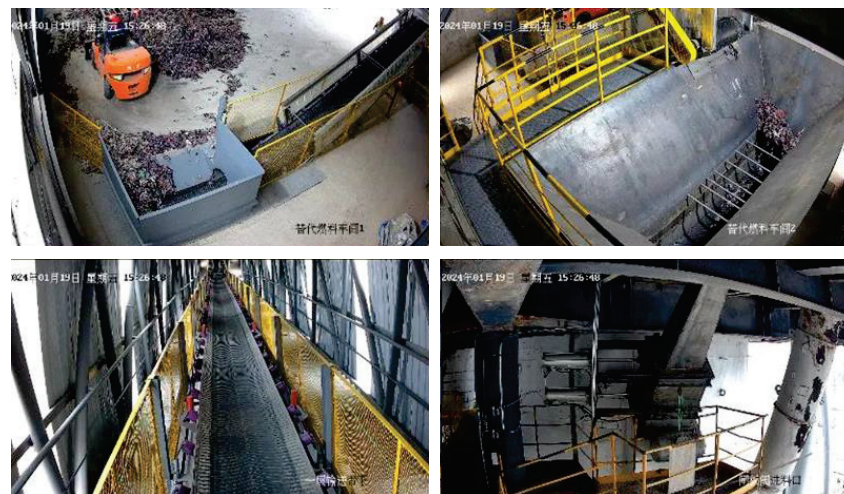
**210.9 thousand tonnes**

### Case: New Tianshan Cement actively exploring alternative raw materials and fuels and establishing a green, low-carbon and cycling development industrial system

The Group actively explores alternative raw materials and fuels in the process of scientific formulation and continuous experimentation, and reduces carbon dioxide emissions while improving the efficiency of resource utilization. In 2023, New Tianshan Cement improved concrete performance using mineral admixtures such as fly ash and tailing powder, with a reduction of 2.7 million tonnes carbon dioxide emissions. Yunnan Cement, a subsidiary of New Tianshan Cement, has launched a pilot project on alternative fuel combustion. Cleaner waste tire powder with high combustion value is chosen to produce alternative fuel for trail use in kiln tail preheater decomposition furnaces after mixed with coal, thus achieving the goal of fossil energy saving and carbon dioxide emission reduction.

Reduction of carbon dioxide emissions

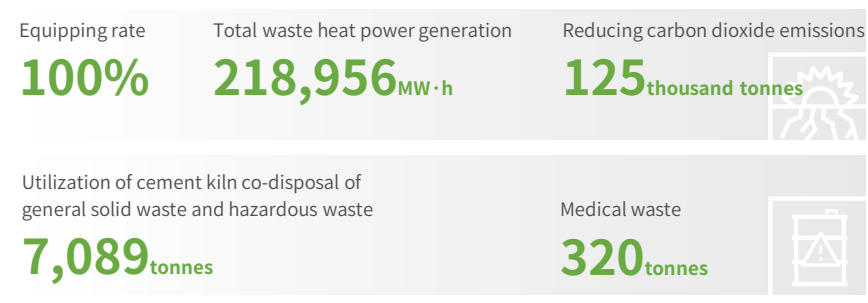
**2.7 million tonnes**



CUCC Beichuan alternative fuel project of southwest cement

**Case: Ningxia Building Materials promoting waste heat utilization and integrated waste treatment to fully exploit carbon reduction potential of cement kilns**

In 2023, Ningxia Building Materials continued to promote cement kiln waste heat recovery and utilization. The equipment rate of cement clinker waste heat power generation facilities in its affiliated companies that meet the conditions reached 100%, with annual total of 218,956 MW·h waste heat power generation and reduction of 125 thousand tonnes carbon dioxide emissions. Wuhai Saima, a subsidiary of Ningxia Building Materials, utilization of cement kiln co-disposal of general solid waste and hazardous waste 7,089 tonnes and 320 tonnes of medical waste. The process not only promoted resource recycling, but also utilized waste as fuels, leading to fossil energy savings and significant carbon dioxide emissions reduction.



In the basic building materials segment, the Group takes active water conservation measures, recycling industrial cooling water in the production system, realizing 100% reuse of all waste water after deep treatment in the plant sewage treatment station, mainly for vehicle washing, dust suppression and water spraying of the storage yard, ground washing, road water spraying, greening watering, and striving for zero discharge of production waste water. We also conduct sampling and testing of sewage to ensure that the water quality meets the standards and avoid soil pollution. Meanwhile, the Group requires its subsidiaries to obtain water drawing permits in accordance with the law, so as to promote water conservation through regulation and avoid waste of water resources.



Wastewater reuse rate after deep treatment  
**100%**

**Case: New Tianshan Cement implementing the spirit of water saving and taking multiple measures to reduce waste**

New Tianshan Cement implemented water-saving spirit, and took multiple measures to continuously improve water resources reuse rate and reduce water resources pollution and waste. The annual recycling water rate reached 94%, and the sewage reuse rate of commercial concrete enterprises reached 100%.

- ◇ Installing high-frequency pulse electromagnetic wave activation equipment in the factory to increase cooling water circulation rate of the equipment;
- ◇ Implementing sewage treatment technological transformation project, utilizing treated waste water for greening irrigation in the factory area, and reducing the quantity of out-purchased water;
- ◇ Vigorously promoting green irrigation methods such as drip irrigation and spray irrigation instead of flood irrigation, and reducing water resources waste caused by evaporation and sandy leakage.



Sichuan Lisen Building Materials rainwater sewage recycling system

## New materials segment

In the new materials segment, the Group always adheres to the “three wastes” treatment concept of “Focusing on the Source, Controlling the Process and Strengthening the Treatment” and disposes of hazardous and non-hazardous solid wastes in compliance with the regulations. We actively explore recycling technologies of solid waste and continuously upgrade resources utilization level through the implementation of various measures, including standardizing solid waste management in production sites and temporary storage sites, setting up waste identification marks, establishing classified storage for ledgers, supervising and inspecting problems on prevention of dispersion, loss and seepage in the process of storage and transfer.

### Case: Sinoma Science & Technology exploring recycling system to increase level of solid waste utilization

Subsidiaries of Sinoma Science & Technology continue to carry out solid waste reduction practices and recycling projects.

- ◇ In 2023, Sinoma Blade reduced solid waste per unit of blade production by 17.26% on year-on-year basis, signed a cooperation agreement on packaging material recycling and with its suppliers, and recycled about 57 thousand packaging barrels throughout the year, which significantly reduced the total amount of solid waste and enhanced the efficiency of resource utilization.
- ◇ CTG used existing comprehensive utilization workshop to develop glass powder reuse technology, converting waste glass powder into glass fiber production raw materials and reducing the solid waste disposal volume by 1,500 tonnes;
- ◇ Suzhou Limited promoted the recycling mechanism of hazardous waste packaging barrels, reducing about 10 tonnes of hazardous waste throughout the year;
- ◇ Hengzhou Special Fiberglass, a subsidiary of NRDI, increased the recycling of waste glass, waste silk and waste glue generated in the production process, saving more than 10 tonnes of raw materials throughout the year.

Reduced solid waste per unit of blade production by

**17.26%**

Recycled packaging barrels throughout the year

**~57 thousand**

Reducing the solid waste disposal volume

**1,500 tonnes**

Reducing hazardous waste throughout the year

**~10 tonnes**

Materials saving for the year more than

**10 tonnes**



Meanwhile, the Group actively promotes measures such as recycling of production water, reuse of reclaimed water and diverting wastewater from clean water to protect the surface water and groundwater systems in which the base is located, and formulates targeted water system testing plans to prevent sewage infiltration and improve the treatment process of wastewater system.

### Case: Sinoma Science & Technology improving process technology to increase water resource utilization

Sinoma Science & Technology and its subsidiaries carry out special water-saving projects and constantly develop new processes and new technologies, striving to improve the utilization rate of water resources and reduce water consumption.

- ◇ Launching Steam Condensate and Desorption Gas Waste Heat Recycling Project, which can save 1.7 tonnes of steam per hour in two production lines;
- ◇ Carrying out the project concerning concentrated water utilization of steam condensate water and soft water, where the condensate water after heat utilization, can be used as high-quality soft water to directly replenish the circulating water to improve water quality or as spray water for cooling towers, and reduce tap water consumption;
- ◇ The wastewater reuse project at Inner Mongolia Lithium Separator has been under construction, which can save 115 thousand tonnes of tap water per year after its completion;
- ◇ Suzhou Limited recycles wastewater, saving more than 200 thousand tonnes of water per year. Its plant in Chengdu recycles and reuses wastewater from a treatment station, reducing the amount of fresh water used in the pickling and phosphatizing process by 80%.

Save steam per hour in two production lines

**~1.7 tonnes**

Tap water saving for the year

**~115 thousand tonnes**



Saving water per year more than

**200 thousand tonnes**

Reducing the amount of fresh water consumption

**80%**





## Engineering technology service segment

During the pre-construction period, Sinoma International clarifies the responsibility of water conservation and puts forward the construction requirements in the subcontract and safety and environmental protection management agreement. During the project design period, Sinoma International fully considers the water intake of the project, investigates and studies the abundance of water resources in the project site, and selects a suitable construction area. During the project construction period, Sinoma International fully implements the concept of water saving to avoid excessive consumption and waste of water resources.

Sinoma International advocates the use of simple and less packaging materials to reduce resource consumption, standardizes waste treatment and increases resource recycling efforts to promote waste reuse, provide sustainable raw material sources for the industry and help the industry to improve the level of circular economy.

### Case: Sinoma International reducing packaging materials to achieve sustainable development goals

Equipment Group, a subsidiary of Sinoma International, has actively reduced packaging materials. For containerized cargo transportation, the company simplified the traditional “conventional packaging + container pallet” mode to using “container pallet” only, which significantly reduced the amount of packaging materials used without affecting the safety of cargo transportation. The proportion of packaging materials in weight has been reduced from 8% to 5%, allowing for more efficient use of resources and better sustainable development of the company.

The proportion of packaging materials has been **reduced from 8% to 5%**



# Insisting on green manufacturing



The Group strictly abides by the requirements of relevant national laws and regulations, continuously improves the construction of environmental management system, carries out various environmental protection measures, strengthens the supervision and management of the ecological environment, and makes every effort to promote environmental protection and governance, so as to jointly protect the green earth.



As of December 2023, totalling green factories

**239**

National green factories	Provincial green factories	Other level green factories	Factories that have been passed the evaluation in 2023
<b>160</b>	<b>65</b>	<b>14</b>	<b>36</b>



## Improving management system

The Group always implements the concept of green management and green development, strictly abide by and implement the national laws and regulations on environmental protection, pollution prevention, cleaner production, energy conservation, etc., as well as the norms and standards related to waste gas emissions, greenhouse gas emissions, sewage and waste discharge, which have a significant impact on the Group, and formulate more than 10 rules such as the “Responsibility Policy for Ecological and Environmental Protection of CNBM” and the “Management Measures for Assessment of Energy Conservation and Ecological and Environmental Protection of CNBM” , to coordinate and standardize the environmental management of each business segment.

In order to ensure the implementation of the system, the Group has established and continuously improved the responsibility structure of environmental management. The Chairman and the President jointly assume the leadership responsibility of environmental protection work, while the Vice President in charge of environmental protection work implements the overall organizational work, and other management staffs are responsible for the environmental protection work within their respective areas of responsibility. As the first person responsible for the environmental protection work of the department, the person in charge of each department leads the employees of the department to actively implement the environmental management system of the Group, thus forming a complete management system from top to bottom.

The Group accepts external and irregular inspections from central and local environmental protection authorities, achieving full coverage of key areas for external environmental inspections every year, accounting for nearly 100% of the Group's production and operation enterprises at all levels. At the same time, the Group conducts internal environmental protection audits by on-site and online means, which can annually achieve full coverage of internal environmental inspections for the Group's production and operation enterprises at all levels. In 2023, the Group conducted on-site environmental protection audits on 28 subsidiaries and pointed out 882 problems and hazards, and urged the subsidiaries to complete rectification.

### Full coverage of key areas

for external environmental inspections

Accounting for **nearly 100%** of the Group's production and operation enterprises at all levels

The Group conducted on-site environmental protection audits on **28** subsidiaries

Pointed out **882** problems and hazards

Every **1 year**, Internal environmental inspections covering all production and operation enterprises at all levels



**The basic building materials segment** is the top priority of green management of the Group. New Tianshan Cement has established a Dual-Carbon Management Department in 2023, starting to formulate a management system related to carbon peaking and carbon neutrality and to collect the information of carbon emissions from each subsidiary. Ningxia Building Materials has set up safety and environment departments at all levels to build a sound environmental responsibility system and assessment mechanism. Environmental protection goals and targets are issued at the beginning of each year, and the “Energy Conservation and Ecological and Environmental Protection Target Responsibility Letter” is signed at each level. Monthly follow-ups are conducted to ensure the achievement of annual work goals.

**The new materials segment** is a key focus of our Group's green management initiatives. In 2023, Sinoma Science & Technology developed over ten management policies, including the “Energy Conservation and Ecological and Environmental Protection Management Measures” and “Safety and Environmental Protection Supervision and Inspection Management Regulations”, and jointly created and revised more than 300 related policies with its subsidiaries. China Composites has specified in its “Environmental Protection Management Policy” and the annually signed “Energy Conservation and Ecological and Environmental Protection Assessment Responsibility Agreement” the management and assessment measures to be taken in cases of exceeding emissions standards or receiving administrative penalties.

**The engineering technology service segment** serves as a vital instrument for the Group to infuse green management practices across all sectors of the industry. In 2023, Sinoma International continuously improved the environmental protection system, and planned and formulated a series of environmental protection policies in a scientific manner, such as the “Environmental Protection Responsibility System”, the “Management Measures for Cleaner Production, Energy Conservation and Emission Reduction” and the “Management Regulations on Handling of Environmental Emergencies”. Since 2022, Sinoma International started to optimize and upgrade the ecological and environmental protection management policies. By the end of 2023, a total of 36 management systems involving ecological and environmental protection had been improved.

In 2023, the Group continued to actively promote various environmental protection certifications for its subsidiaries.



At the present, the proportion of industrial enterprises at all levels accredited by the ISO 14001 Environmental Management System certification stands

**over 85%**



## Cultivating environmental protection awareness

The Group implements the green management system, actively organized its subsidiaries to carry out the activities of National Energy Conservation Publicity Week and National Low Carbon Day in 2023, publicized and interpreted the relevant policy requirements of carbon peaking and carbon neutrality, and promoted the work related to green energy conservation in a coordinated and orderly manner. The Group actively promotes the concept of a green office, encourages the use of video conference and has implemented electronic document management through the OA system to reduce paper consumption. The Group also prioritizes the purchase of environmentally friendly paper and pens with replaceable refills, and extends the service life of printing equipment and lighting fixtures through repairing old and recycling. In addition, the Group organizes Environmental Protection Day events and relevant training sessions. Employees are urged to save water and electricity, classify waste and travel green, and are encouraged to start with small actions around them and contribute to the sustainable development of the Group.

### Case: New Tianshan Cement purchasing sustainable paper, giving full play to the dual effect of green office and green suppliers

New Tianshan Cement is committed to promoting and implementing the concept of green office, and giving priority to suppliers that use sustainable fiber materials for paper. These suppliers encourage crop papermaking, which can help reduce green space losses and greenhouse gas emissions, and also recycle by-products and residues from paper manufacturing to produce biomass energy. It can further reduce the environmental impact of paper consumption, highlight suppliers' collaborative efforts for a greener supply chain.

### Case: China Jushi Low Carbon Month – a collective push for greater awareness of environmental protection

China Jushi carried out the seventh Low Carbon Month with the theme of “Building Green Jushi Together and Contributing to Harmonious Coexistence”. Through a variety of activities including knowledge quiz, essay contest, and analysis of treatment costs and pollutant emissions, the company raised employee's awareness of environmental protection. The campaign attracted more than 8,000 participants.



Low Carbon Month spot

## Reducing pollution emission

Adhering to the core concept of “Smart Use of Resources to Serve the Industrial Construction Industry”, through carrying out peer benchmarking and comprehensive benchmarking among enterprises within the Group, the Group continues to optimize industry techniques, technologies, management, innovation, reduces emissions in waste gas, waste water and waste residue and actively lead the industry in self-disciplined emission reduction.

Targets set in the previous year	Progress in 2023	Future targets
The nitrogen oxide emission intensity of cement clinker does not exceed 0.32 kg/tonne.	In 2023, the emission intensity of nitrogen oxides in cement clinkers of the Group was 0.30 kg/tonne, decreasing by 6.27% year on year.	The nitrogen oxide emission intensity of cement does not exceed 0.297kg/tonne.
100% compliance with the discharge requirements of the pollutant discharge permit.	In 2023, the Group’s compliance with the discharge requirements of the pollutant discharge permit reached 100%.	Meeting the discharge requirement of the pollutant discharge permit at 100%.

### Basic building materials segment

The basic building materials segment of the Group has formulated internal management measures in the areas of noise management, sewage management and emissions management to ensure that environmental protection targets are fully implemented. The segment has also vigorously implemented technological upgrades and reduced pollutant emissions and air pollutants as identified by energy consumption indicators. In regards gas emissions, these include sulfur dioxide, nitrogen oxides, particulates and volatile organic compounds emitted from the cement production lines, as well as raise dust from mining and cement transportation. The Group has met the emission standards after using equipment to carry out various waste gas treatment processes. The wastewater mainly comes from industrial cooling water and production and domestic wastewater in the factory area, which is reused after advanced treatment by recycling treatment facilities and sewage treatment stations. The Group conducts quarterly sampling and testing of sewage to ensure that the water quality meets the standards and avoid soil pollution.

Southern Cement, a subsidiary of New Tianshan Cement, has achieved greenhouse gas emission reduction through continuous investment in environmental protection and technological innovation. In 2023, after the implementation of the Measures for the Management of Compensated Use and Trading of Sewage Discharge Rights in Zhejiang Province, Southern Cement completed the first cross-district emission rights trading officially launched in Zhejiang Province.

#### Case: New Tianshan Cement refining pollution management measures and improving green production

To improve sewage treatment and realize green production, New Tianshan Cement continues to refine their pollution management measures for reducing the emissions of particulate matter, nitrogen oxides and sulfur oxides.

- ◇ Advance the efficiency-orientated modification to the environmental protection equipment of the clinker production line and the management of the dispersed emissions of particulate matter, thus reducing the dispersed emissions of dust from various production processes;
- ◇ Integrate the low-nitrogen oxides combustion, staged combustion, and automatic control technology of precise selective non-catalytic reduction to maintain stable emissions of nitrogen oxides;
- ◇ Accelerate deployment of technology for reducing sulfur emission mainly by wet flue gas desulfurization to reduce sulfur dioxide emissions;
- ◇ Strengthen the recycling and integrated treatment of water resources, enhance the transformation toward “separation of rainwater and wastewater” in factories, and standardize the centralized treatment of domestic sewage. In addition, the company actively supports the local government to discharge sewage from certain pipelines.

## New materials segment

The air pollutants generated by the new materials segment of the Group include sulfur dioxide, nitrogen oxides, particulate matter and volatile organic compounds emitted from various production lines, while the wastewater mainly comes from the production and domestic wastewater in the factory area. All production and operation units have built supporting environmental protection facilities for wastewater, waste gas, noise and solid waste treatment, and all production companies at all levels have obtained pollutant discharge permits. They regularly carried out pollutant discharge monitoring, established and improved the ecological environmental protection contingency plan, and strengthened the maintenance of energy-saving and environmental protection facilities, ensuring the efficient operation of equipment and facilities.

### Case: Leading the industry improvements in environmental standards by transforming environmental protection technology of new materials segment

The new materials segment actively carries out various environmental protection technology research and process technology transformation, continuously breaks through lower emission levels of air pollutants and water pollutants, leading the industry in continuously improving progress of environmental protection standards.

- ◇ China Jushi adopted various advanced technologies, such as dry and wet exhaust gas treatment system, fully-dry treatment system, odor collection and treatment system, as well as “activated carbon adsorption + catalytic oxidation” and denitrification technology processes, to convert exhaust gas into nitrogen and water, improving the efficiency of pollutant removal to more than 95%;
- ◇ CTG, a subsidiary of Sinoma Science & Technology, carried out the research on the improvement of biodegradability of glass fiber infiltrating agent wastewater. Therefore, it improved the capacity to treat wastewater and ensured that the capacity and efficiency of the wastewater treatment at this stage were increased by 5% and 10% respectively;

Ensured that the capacity and efficiency of the wastewater treatment at this stage increase by

**5% and 10%** respectively

- ◇ After the three major bases (Tengzhou, Ningxiang and Inner Mongolia) of Sinoma Lithium Separator, a subsidiary of Sinoma Science & Technology, have completed the renovation of the collection and treatment of extruder head fumes and TDO exhaust gas. The dispersed exhaust gases were collected as much as possible, resulting in the concentration of VOC emissions less than 20 mg/m<sup>3</sup>, which meets the local requirements of emission standards.

Improving the efficiency  
of pollutant removal to

more than **95%**

## Engineering technology service segment

Sinoma International pursues clean production and green construction. The company prevents and reduces the adverse impacts of production and operation activities on the environment by identifying, evaluating and controlling the environmental factors involved in production operations, the construction process of its projects and management activities. Waste, oil or garbage burning at the project site is strictly prohibited, and adopt dust reduction or dust prevention measures are implemented for the areas where smoke and dust are generated. With these measures, the concentration of air pollutant emissions is controlled within the standardized range. When building temporary camps for overseas projects, the company also establishes the sewage treatment system and hires local qualified sewage treatment companies to carry out centralized extraction and treatment, so as to prevent direct discharge into rivers or natural discharge, and build an environment-friendly enterprise which is conducive to protect local environment.





# Protecting ecological conservation

Protection of the ecological environment of raw material mining areas such as mines has always been important for the Group in carrying out its key task of building a civil ecological construction practice and reduce the impact on the business environment. In the course of all its business activities, the Group assesses the biodiversity risks that exist, such as the felling of vegetation at the mine site during the mining of some raw materials in the cement business, as well as the fuel consumption and exhaust emissions in the operation of the cement business, which may have an impact on the local natural environment and natural resources.

Guided by the relevant policy guidelines on ecological protection redlines, the Group establishes the concept of ecological protection redlines, respects the Convention on Biological Diversity, and carries out strict verification on the site selection and layout design of factories. During the construction of projects, steps are taken to protect natural habitats, wetlands, forests, wildlife corridors, and agricultural lands. The Group mitigates the adverse impacts on the surrounding environment and communities as much as possible, and pays attention to the conservation of biodiversity such as ecosystems and biological species within the ecological protected areas, ensures that 100% of factories and projects carry out biodiversity risk assessments, and 100% meets the requirements of ecological protection redlines.

The Group continue to improve the raw material extraction planning and mine operation management system, complying with the Convention on Green Mine, the Group has formulated relevant management policies such as the Interim Measures for the Protection of Mine Ecological Environment. The subsidiaries of the Group have also formulated relevant regulations and policy documents based on their situations, such as the Mining Management Policy of Ningxia Building Materials, the Plan for Geological Environmental Protection and Ecological Governance and Restoration of Mines and the Plan for Mine Land Reclamation of Sinoma International. The regulations and policy documents not only help ensure a scientific and orderly mining process, but also strictly controls the environmental impact of mining activities.



The Group Implements the principle of “Managing while Mining” , ensuring that ecological restoration is concurrent with and follows mining activities. In this regard, the Group has established a management system for the development and comprehensive utilization of mine resources, maximizing the resource recovery of stripped topsoil and waste rocks. This approach to ecological restoration in mining areas involves a blend of engineering measures and land consolidation, along with a mixed planting strategy of trees, shrubs and grasses to revive vegetation. It can effectively increase the amount of forestry carbon sink and advances the construction of green mines. And the greening of mines will be restored to the fullest.



## By the end of 2023



The Group had developed green mines of

**137**

National-level green mines

**43**

Green mines at other levels

**94**

## Targets



It is planned by 2025 that The proportion of greening in the usable area of the Group's subsidiaries will

**not be less than 50%**

By 2030, it will

**not be less than 60%**

**Regreening of mines will be restored to the fullest**

### Sinoma International Forest Resources Conservation Practice

Sinoma International involves the use of timber in engineering construction projects, attaches great importance to the protection and sustainable development of forest resources in its business activities, and takes a number of measures to avoid the destruction of forest resources, reduce land exposure and prevent soil erosion.

- ◇ **Compliance with laws and regulations:** comply with all laws and regulations related to the protection of forest resources and ensure that its business activities comply with legal requirements;
- ◇ **Sustainable procurement policy:** develop a sustainable procurement policy that requires suppliers to provide timber and forest products from legal sources and obtain relevant forest certifications, and encourages suppliers to use sustainably managed forest resources;
- ◇ **Supplier compliance audits:** conduct online or offline audits of suppliers to ensure that they comply with environmental and social responsibility requirements, and take relevant measures to avoid the destruction of forest resources;
- ◇ **Substitution of wood as raw material:** consider using steel formwork or aluminium alloy formwork instead of wooden formwork, or choose high-quality wooden formwork to increase turnover and avoid excessive use of wood;
- ◇ **Forest resources restoration:** carry out environmental protection actions such as factory greening, mine restoration and tree planting, etc., to protect forest resources and improve the ecological environment.

### Case: New Tianshan Cement strictly adhering to the ecological redlines to protect the lucid waters and lush mountains of China

The Group always adheres to ecological protection redlines to protect biodiversity and maintain ecological security. The transportation corridor project, with an annual aggregate production capacity of 40 million tonnes, is operated by CNBM Chizhou, a subsidiary of New Tianshan Cement. The project traverses the National Aquatic Germplasm Resources Conservation Area for Endemic Fish, the Provincial Wetland Park of Xinghua Village and Qiupu Wonderland Scenic Area. To steer clear of the ecological protection redlines, the project implemented an underpass tunnel design, which minimized the impact on local flora, fauna and ecological environment. It is a model for the harmonious coexistence of transportation corridor construction and ecological environment protection.



Completion of tunnel section of corridor project in Chizhou

**Case: Green restoration of mines to safeguard sustainable development of ecological resources**

To create a better ecological environment within mine sites, the Group has actively optimized and upgraded green mine construction and continuously improves the ecological restoration and management of mines for a better ecological environment of mining areas.

- ◇ In 2023, New Tianshan Cement's CUCC Pingyi invested 24 million yuan in mine ecological restoration, carrying out ecological restoration projects such as slope management, dust control, and land revegetation in the factory's limestone mines. This initiative added more than 50,000 square meters of green space, planting tens of thousands of trees, shrubs, lawns, fruit trees, and other vegetation, attracting birds such as pigeons, swallows, sparrows, eagles, as well as terrestrial animals like snakes, rabbits, mice, weasels, and insects including butterflies, bees, ants, cicadas. These efforts have restored the mine's ecosystem and enriched biodiversity.

Pingyi Zhonglian added green space of

**~50,000**  
square meters



- ◇ Yulong Tongli, a subsidiary of New Tianshan Cement, responded positively to "forest carbon sequestration" and invested a total of over RMB 26 million to carry out green mine construction at Dushan Mine and a mine carbon sink forest project was built

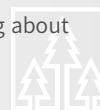
Yulong Tongli mine treatment area

**119** thousand square meters

By the end of July 2023, **415** mu of trees had been planted, and it is expected

that **700** mu of carbon sink forest will be built eventually, sequestering about

**700** tonnes of carbon annually.



- ◇ Since 2016, Ningxia Building Materials has promoted the geological environment protection and land reclamation of mines in an all-round way, requiring its subsidiaries to strictly follow relevant plans for mining and treatment. Slopes and main mine transportation roads are covered with soil at the end of mining in time to prevent the over mining and slow restoration of management.

The mine treatment area of Ningxia Building Materials

**884** thousand square meters

Accounting for **31%** of the mined areas



Yulong Tongli green mine construction



CUCC Pingyi mine ecological restoration



# Outstanding Brands

## Promote International Cooperation

- ◇ Guaranteeing quality excellence and casting a quality brand
- ◇ Caring for employee development and building an employer brand
- ◇ Undertaking social responsibility and building a responsible brand
- ◇ Responsible marketing-oriented and establishing a market brand



## Statistics 2023



Accumulated valid patents

**15.2** thousand



**123** new ISO 9001 quality management system certified companies in four years



Investment in safety and health

**1.493** billion yuan



**678** plants certified for ISO 45001 occupational health and safety management system, accounting for over **85%** of the total plants



Safety, environmental and health inspections

**69,125** times

Correction rate of hidden dangers

**99.6%**



Safety education and training for

**1.551** million person-times



Employees

**145,277**



Satisfaction across all employee categories

over **96.5%**



The average training hours for all employees

**49** hours

An year-on-year increase of

**4.3%**



Total investment in philanthropy

**70.57** million yuan



Volunteer activities

**30,078** hours



# Guaranteeing quality excellence and casting a quality brand



The Group adheres to the principle of quality first and the concept of “Protecting the Common Health of Human Beings and Earth” and strives to provide customers with the best quality products and services, as well as promotes green and sustainable development of the industrial chain.



## Quality management

The Group strictly complies with the Product Quality Law of the People's Republic of China and other relevant laws, regulations and policies, and revised the Quality Management Practices, to clarify the responsibilities and authorities of quality-related personnel, points out the direction and ways for the quality management of subsidiaries, and continuously promotes the improvement of product quality. In addition, the Group actively organizes and ensures that its production and operation enterprises at all levels pass the quality management system certification. During the four years from 2020 to 2023, 123 additional production-oriented enterprises obtained ISO 9001 quality management system certification.

In 2023, a number of subsidiaries of the Group won the 40th anniversary award of the National Cement Inspection Competition, China Jushi won the Gold Award of the National Excellent Quality Management Team, BNBM won the title of National Building Materials Industry Quality Benchmark.

- ◇ New Tianshan Cement adheres to the management theory of “Strengthening Enterprises by Quality”, issues and implements the Special Action Plan for Cement Quality Improvement, extensively carries out activities such as quality improvement, quality research, quality diagnosis and quality improvement team, and continues to track the use of the three system certification, production licenses and trademarks of the company’s subsidiaries to comprehensively enhance the quality competitiveness.
- ◇ BNBM established a whole process product quality control mechanism and formulated rules and regulations such as the Product Quality Management System, to strictly control the quality of raw materials, semi-finished products and finished products in the production process. BNBM also organized special activities for quality improvement and “quality month” activities to enhance the quality awareness of employees.
- ◇ Sinoma International has prepared the Management Manual for Quality, Environment, Occupational Health and Safety Management System and the Compiled Procedures for Quality, Environment, Occupational Health and Safety Management System to standardize and normalize the whole business process by strengthening the building of systems, strictly enhancing process control and making great efforts to implement various basic management processes. The company also improves quality in a comprehensive manner by actively achieving high-level performance capabilities, high-growth economic benefits, high-efficiency management level, high-standard safety projects, and “five-star projects” comprehensively guaranteed by the communist party.

## Customer service

The Group attaches great importance to customer satisfaction, guided by customers' demands to continuously improve customer service system to enhance customer satisfaction and brand trust.

In 2023



Totaling complaints about products and services

**444**



The overall customer satisfaction

**92.64%**



**100%** of complaints were properly responded to and dealt with

### In the basic building materials segment

subsidiaries continue to promote the building up of the customer service system, formulate the Rules for Customer Complaint Handling Management and Management Standards for User Visits and Talks and other provisions, regularly conduct in-depth customer satisfaction surveys, summarize and analyze the survey results, implement timely rectification of the deficiencies and problems revealed in the surveys to improve customer satisfaction.

### In the new materials segment

the subsidiaries formulate rules and regulations such as the Measures for Handling Customer Complaints, Customer Satisfaction Management Measures and Management System for After-sales Service to clarify complaint channels and handling time of complaint resolution, regularly investigate, analyze and evaluate customer satisfaction, as well as make timely corrections and strengthen prevention.

### In the engineering technology service segment

the subsidiaries implement the Customer Satisfaction and Service Management Measures, regularly conduct customer satisfaction surveys, establish after-sales service business groups and other after-sales service systems, and carry out better after-sales services in a multiple servicing one manner.

The Group strictly abides by the Personal Information Protection Law of the People's Republic of China and other relevant laws and regulations. The subsidiaries have formulated the Measures for the Management of Customer Archives, the Confidentiality Management System, the Management System for the Use of Confidential Information Systems and Information Equipment, the Confidential Management Manual and other systems and regulations. At the same time, all confidential employees are required to sign confidentiality agreements with Group to effectively protect the privacy and business confidentiality of clients and themselves.

The Group attaches great importance to network security and has established a sound system that resolutely curbs and identifies major network security risks and incidents, to continuously improve its defense against network security threats. The Group has formulated rules and regulations such as the Contingency Plan for Network Security, the Measures for Network Security Management, the Project Management System for Network Security and Informatization, the Work Management System for Network Security and Informatization and the Measures for Computer Information Security Management of CNBM. These rules and regulations define a steering committee comprising chairman, president and senior management as the core members, as well as a working group composed of responsible leaders, heads of departments such as the Digitalization Management Center and relevant staff. The above system not only requires all employees to conscientiously implement the network security responsibility system, but also clarifies the channels and procedures of reporting information security issues by employees. At the same time, the Group clarifies management process of network security incidents, requiring each subsidiary to assess and handle network security alerts and notification information in the first instance, and to report the information immediately after the occurrence of a significant or above network security incident in order to urge them to do a good job of network security self-inspection and protection.

### To improve the level of information security technology, the Group

- ◇ developed emergency response plans to ensure business continuity and conduct at least annual third-party vulnerability analysis and information security testing and assessments. Complete all necessary filings for the second-level security protection of application systems as part of the information system security level protection (SLP) requirements. In 2023, the Group successfully completed evaluations for 4 second-level information systems SLP, interfaced with relevant business system service providers and enhanced vulnerability remediation efforts;
- ◇ achieved closed-loop handling of risk events, use unified analysis and management of logs through the dynamic linkage of situational awareness devices and firewalls;
- ◇ in collaboration with third-party technology companies to enhance the protection of website system through the execution of vulnerability scanning and the remediation of critical vulnerabilities. It includes the timely remediation of day zero vulnerabilities and elimination of potential security risks.

### To enhance employees' awareness of network security, the Group

- ◇ organized the 2023 National Network Security Publicity Week, extensively mobilizing leading cadres and employees to participate, and successfully leading subsidiaries to carry out a series of thematic activities in various forms with rich content;
- ◇ held a network security lecture, inviting network security experts from the Ministry of Public Security to elaborate on the domestic and international network security situation and the relevant laws and regulations in force from a professional perspective, with the active participation of network security professionals at all levels, totaling more than 100 participants;
- ◇ has each subsidiary constantly strengthen all employee' s awareness of network security by distributing information brochures on network security, conducting themed publicity and education of the Cybersecurity Law, organizing film-watching activities on relevant topics, organizing attack and defense drills, phishing email testing and competition on network security knowledge;
- ◇ called for enhanced cooperation to build a network security "firewall" with online and offline efforts simultaneously, including publicizing network security concept, popularizing network security knowledge, and promoting network security skills.



## Responsible supply

The Group is committed to building a transparent, dynamic and traceable supply chain management system, has formulated the Policy Statement on Sustainable Supply Chain Management and the Code of Conduct for Suppliers. The Group integrates the ESG concept throughout the entire procurement process, with attention to the green attributes of products and services purchased, and the sustainable performance of suppliers in terms of employees' health and safety. The Group also builds long-term, stable, and sustainable relationships with suppliers to achieve sustainable win-win development with partners.

## Robust supply chain management

In accordance with the rules and regulations such as Material Procurement Management Measures and Bidding Management Measures, the Group strengthens material procurement management, standardizes procurement behavior, and ensures effective supply of materials needed for production and construction. The Group also requires subsidiaries to formulate a supply chain management system that aligns with their own business mode to continuously standardize procedures including the procurement plan, supplier access mechanism, cooperation evaluation and grading and classification management to ensure the compliance and effectiveness of procurement activities, improve the efficiency and quality of procurement, maintain and develop long-term and stable relationships with suppliers.

### ◇ Strict access

The Group has established a supplier admittance mechanism. Depending on the type of materials and services supplied, different assessment methods are used to review supplier admittance. The evaluation is comprehensive and focuses on the supplier' s business qualifications, business scale, organizational structure, trade safety, tax-related public sentiment, tax credit rating, upstream and downstream relationships, and whether there is an anti-corruption policy in place etc. This ensures that admitted suppliers possess the necessary quality, safety, and environmental certifications and other production and operation permits required by the government and the Company, and such suppliers have a comprehensive quality assurance system with good business reputation to minimize potential risks.



## ◆ Grading management

To effectively manage the entire life cycle of the supply chain and continuously optimize supplier structure and management quality, the Group comprehensively judges the importance of suppliers from multiple dimensions such as company operation, evaluation results, years of cooperation ESG performance and external factors like geopolitics, international relations and product specific risks to implement grading management.

According to the evaluation results, Ningxia Building Materials divides suppliers into green, blue, yellow, red and black five categories to adopts different cooperation strategies accordingly.

The green rating means suppliers that are in normal cooperation with the company and have received favorable evaluations may submit a written application to the company's purchasing business management department. This application should include information on product quality, product pricing, service quality, payment methods, and risk resistance capability during the performance period. Upon collective approval by the centralized procurement leadership team, these suppliers are designated as green-rated excellent suppliers. The qualification of green-rated suppliers can be extended to the next tendering period.

The blue rating is for suppliers with good annual evaluation and subsidiaries can normally cooperate with these suppliers.

The yellow rating is for suppliers who had legal disputes with the company, which were verified by the Purchasing Management Department of the company and listed as the key concern objects. Other subsidiaries need to careful about which suppliers they work with.

The red rating means dishonesty, malicious breach of contract, or actions that harm the legitimate rights and interests of the company, will have their qualification revoked. These suppliers are prohibited from participating in any type of tendering activities within the company for a period of three years.

The black rating is for suppliers who have serious problems (such as major responsibility for safety production accidents, environmental pollution incidents) , and are immediately disqualified as qualified supplier, and are not allowed to participate in the company's scope of various bidding activities with five years.



## ◆ Cooperation evaluation

During the cooperation period, the Group continuously pays attention to the production and operation of suppliers, and regularly and irregularly evaluates suppliers, focusing on ESG indicators such as enterprise qualifications, supply and after-sales services, building up of safety management system, environmental protection performances and compliance of anti-corruption requirements, making sure they comply with the requirement of Suppliers Code of Conduct. The evaluation is based on the performance of access suppliers during the assessment period, and will directly affect the revision of the supplier catalogue, so as to realize the dynamic management of the catalogue.

### Supplier assessment management measures of subsidiaries

#### New Tianshan Cement

- ◆ The company regularly assesses and investigates all cooperative suppliers, tailoring the frequency and methods according to factors such as procurement region, procurement method, material category, and contractual agreements. The key performance indicators for these assessments include delivery schedule, product quality, service quality, supplier cooperation and cost. To ensure a reliable supply of high-quality packaging bags, the company has established a monthly assessment and evaluation mechanism for suppliers of packing bags, as well as the PDCA<sup>3</sup> closed-loop feedback mechanism. The assessment results are used to adjust the allocation of planned monthly procurement quantities, thereby ensuring a consistent supply of high-quality products.

#### Ningxia Building Materials

- ◆ The company conducts a supplier review once a year. This involves a combination of on-site inspections and information analyses to assess the product quality, product prices, service quality, payment methods and risk resistance capabilities of suppliers during the contract period. The assessment results are used as the main basis to determine whether they remain qualified and manage suppliers in a grading manner.

#### China Composites

- ◆ The company focuses on the operation of the Quality, Environment, Health and Safety system of suppliers and manufacturing process of products and achieves full coverage of supplier examinations on the above key points every two years. The company also evaluates suppliers according to the examination results and issues a list of non-conformities to suppliers, tracks the rectification results of non-conformities.

#### Sinoma Science & Technology

- ◆ The company conducts annual on-site examinations for suppliers who have obtained performance certification for new materials and new models and that have been introduced as needed, suppliers who had major quality incidents in the previous year, suppliers who ranked among the top five in terms of the number of quality complaints received in the previous year, suppliers with a comprehensive performance evaluation score of less than 60 and suppliers with an on-site examination interval of more than two years. The examination scope includes system operation, design and development, supplier management, production processes, customer service, change management, traceability measurement, continuous improvement and environmental health and safety. Suppliers are also required to complete rectification of non-conformities on time and submit verification documents.

<sup>3</sup> PDCA Cycle: Plan, Do, Check, Act

## Sustainability integration

The Group pays close attention to suppliers' performance on ESG issues and manages environmental and social risks in the supply chain seriously, aiming to create a high-quality and sustainable supply system.

### ◆ Risk identification

The Group enhances awareness of ESG risk assessment in the supply chain and adopts differentiated cooperation priorities and strategies based on the results of risk assessment. Based on the Supplier Risk Assessment Form, subsidiaries of the Group assess the environmental, social and other sustainable risks of suppliers from the perspectives of enterprise operation, product quality and delivery capacity. For the problems found in the supply chain risk assessment, suppliers will be asked to solve them in time, and provide assistance through in-depth communication and joint action to reduce the environmental and social risks of its own supply chain and deepen the cooperative relationship with the supplier and build a long-term and stable supply chain system.

For example, New Tianshan Cement identifies the environmental and social risks of suppliers through methods such as business information retrieval, desk research and on-site investigations. Based on the assessment results, suppliers are classified as suppliers with “high sustainability risk” or suppliers with “low sustainability risk”, and effective measures are taken to promote rectification and risk reduction, ensuring the stability and sustainability of the supply chain. New Tianshan Cement plans to conduct ESG surveys of existing suppliers in 2024, comprehensively assess their environmental and social risks, continuously improve the coverage of supplier assessment, enhance the sustainability and stability of the supply chain.

### Identifying and assessing supplier's environmental and social risks

- ◆ **Environmental management:** Whether the supplier has been subjected to environmental administrative penalties, etc.;
- ◆ **Social responsibility performance:** Whether the supplier has been involved in any labor disputes or legal issues, whether the supplier has been punished by government departments for safety accidents, etc.;
- ◆ **Specific risks:** For instance, the production process of certain products may involve high pollution or high energy consumption, and their manufacturers may face higher environmental risks. Additionally, some countries may have stricter requirements regarding the environmental and social responsibilities of suppliers, which results in higher social risks for them.

### For suppliers with “high sustainability risk”

- ◆ **Assessment:** Conduct a comprehensive assessment to understand the severity and scope of the issues;
- ◆ **Investigation:** Conduct an in-depth investigation to determine the root causes of the issues;
- ◆ **Review:** Entrust a third-party organization to conduct a comprehensive review to ensure authenticity and objectivity;
- ◆ **Rectification:** Require the suppliers to develop rectification plans and monitor the rectification process;
- ◆ **Assessment:** Assess the effectiveness of the rectification measures to ensure a satisfactory effect;
- ◆ **Elimination:** Consider terminating the cooperation with high-risk suppliers if the results after rectification are not acceptable.

Additionally, the Group requires all subsidiaries to strengthen risk control and emergency management in the supply chain, establishing a comprehensive supply chain security management system that outlines safety requirements for supplier selection, contract signing, product acceptance, inventory management, and more. Supplier files are created, and regular reviews and updates are conducted. Diversified procurement channels are established, along with safety stock, and regular inventory checks and updates are implemented to mitigate the risk of disruptions in the supply of raw materials and finished products. Detailed emergency plans are developed, and regular emergency drills and training are organized to ensure the overall security and stability of the supply chain.

### ◆ Integrity leadership

The Group pushes the sunshine procurement mode of “fairness, openness and impartiality”, and continuously improves the transparency of procurement by increasing the proportion of public bidding and expanding the scope of price seeking. The subsidiaries of the Group actively promote the building up of supplier system and bidding platform, facilitate sunshine and transparent procurement with the help of digital technology.

The Group is revising the Management Measures for Material Procurement. In regards basic requirements for supplier admission, new suppliers must be equipped with anti-corruption policies and actively engage in anti-corruption efforts. Suppliers who fail to meet compliance management requirements will have their admission qualifications revoked, among other related regulations. When signing contracts with suppliers, the Group requires all departments and subsidiaries to send integrity notification letters or sign integrity commitment letters and integrity contracts to the parties involved in the cooperation, including clauses prohibiting the parties involved in the cooperation from providing various benefits and conveniences to the Group's staff, their relatives and specific related parties. At the same time, integrity as a one-vote veto system, suppliers who violate the above provisions will not be allowed to participate in bidding and will be blacklisted if they violate the rules. During the reporting period, the Group's integrity notification letters, integrity commitment letters or integrity contracts covered all suppliers.

**Case: Strengthening integrity requirements, accelerating concerted integrity efforts**

New Tianshan Cement has signed integrity commitment letters with all its cooperating suppliers and conducts regular assessment of their integrity performance. Based on factors such as the scale of cooperation, business scope and risk level, the company has developed and strictly implemented an optimized integrity review investigation plan. It entrusts professional third-party reviewing organizations to conduct comprehensive reviews to ensure that suppliers meet the following requirements:

- ◇ compliance with anti-corruption laws and regulations;
- ◇ no involvement in any improper benefits or kickback practices in business transactions;
- ◇ compliance with the anti-corruption policies, such as prohibition of bribery of public officials;
- ◇ implementation of effective internal control and supervision mechanisms to prevent corruption.

Sinoma International has established a parallel mechanism between the main procurement contracts and integrity agreements. It continuously optimizes integrity clauses and formulates the Procurement and Subcontracting Integrity Agreement, which is distributed to enterprises at all levels and covers all contracts signed with suppliers. The company conducts special inspections on its subsidiaries' procurement and outsourcing businesses, conducts employee integrity surveys among suppliers, periodically conducts telephone follow-ups with key suppliers, and continuously enhances integrity supervision to build healthy partnerships.



Sanmenxia Tengyue Cement, a subsidiary of New Tianshan Cement, carried out a symposium on supplier integrity

**◆ Responsible procurement**

The Group advocates for responsible procurement and encourages suppliers of subsidiaries to support and commit to safety and health, employees and communities, environment and climate change, management and compliance. This includes a continuous improvement in health and safety performance, support and respect for human rights, recognition of employees' freedom of association, a ban on all forms of modern slavery, and the assurance of occupational health and safety for employees. Additionally, suppliers are expected to provide favorable working conditions and reasonable compensation, while also working to eliminate all forms of discrimination and harassment. They are expected to be committed to reducing energy consumption, proactively address climate change issues, and improving resource efficiency. In addition to exploring the potential for waste recycling, suppliers should also aim to reduce water consumption and pollutant emissions. Protection of land and forest resources, along with preservation of natural ecosystems and biodiversity, are also key requirements. Furthermore, the code explicitly bans any form of corruption, incitement to crime, extortion and embezzlement.

The Group actively integrates ESG requirements on the basis of the existing supplier access mechanism and selects high-quality suppliers in a better and more comprehensive manner. The Group's subsidiaries incorporate ESG requirements into the scoring criteria clearly stated in the bidding documents. For example:

**Sinoma Blade, a subsidiary of Sinoma Science & Technology**



The EHS-related indicators in the bidding documents account for

**11.67%**

The ESG score accounts of the overall bidding score for

**1.17%**

**Sinoma Lithium, a subsidiary of Sinoma Science & Technology**

The score for ISO 14001 environmental management system certification accounts for

**5‰ -1%**

The score for social responsibility accounts for

**5%**

In the raw material bidding documents of Ningxia Building Materials, it is clearly stipulated that suppliers listed in the environmentally discredited executives lists stipulated by the government or other entities' are not qualified for bidding.

The Group advocates for green procurement. When purchasing raw materials, the Group gives preference to products that are produced with a green and low-carbon process, are energy-efficient and environmentally friendly, and have a minimal impact on the environment. Suppliers are selected based on their certifications in environmental management system, quality management, occupational health and safety management and energy management systems. The Group prioritizes the procurement of clean energy, and efforts are made to promote the use of non-fossil fuel energy sources such as alternative energy, urban waste, and biomass energy. Suppliers are encouraged to fully consider energy-saving, water-saving, environmental protection, recycling, low-carbon, and renewable factors in product design and manufacturing processes. The Group advocates for the use of clean energy transportation methods by suppliers. Suppliers are expected to promote the concept of minimal packaging, simplifying the external packaging of bulk products and using renewable packaging materials as much as feasible to minimize waste while ensuring product quality and safety during transportation.

#### Responsible procurement measures of subsidiaries

- ◇ New Tianshan Cement is developing green logistics in its actual business. The company encourages clean energy vehicles in transportation, tries to use new energy vehicles for logistics transportation and internal transfer, and reduces the consumption of fossil fuels in the transportation. It encourages suppliers to use the digital logistics platform “Find a Car” to improve logistics efficiency. It has built a conveyor belt tunnel for short-distance material transportation, and for long-distance transportation, it chooses water or rail transportation based on actual conditions, reducing environmental pollution.
- ◇ Sinoma Science & Technology has signed the Code of Conduct on Social Responsibility of Suppliers, Supplement Agreement on Energy Conservation and Consumption Reduction, Cooperation Agreement on Circular Economy Reuse, and Public Letter on Influencing the Safety and Environmental Behavior of Relevant Parties with suppliers. These documents set out requirements and assessments for suppliers and contract manufacturers in areas such as energy conservation, recycling, child labor, freedom of association, forced labor, wages and benefits, occupational health and safety, and business ethics. Additionally, a mechanism has been established to eliminate negative matters, contributing to the construction of a green, healthy and sustainable supply chain.
- ◇ Sinoma Blade, a subsidiary of Sinoma Science & Technology, is actively practicing green procurement. It has taken the lead in the industry to transition from oil-based paints to water-based paints. In 2023, the use of water-based paints reduced the emission of volatile organic compounds by 400 tonnes compared to oil-based paints.

#### Capacity building

The Group encourages suppliers to obtain ESG-related certifications, participate in ESG training and provides suggestions for improving ESG management. Through measures such as information sharing, two-way communication, high-level consultations, supplier incentives and assistance, the Group supports its suppliers. It also conducts ESG-related training for procurement department staff, enhancing both parties’ strengths in technology, cost, service, response efficiency and ESG performance. The Group carries out supplier satisfaction surveys and works with suppliers to create value together.

#### Case: New Tianshan Cement actively training procurement staff to improve supplier ESG performance

New Tianshan Cement trains its procurement department staff to deepen their understanding of ESG concepts and assessment methods, strengthen their ability to promote better supplier performance, and help to build a more sustainable supply chain.

- ◇ Organizing regular ESG training courses which cover aspects such as ESG concepts, assessment methods and communication skills;
- ◇ Providing practice opportunities, including engagement in supplier assessments and supplier improvement follow-ups, to help the team master the methods and tools for assessing supplier ESG performance;
- ◇ Engaging external experts to provide the procurement staff with guidance and valuable advice.

# Caring for employee development and building an employer brand



The Group always adheres to the people-oriented principle, protects legitimate rights and interests of employees, and provides employees with a healthy and safe working environment and a comfortable and convenient living environment. The Group adheres to the talent-led strategy, takes various measures to attract and train talents, and actively builds a broad career development platform for employees to enable employees to share the fruits of development. In 2023, Sinoma International won the champion of the "Best Employee Care Duty Communication Award" for global enterprises at the 6th "Employee Care Duty and Responsibility" Summit of the International SOS Foundation.



## People-oriented

The Group regards employees as the most valuable asset of the Company, creates a fair and equitable employment mechanism, and continuously improves a scientific system for talent retention, promotion and development. Moreover, we have designed a welfare system that runs through the entire life cycle of employees in the workplace, to protect the career development and workplace experience of employees in an all-round manner and enhance employees' happiness and sense of belonging.

## Regulating employment

The Group strictly complies with laws and regulations related to remuneration and dismissal, recruitment and promotion, working hours, rest periods, equal opportunities, diversity, anti-discrimination, anti-harassment, and other benefits and welfare. The Group has established rules and regulations such as the Measures for Employee Management and the Measures for Employee Leave and Attendance, which spell out in detail the management procedures for recruitment, dismissal, change of employment, working hours and contract operation of employees, aiming to safeguard the lawful interests of the Company and the employees.

## Regulating employment

- ◇ The Group upholds the principles of fair competition and merit-based recruitment in the process of recruitment and employment, and has formulated and implemented a standardized personnel management system. The Group prohibits inquiries into the privacy of candidates during the recruitment process, designate dedicated personnel to keep recruitment information and files in dedicated storerooms, and establishes strict procedures for the access to and circulation of files to prevent leakage of privacy.
- ◇ The Group reasonably regulates the dismissal. For different circumstances such as unilateral dismissal by employees, unilateral dismissal by the Company, and dismissal by consensus of both parties, the Group implements the compliance procedures in accordance with the Special Guidelines on Compliance Management – Labor and Employment. In the past three years, the Group has not been involved in any disputes such as labor arbitration and large-scale layoffs. Where labor disputes arise, the Group deals with employee labor disputes and communication, arbitration and other matters through the labor union to safeguard the legitimate rights and interests of employees.

### Managing leave and attendance

- ◇ The Group has formulated the “Management System of Working Hours, Rest, Vacation and Leave for Employees”, which stipulates the system of 8-hour workday and 5-day workweek. The Group clearly stipulates the working hours and annual leave and various leave hours of employees to safeguard the right of employees to rest and vacation. In addition, the Group provides mental health counselling and mental health training courses for employees to relieve their work pressure, organizes a variety of cultural and sports activities for employees to promote their physical and mental health, and provides employees with flexible working hours and home office options under special circumstances such as extreme weather, so as to enhance employees’ happiness and sense of belonging.



"Youth 17 Building Materials Cup" staff basketball game

### Preventing forced labor and child labor

- ◇ During the recruitment process, the Group strictly examines the identity information of candidates to prevent recruiting child labor, and if any case of child labor is found, it will be dealt with in accordance with the requirements of laws and regulations in a timely manner. In this year, the Group had no violations related to forced labor and child labor.

## Protecting human rights

In line with the internationally recognized human rights policies as set out in the Universal Declaration of Human Rights issued by United Nations, the International Covenants on Human Rights and the core conventions of the International Labor Organization, the Group has issued the Special Guidelines on Compliance Management of CNBM – Labor and Employment and the Compliance Manual, and committed to creating a working environment of diversity, inclusiveness and equality.

### Human rights risk management

- ◇ The Group regularly conducts self-examination and assessment of human rights risks across all levels, including self-examination and self-correction of the timely payment of wages to migrant workers and pays attention to whether there are human rights risks related to women, children, migrant workers and other groups in its business activities, suppliers and partners. During the reporting year, there has been no occurrences of potential human rights issues, or violations of equal opportunities, diversity, anti-discrimination regulations.

### Equality and diversity

- ◇ The Group protects employees’ rights to equal employment and independent choice of employment in accordance with the law, and takes reasonable measures such as preventative measures, addressing complaints, investigating and handling matters to curb discrimination against any applicant based on ethnicity, race, gender, physiology, religious belief and marital status in the process of recruitment and employment, guaranteeing equal employment and promotion opportunities.
- ◇ We adopt a zero-tolerance attitude towards discrimination and sexual harassment in the workplace and provide employees with smooth reporting channels such as hotlines and mailboxes, and report as well as handle incidents in accordance with the requirements of the Compliance Manual after receiving complaints. If the Group violates relevant regulations, it will be subject to the administrative punishment and be ordered to make corrections (and may also be fined) by the administrative department of labor security; if damage is caused to the parties involved, it shall be liable for compensation.
- ◇ In the Measures for the Management of Employees of the Headquarters CNBM (Revised), we stipulate that those employees who violate social morality and professional ethics, will be given warnings, demerits, demotions, dismissals and termination of labor contracts according to the seriousness of the circumstances, and corresponding economic penalties will be imposed according to the salary system.

### Protecting the rights of female employees

◇ The Group respects and protects the special rights and interests of female employees in accordance with the law, strictly abides by relevant rules and regulations such as the Special Provisions on Labor Protection for Female Employees and the Provisions on the Scope of Prohibited Labor for Female Employees.



Equal treatment in promotion, training, benefits, and compensation



Dedicated nursing room, maternity leave, childcare leave and paternity leave



Diversified care activities for female employees



Exclusive holiday gifts

### Democratic management of employees

◇ The Group has built smooth communication channels for employees, highlighted the employee communication system featuring trade unions, and achieved that 99.49% of employees at all levels joined the trade unions. The Group fully respects employee's right to know and supervision rights, and has established a democratic management mechanism through the worker's congress to collect proposals from employee representatives and understand employee's suggestions and requirements. In 2023, the Group conducted an employee satisfaction survey to collect their satisfaction and opinions and suggestions on job content, working environment, promotion, benefits, remuneration and other aspects through online questionnaires. According to the results of the questionnaire, the satisfaction rate of the Group's employees by gender, ethnicity, job level and age group exceeded 96.5%.

### Human rights management of suppliers

◇ The Group not only pays attention to protecting the legitimate rights and interests of the Company's employees, but also requires suppliers to protect the legitimate rights and interests of their employees. For example, we explicitly require suppliers to provide proof of social security payment, insurance coverage and insurance descriptions of their employees in contracts. We make clear requirements for the age of workers, provide strict guarantee for the payment of wages for migrant workers, make detailed agreements on commercial insurance for migrant workers, and provide employees with protective gears in compliance with the requirements.

## Remuneration

The Group has established a multi-channel career system for employees, set up a number of job sequences such as management sequence, professional sequence and support sequence, and carried out supporting systems in terms of employee performance assessment and salary management. The Group has also established a scientific and sound remuneration management system and welfare system to optimize and standardize the remuneration management, ensures that remuneration level is coordinated with the overall development of the Company and the national economic development, and is compatible with social progress.

### Performance-based pay mechanism

◇ The Group makes continued efforts to optimize the performance appraisal system. The performance appraisal results are used as the main basis for the appointment, removal, promotion and demotion, salary distribution and position adjustment of employees, and the design of incentive salary units such as floating salary and bonus are designed to reflect job responsibilities, working ability and work performance of employees, and effectively links them with business ethics factors such as integrity practice, privacy protection and information security, while maintaining a reasonable salary gap between different positions and ranks. The performance appraisal is conducted on a quarterly or annual basis, and after the appraisal results are obtained, the head of the department will be arranged to talk with the employees about the evaluation to understand the work of the employees and receive the feedback from the evaluation.



**40-60%**

of the Group's management salaries

**30-40%**

of the middle-level employees salaries

**10-30%**

of the ordinary employees salaries

— are variable compensation based on the performance



### Assessment mechanism for management

- ◇ The Group has formulated a sound incentive and bonus system for management, linking sustainable development indicators to the performance of management. The Group has formulated operational performance appraisal indicators for the management of CNBM and its subsidiaries, and signed the 2023 Operational Performance Responsibility Letter with managerial staff at all levels. ESG factors, including safety, environmental protection, energy conservation, carbon peaking and carbon neutrality, integrity, privacy protection, employee development, ESG information disclosure and ESG ratings, are incorporated in the individual operational performance appraisal and disqualification indicators of the management, the performance indicators of the departments charged by members of the management, as well as the operational performance appraisal indicators of the subsidiaries that they manage or assist in management. Among these ESG indicators, “energy conservation and ecological environment protection” accounts for 10% of the individual performance appraisal of management.
- ◇ The Group has established a salary recourse system, whereby members of the management who violate relevant national laws and regulations, or who causes the Company to suffer losses of assets due to failure or improper performance of their duties, will be deducted accordingly from their current annual performance salary or subject to clawback of part or all of the annual performance salary and medium and long-term incentive income paid.



“Energy conservation and ecological environment protection” accounts for

**10%**

of the individual performance appraisal of management

### Incentive mechanism for employees

The Group includes all employees in the performance appraisal and career channel design, formulates different performance appraisal standards for different positions, and distributes year-end bonuses, performance bonuses and contribution awards to employees according to their performance appraisal. The Group also considers the implementation of a long-term equity incentive plan for core employees at an appropriate time, making full use of the incentive tools in the medium-term and long-term incentive toolbox, fully mobilizing the enthusiasm and creativity of employees, and supporting the strategic development of the Group. For scientific and technological talents, the Group adheres to the combination of commonality and particularity, level performance and development potential, qualitative and quantitative evaluation, improves the scientific talent classification and evaluation system based on occupational attributes and job requirements, and implements performance appraisal for scientific and technological talents in combination with job characteristics, so as to create environment for scientific and technological talents to innovate and explore.

- ◇ The coverage of restricted stock incentives for listed companies has been further improved, Sinoma International has completed the reserved equity grant, while the plan of BNBM has been announced;
- ◇ Two high-tech companies, Sinoma International’s subsidiary CNBM Smart, and BNBM’s subsidiary Taishan Gypsum, newly added and awarded dividends;
- ◇ Four subsidiaries of BNBM, namely Dream Brand, Longpai Gypsum, BNBM Waterproof and BNBM Tanzania, have shared excess profits.



In 2023, the Group granted medium-term and long-term incentives to

**3,180** person-times,

an increase of **133%**

covering **117** subsidiaries

with an increase of **189%** from the end of 2022

### Multiple welfare benefits

- ◇ The Group provides various benefits for its employees, such as various social insurances and housing provident funds, for all employees in a timely manner and in full amount, and also establishes supplementary welfare system such as enterprise annuity, supplementary medical insurance and personal accident insurance to build a multi-level pension and medical insurance system.



The Group’s “five insurances and one fund”

cover **100%** of employees

The proportion of employees covered by enterprise annuity is **46.7%**

**904** children of employees facing financial difficulties were supported or rewarded for their education

**328** critically ill employees were assisted

A total of **5.1** million yuan was spent on comforting employees with special needs and employees facing financial difficulties

**4,550** employee activities were organized and participated in

Covering **232,913** person-times

## Strengthening the enterprise by the talents

The Group focuses on the use of talents and is more committed to the cultivation of talents. The Group continuously establishes and improves the whole-chain management mechanism for the selection, cultivation, management and use of talents, builds a comprehensive training management institutions and system, and formulates relevant rules and regulations such as the Employee Training Management Measures. The Group establishes a multi-channel, multi-form, hierarchical and focused employee development and training platform to help employees enhance their personal values.

The Group adopts the training methods of “Internal Training as Principal, External Training as Supplementary”, building the Group’s multilevel training system. In addition, new employees of the Group are required to participate in collective pre-employment training, and in-service employees are provided with job knowledge and skills training according to professional categories in accordance with the Company’s development plan and the work needs of various departments. We also carry out training activities related to anti-discrimination and anti-harassment from time to time, which are conducive to employees protecting their own rights and interests in the workplace. Further, subject to work demands, the Group encourages employees who proactively seek independent training and study. The Group provides support and safeguards such opportunities, during working hours, investing in training and implementing incentive mechanisms, to encourage further education, training and learning.

### Case: New Tianshan Cement’s cement process training empowers talents

In 2023, New Tianshan Cement held two process training courses, inviting external senior experts from industry and internal experts in the fields of calcination and grinding to give lectures on denitrification in the cement industry, cutting-edge application of kiln collaborative disposal technology, basic application knowledge of cement calcination and grinding, as well as typical case analysis and difficulty diagnosis of kiln and grinding process parameters. 97 young backbone employees from 13 regional companies of New Tianshan Cement participated in the training course, which empowered the cultivation of the professional talent team.



2023 cement process training course of New Tianshan Cement

New Tianshan Cement held **2** process training courses

**97** young backbone employees from

**13** regional companies participated in the training course



### Case: Sinoma International focus on international business strategy consolidates the cornerstone of localized talents

Sinoma-CDI, a subsidiary of Sinoma International, closely follows the needs of international project construction and regional territory, and has established four regional international talent centers in Egypt, Middle East, Pakistan and Uzbekistan to further promote the localization of technical services, project management and construction teams, and provide talent support for project implementation in local or neighbouring countries. They vigorously carries out localized talent training, regularly organizes local core backbones to the headquarters for training, imparts advanced construction technology and management experience, and shortens the single-story construction period of Egyptian housing construction projects by 12 days after training.



Development of the local construction team

### In 2023

The total hours that employees of the Group participated in safety and environmental protection training reached

**2.52** million hours

Skills and business training

**2.38** million hours

Management training

**0.75** million hours

The average training hours for all employees

**49** hours

A year-on-year increase of

**4.3%**



## Upholding safety commitment

The Group is committed to providing every employee with a safe, healthy and harmonious working environment and achieving the safe, stable and sustainable development of the Group by strengthening the safety production system, implementing safety production measures and strengthening employee safety training and awareness.

In 2023, the Group invested a total of RMB 1,493 million to ensure effective and safe production. No major and above liability accidents occurred in the subsidiaries of the Group, the total number of production safety accidents and the total number of casualties “double declined” for 6 consecutive years, no major accidents occurred for two consecutive years, no new occupational cases were found, and the situation of safe production was basically stable.



In 2023, the Group invested a total of **RMB 1,493 million** to ensure effective and safe production



From 2021 to 2023, the Group had in each year **4, 5 and 0** work-related deaths

With a death rate of

**0.020‰, 0.033‰ and 0‰** respectively



Lost **32 days** due to work-related injuries in 2023

The completion of the Group's safety production objectives is as follows:

 Indicators	 Safety production objectives set for 2023	 Completion of objectives
Accidents relating to breach of safety production responsibility (case)	14	3
Serious injury rate per thousand persons (excluding overseas)	0‰	0‰
Overseas safety production accidents (case)	2	0

In 2024, the Group will take the safety production objective of **“zero major safety production accidents”** as the guide, implement safety production management, and ensure the stability of safety production situation and the safety and health of employees.

## Protecting health

The Group strictly abides the Law of the People's Republic of China on Prevention and Control of Occupational Diseases and other laws and regulations on the prevention and control of occupational diseases, labor protection and health supervision in the workplace, and occupational health supervision, continuously improves the rules and regulations of CNBM such as the Measures on Supervision and Administration of Occupational Health in Workplaces and Measures on Management of Employee Health Examination to strengthen the protection and management of employee' s occupational health and prevent, control and eliminate occupational diseases effectively. The subsidiaries of the Group formulate a safety management standard system according to their own characteristics and adopt various control measures.

The Group constantly improves the construction of supporting facilities and management of first-aid equipment for dust prevention, poisonous gas prevention, noise reduction and emergency management at work sites, equips reliable labor protection equipment strictly in accordance with the requirements of labor protection, and organizes regular health check-ups for employees to ensure their health and safety.

- ◇ New Tianshan Cement includes contractor employees and other relevant parties in the unified occupational health management, use the intelligent safety management system to conduct a unified review of personal information, formulate an annual training plan for the personnel of relevant parties, organize regular physical examinations and issue labor protection articles in line with national standards, and carry out irregular hidden danger inspections to ensure the safe operation of the personnel of relevant parties.
- ◇ In view of the heavy work burden and poor operating environment in the cement loading process, Ningxia Building Materials uses the intelligent bagged cement loading system to complete the packaging, transfer, distribution and shipping of cement in the confined space, effectively improving the working environment.
- ◇ BNBM established an incentive mechanism for occupational health innovation, encouraging all units to continuously carry out occupational health innovation to improve the working environment of employees. BNBM also organizes occupational disease prevention and control knowledge publicity every year to enhance employee' s occupational health knowledge and awareness.

## Building a firm system

The Group strictly abides by the laws and regulations related to safety production, including but not limited to the Law of the People' s Republic of China on Work Safety and other national laws and regulations, as well as the industrial safety standardization standards, established a sound safety production organization system, and formulates the Safety Production Responsibility System for All Employees of CNBM, Measures for Emergency Management, the Management Measures for Production Safety Accident Report, Interim Measures for Punishment of Safety Production Violations, Management Measures for Grading and Control of Safety Risks, Management Measures for Monitoring Major Dangerous Sources of Dangerous Chemicals and other internal management systems to clarify the basic principles, organizational structure, division of responsibilities, management requirements, investigation and handling, emergency handling, incident punishment and accountability of safety production work, and makes detailed provisions on safety production management, safety production management of engineering projects and safety production management of overseas institutions.

The subsidiaries of the Group formulate systems and measures related to production safety according to their own conditions, clarify their safety responsibilities by signing production safety responsibility letters at all levels and link the performance of production safety with the rewards and punishments of management, so as to ensure that responsibilities are assigned to people and measures are in place.

In 2023, the Group further promoted the construction of safety standardization system



**678** subsidiaries at all levels obtained the certification of occupational health and safety management system accounting for over **85%**



Subsidiaries at all levels certified for safety standardization

First-level	Second-level	Third-level
<b>16</b>	<b>266</b>	<b>286</b>

## Building safety together

The Group takes safety production actions focusing on prevention, starts with hidden danger investigation and safety inspection, clarifies safety production management responsibilities of companies at all levels, and implements specific safety production measures. In 2023, the Group carried out 343,417 hidden danger investigation (including self-inspection, mutual inspection, special inspection of hazardous chemicals and mines and superior supervision), with a rectification rate of hidden dangers of 99.6%.



All kinds of hidden  
danger investigation

**343,417** times

Rectification rate  
of hidden dangers

**99.6%**

- ◇ **New Tianshan Cement** organized special work such as “Special Rectification of Major Hidden Dangers in Work Safety” , “Mine Safety Production Inspection” and “Hidden Danger Inspection of Equipment and Facilities of Large-scale Buildings (Structures)” , a total of **20,377** hidden danger inspections and **1,027** safety inspections were conducted throughout the year, covering **100%** of the subsidiaries.
- ◇ **China Jushi** formulates special action plan for identifying and rectifying major accidents and hidden dangers, and carries out special inspections on a monthly basis. Throughout the year, no major hidden danger was identified. A total of **266** inspections were organized throughout the year, including daily safety inspections, seasonal safety inspections, holiday safety inspections and comprehensive safety inspections, identifying **1,572** issues, **100%** of which were rectified.
- ◇ **Sinoma International** conducted **1,923** emergency drills throughout the year, organized **19,960** safety and environmental protection inspections, and handled **51,196** issues related to hidden dangers, realizing a rectification rate of **99%**.

The Group includes the employees of contractors and subcontractors into its overall safety management system and actively cooperates with contractors and subcontractors. We sign work safety responsibility letters with them to clarify safety standards and their responsibilities.

- ◇ **Ningxia Building Materials** has formulated the Interim Measures for the Management of Outsourcing Business Safety, which includes contractors into the safety management system, and clarifies the safety management requirements for contractor’ s qualifications and licenses, insurance, physical examination, training and other safety management requirements.
- ◇ **Sinoma Graphite** strictly exercises closed-loop management by signing production safety construction agreements with outsourced units, carrying out safety education and assessment for outsourced workers, and checking the production safety management of outsourced units.
- ◇ **Sinoma International** includes subcontractors and labor teams into the overall safety management system, and trains and manages contractors with reference to the Sinoma International’ s unified standards, paid effort to put an end to “shirking from management duty through contracting and penalties” .

## Strengthening training

The Group carries out safety inspections and safety management assistance at all levels and enhances employee’s safety awareness and ability through various safety training and safety drills such as first aid knowledge and skills training, fire emergency evacuation drills, and psychological guidance for overseas employees. The Group has also formulated relevant rules and regulations such as the Safety Training Management Measures of CNBM to ensure the effectiveness of safety training for employees, updated the Production Safety Accident Warning Cases as a teaching material for warning purposes as carried out by subsidiaries, and urged subsidiaries to draw inferences of safety issues and learn from those instances.

In 2023, the number of people who received safety education and training from the Group reached 1.551 million person-times, and the subsidiaries conducted 39,810 person-times.



All kinds of safety education and training covered

**1.551**  
million person-times



All kinds of emergency drills covered

**39,810**  
person-times

- ◇ **New Tianshan Cement** organized a variety of activities such as “Zero Violation” selection, safety open lecture by general manager, and safety heart-to-heart talks to convert employees’ mindset from “pursuing safety for the sake of regulations” to “pursuing safety for the sake of ourselves” . By doing so, the company fully stirred employees’ enthusiasm for participating in safety management, fostering a distinctive safety culture.
- ◇ **Ningxia Building Materials** organized the “Work Safety Month” management exchange tours with the theme of “Everyone Aware of Safety and Capable of Emergency Response” for 2023, created a strong safety culture atmosphere through mutual exchanges between enterprises, and put the experience gained from the exchange tours into action. By doing so, Ningxia Building Materials constantly improved its safety management.
- ◇ **China Jushi** organized 100-day safety competitions in summer and winter, and ranked its subsidiaries based on the assessment on their safety data indexes, safety publicity and education, ability to inspect and manage hidden dangers, and level of emergency management. These efforts fostered a good safety environment of competing, learning and catching up, with safety culture activities conducted routinely throughout the year.
- ◇ **Sinoma International** organized a number of thematic training sessions, such as the “Training on Promotion and Implementation of Special Results of the Work Safety Responsibility System for All Employees” and the “Training on Occupational Health and Safety and Emergency Response for Overseas Employees” , as well as fun activities such as the Fifth Contest of Safety-themed Video Shooting, Safety Prize-winning Quiz, Safety-themed Dress Competition, and the “Safety Talks” Writing Contest. In addition, it set up columns of safety topics on a number of platforms, forming a strong safety atmosphere.

# Undertaking social responsibility and building a responsible brand



The Group has a global vision, targets to be a world-class enterprise, insists on the three win-win cooperation principles of “making contribution to local development, cooperating with local enterprises, and serving the local residents” . In addition, the Group integrates its culture, attitude and concept into the construction of project sites, promoting the building of a community with a shared future for mankind.



## Revitalizing the countryside

The Group strengthens responsibilities, performs high-quality work in supporting the key aspects of rural revitalization, and effectively addresses the basic needs of the people in need, promotes the continuous safeguard and improvement of people's livelihoods. In 2023, the Group carried out a number of efforts in various aspects, including the selection of cadres, employment assistance, environmental improvement and capital investment, and invested RMB 64.39 million in rural revitalization, implemented 12 assistance projects and organized 58 volunteers to construct the colorful classroom. Since 2018, more than 400 million has been invested in rural assistance, a total of 54 designated cadres have been selected and assigned to towns and townships for designated assistance, contributing to consolidating and expanding poverty alleviation achievements as well as comprehensively promoting rural revitalization.



In 2023, the Group donated a rural revitalization fund of **RMB 64.39 million** and implemented **12** assistance projects



Organized **58** volunteers to construct the “colorful classroom”



Since 2018, **more than 400 million yuan** has been invested in rural revitalization, and **54** designated cadres have been selected to help in towns and villages

### Case: New Tianshan Cement improves the rural environment and illuminate the hilly village roads

South Cement, to which is affiliated with New Tianshan Cement, actively fulfilled its social responsibilities and serviced the population. Given the weak infrastructure in the hilly areas of Hefei City in Lujiang County, the Group provided funds for Banqiao village in Shengqiao Town to install street lamps and improve its infrastructure construction. This created a “navigation lamp” for rural revitalization in the hearts of the people and won the praise from the masses.

### Case: BNBM delivering building materials services to the rural areas to help post-disaster reconstruction

Fully leveraging its advantages in the building materials industry, BNBM actively participated in the post-flood reconstruction of Zhuozhou and assisted the local residents to rebuild their homes. BNBM also carried out “building materials fair” and “setting up stalls in the rural areas” campaigns to deliver the “best” products and services to villagers at the fastest “speed” and lowest “price”. Moreover, BNBM innovated service mode by establishing a “Rural Housing Revitalization” team to repair the houses of the hardest-hit households at no cost, customized decoration plans for disaster-affected masses, and provided green, environmentally friendly, healthy, and high-quality building materials for the people. Meanwhile, BNBM carried out a cultural campaign with the theme of “green technology, quality life, and building a better homeland” in the village. It held the wall painting activity by using the lacquer of Dragon Brand, flood-combating theme exhibition, and Diaowo Town Station “harmony” concert, which boosted the confidence of villagers to rebuild their homes, and created a new model of “culture as the medium, village-enterprise cooperation” that empowered rural revitalization with BNBM characteristics.



Zhuozhou post-disaster “building materials fair” booth



The scene of the damaged house “being renovated in a week”



## Performing duties overseas

The Group creates a new global resources mode with high-quality building materials, advanced technologies, and mature experience and to boost the construction of the “Belt and Road” countries. The Group also contributes to promoting employment, cultural exchange, industrial and economic development, and other community investment.

### Promoting local employment

The Group strives to promote localized employment and stimulate local employment, facilitate the economic and social development of the project sites.

#### The Group's best practices in promoting localized employment

##### ◇ BNBM PNG

Adheres to local employment, provides employment opportunities for local people and provide more than 10,000 jobs for local people, with a localization ratio of 92%;

From 2021 to 2023, a total of more than 57 million yuan of taxes was paid to the Papua New Guinea government.

##### ◇ BNBM Central Asia

Resolved employment issues for over 130 individuals in its location and has employed 9 people with disabilities capable of working, assigning them to roles in cleaning, washing and statistics, addressing employment challenges for vulnerable groups, alleviating their financial burdens.

##### ◇ Sinoma Argentina

L' Amali Line 2, the cement clinker production line with a daily capacity of 5,800 tonnes, has created more than 1,700 direct local jobs, boosted the development of the related industrial chain, and was awarded the “Enterprise Honor” by the Municipal Government of Olavarria.

## Empowering talent cultivation

The Group focuses on localized operations and cultivate local talents, and continues to facilitate the career development of employees in the sites where the projects are located, and actively carries out management, technology, language and other trainings to effectively improve the professional skills and comprehensive business capabilities of local employees.

BNBM Tanzania strives to cultivate local employees to become technical and marketing backbone, leveraging the advantages of local employees. Through professional skills training and job training, local employees have been enabled to master the skills of independent operation of large-scale automation equipment, and gradually grew into skilled professionals and technical experts. After five years of training, two local sales personnel in BNBM Tanzania have been promoted to regional managers.

#### Case: Jushi Egypt cultivates local talent and promotes cultural integration

Jushi Egypt has signed the Agreement on Chinese + Vocational Skills University-Enterprise Cooperation with the Chinese Bridge Club to help local employees improve their Chinese level and vocational skills, jointly build internship and employment bases for Egyptian graduates majoring in Chinese.

To cultivate Egyptian middle and senior managers, the middle-level cadres dispatched by Jushi Egypt have implemented the “pass on experiences” model for five consecutive years, which has been added as the annual evaluation and year-end performance indicators of Chinese middle-level cadres. It has also proposed performance requirement for cultivating reserve executive candidates for Egyptian executives, to strengthen the self-generating function of local middle-level team.



Jushi Egypt cultivates local staff

## Opening up of cultural exchanges

The Group strengthens exchanges and mutual understanding, promotes understanding between people, carries out cross-cultural integration activities, plans cultural promotional activities, promotes harmonious coexistence between Chinese and foreign employees, provides in-depth support for the development of local cultural and educational undertakings, and builds amicability.

### Case: Jushi Egypt collaborated with Confucius Institute to promote cultural exchanges between universities and enterprises

In 2023, Jushi Egypt invited students from the Confucius Institute at Suez Canal University to conduct a two-week summer internship program in various departments, enabling them to improve their Chinese proficiency and learn about Chinese technology, experience the corporate culture and working atmosphere. Jushi Egypt also participated in the campus job fair of the Confucius Institute at Suez Canal University to hire outstanding graduates, enhance Jushi Egypt's visibility in the Egyptian industry, and meanwhile expand employment options for local students.



Students from Suez Canal University successfully completed their internship at Jushi Egypt

### Case: Enhancing international publicity and promoting cultural integration

In 2023, Sinoma International successfully hosted the 4th CNBM Group "Day of Making Good Use of Resource" open activity, showing an excellent international image in an all-round way through various forms such as holding exhibitions, unveiling assistance funds, international promotional videos and new book releases, commending the most beautiful overseas employees, and performing arts. At the launching ceremony, BNBM Central Asia officially launched the operation of the gypsum board production line with an annual output of 40 million square meters in Uzbekistan. BNBM Tanzania introduced and publicized the development of the Company to employee's families, spread corporate culture and showcase the deeds of outstanding employees to motivate employees and enhance cohesion.

Jushi Egypt held a Family Open Day themed on "Create a Bright Future and Grow Together", invited a total of 18 families from China and Egypt to participate. They visited the production line and joined the parent-child game, where the children of Chinese employees competed on the same stage with those of Egyptian employees, creating a harmonious atmosphere.



Family open day, together for the future

## Developing industrial economy

The Group insists on working with local governments, enterprises, suppliers, financial institutions and other partners and establishes long-term cooperative relationships, as well as facilitates collaboration with the upstream and downstream of the industrial chain, which effectively promotes the development of local manufacturing, construction, transportation and other related industries.

The Group effectively implements the local procurement policy and will give priority to business cooperation with local suppliers when the conditions are met, so as to promote the development of local society and economy. BNBM Tanzania purchases bulk raw materials such as natural gypsum and coal, as well as security, consultancy and other services; BNBM Central Asia has expanded the local supply chain through a variety of channels and has established cooperative relationships with several local suppliers. Local procurement has been achieved for daily necessities, canteen materials, production auxiliary materials, etc.

The Group continues to promote business advancement along an upward trajectory and use technology to promote the development of local communities. In 2023, Jushi Egypt donated an inductively coupled plasma spectrometer to the National Research Center of Egypt for qualitative and quantitative analysis of mineral raw materials of glass fiber, promoting the construction of the platform for technical exchange, project development, standard implementation, and technical training between China and Egypt.



In 2023, in **4** provinces in northern Tanzania

BNBM Tanzania held more than **10** product promotion meetings

Total attendance of over **1,000** people

Received more than **50** visits to the factory from domestic and foreign customers

## Enhancing people's well-being

While organically integrating and promoting local economic development, the Group actively fulfils its social responsibilities and serves the local people's livelihoods, which has won the respect and love of the local people.

### Case: Zambia Industrial Park launches a free clinic activity with the theme of "People-oriented, Life First"

CNBM Zambia Industrial Park has implemented the production and management philosophy of "People-oriented, Life First", continuously strengthened employee's health awareness, helped to identify potential health hazards, and actively prevented health emergencies.

In 2023, Chinese medical teams were invited to provide free clinic and special lectures, explaining professional knowledge and disease prevention experience. The teams conducted health examinations for employees in more than 10 items such as general surgery and neurosurgery, give detailed explanations for female employees on gynaecological problems, improving the self-awareness of women's health.



Employees of the Zambian industrial park undergo medical examinations



Voluntary medical service

## Charitable action

The Group actively repays the society and practices social responsibility, strives to promote public welfare undertakings such as poverty alleviation, education advancement and charitable donations. We formulated rules and regulations such as the Measures for the Management of External Donations by Enterprises to strictly regulate external donations. The subsidiaries of the Group actively participated in public welfare undertakings, formulated donation budgets every year, and provide protection and support for various public welfare volunteer activities in terms of personnel organization, working mechanism, time management, financial support, and communication and liaison. Under the leadership of labor unions and the communist youth league, the subsidiaries at all levels established a number of volunteer activity organizations and carried out a series of volunteer projects such as empowering the disadvantaged, emergency disaster relief and volunteer teaching.

### In 2023

Total investment in philanthropy

**70.57** million yuan

Assistance projects

**99**

Established **95** volunteer organizations or groups

Employee volunteers

**10,114**

Volunteer activities

**30,078** hours

Participated in or supported **527** activities related to the protection of the rights and interests of women, children, or people with disabilities

Set up **4** special scholarship programs Involving **23** institutions

With a total scholarship amount of **RMB 240** thousand

**50** students receiving scholarships



### Case: China Jushi Actively helping people with disabilities and empowering vulnerable groups in social integration

In 2023, China Jushi officially inaugurated a supportive employment base for the disabled to “build and share together and walk hand in hand”, provided lots of job opportunities for the disabled, in the field of living services, food production and others, thus creating new means of employment for people with disabilities. Besides, China Jushi actively shoulders social responsibilities and developed the “Six Action” plan, including the “practical social responsibility”, which is a pilot project for common prosperity, to promote dedication and give back to the society, ultimately accomplishing the goal of “helping all people in need”.



“The unveiling ceremony of the “Collaborate and Share, Work Hand in Hand” disability assistance base

**Case: Improving teaching environment through “Well Constructed” colorful classrooms, bringing hope and warmth**

The Group further promoted the “Rural Revitalization Youth Contribution Action” and actively organized its subsidiaries to participate in volunteer teaching activities. In 2023, 58 volunteers prepared courses for children in culture, handicrafts, dance, art, thinking, science, physical education and other courses at 9 teaching sites, illuminating the children’s future with love and dedication, and writing a youth chapter of “the great talent of the country” with responsibility and responsibility.



Ningxia Building Materials and New Tianshan Cement participated in the “Well Constructed” colorful classroom activities

**Case: Sinoma Overseas actively participating in emergency disaster relief and ensuring personal safety**

In 2023, after the earthquake in Turkey, representative office in Turkey of Sinoma Overseas, a subsidiary of Sinoma International, immediately launched emergency plans and implementing on-site disposal measures, to ensure personal and production safety. And at the same time, responding to the call for assistance by the Embassy of the People’s Republic of China in the Republic of Turkey and the General Chamber of Commerce of Chinese Enterprises in Turkey, the representative office actively participated in local earthquake relief, helped coordinate earthquake relief matters, and donated various kinds of living supplies through the Disaster and Emergency Management Presidency of Turkey several times in batches.



Earthquake assistance in Turkey

# Responsible marketing-oriented and establishing a market brand



The Group has built a global marketing network, taking responsibility as the core of marketing, and is committed to integrating the concept of sustainable development into all aspects of product marketing, publicity, expansion and consumption, practicing corporate social responsibility with practical actions, and making unremitting efforts to build an excellent market brand.



## Building a marketing network

The Group deeply cultivates the international development strategy, establishes a marketing network all over the world and a rapid response mechanism for production, marketing and research collaboration, aims at the forefront of the market, actively explores the high-end market, and leads customer needs with strong technology and high-quality services. Through supplier conferences, strategic cooperation alliances, industry seminars and standard formulation, international professional exhibitions, overseas warehouses and building materials supermarkets, etc., we will expand brand influence and drive the high-quality development of the upstream and downstream industrial chains.

### Case: The first store of China Construction Investment Vanuatu building materials supermarket in Tonga opened, showing the new vitality of the South Pacific market

In 2023, China Construction Investment Vanuatu opened its first building materials supermarket in Tonga. This is an important step for CNBM Investment continue to accelerate the leapfrog development of international business in the South Pacific market after successfully replicating the "Papua New Guinea Model" in Vanuatu in 2015. On the first day of opening, the Tonga branch planned opening promotions, lucky draws and other activities, and many consumers came to the store to buy, achieving sales of 330 thousand panga (about 1 million yuan), demonstrating the huge potential of the local building materials and home furnishing retail business. The expansion of the building materials supermarket marketing model in the Kingdom of Tonga will inject new vitality into the local building materials market and bring more high-quality goods to the people of Tonga.

Achieving sales of **330** thousand panga (about RMB **1** million yuan)



The Prince of Tonga cuts the ribbon for the building materials supermarket

## Guiding green consumption

The Group focuses on advanced technologies and innovative ideas in domestic and overseas industries, continuously improves product performance, maintains excellent foresight to the market, and fosters and incubates sustainable consumption orientation.

The Group actively organizes and participates visits to the countryside, publicizes green environmental protection products and product environmental risks through the multimedia and outdoor advertisements, and urges consumers to choose sustainable products and services. Meanwhile, we have increased the use of recyclable packaging materials, as a way that professional institutions and consumers to bring packaging materials into the waste recycling system.

### Case: Green building materials product application of BNBM leads green upgrade for consumption

BNBM supported the construction of Beijing Workers Stadium by relying on high-quality and green product solutions. In the process of renovation and reconstruction lasting more than two years, BNBM gave full play to its comprehensive advantages in green low-carbon, energy-saving and environmentally-friendly new construction materials, and provided Beijing Workers Stadium with green products for the whole life cycle from raw materials, production, products to construction, operation and recycling, with more than 300 thousand square meters of gypsum boards, 160 thousand square meters of calcium silicate boards, over 1,000 tonnes of light steel stud, and 300 thousand square meters of inorganic coatings, helping Beijing Workers Stadium achieve green upgrade and acquire a new outlook.



Provided Beijing Workers Stadium with

Gypsum boards **300** thousand square meters

Calcium silicate boards **160** thousand square meters

Light steel stud **over 1,000** tonnes

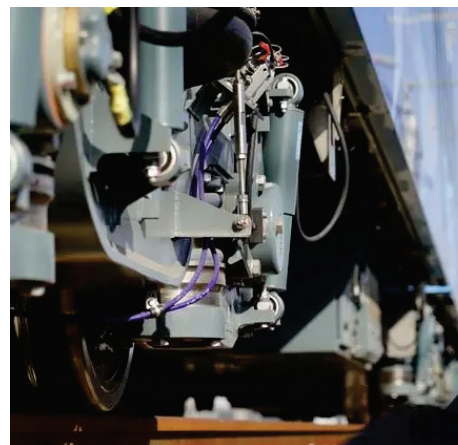
Inorganic coatings **300** thousand square meters



BNBM green products promote the upgrading and transformation of Beijing Workers' Stadium

### Case: Sinoma Science & Technology (Suzhou) Co., Ltd. injects "green power" into domestic hydrogen hybrid articulated light rail vehicles

In 2023, the domestic hydrogen fuel hybrid articulated light rail vehicle successfully rolled off the assembly line at the manufacturing base, the light rail vehicle uses "hydrogen fuel cell + power battery" as the power source, and the 145-liter × 4×2 hydrogen storage cylinder set independently developed by Suzhou Limited, a subsidiary of Sinoma Science & Technology, is installed on the top of the front of the vehicle, continuously injecting "green power" into the new light rail vehicle, which can reduce about 40 tonnes of carbon emissions in one year of operation, which is equivalent to planting 2,185 trees.



Hydrogen storage cylinder set independently developed by Suzhou Limited installed on the top of the front of the vehicle

Reduce about **40** tonnes of carbon emissions in one year of operation

Which is equivalent to planting

**2,185** trees



Hydrogen-fuelled hybrid articulated light rail car

## Protecting intellectual rights

The Group strictly abides by the Patent Law of the PRC, the Anti-Unfair Competition Law of the PRC, Advertising Law of the PRC, and the Trademark Law of the PRC. An intellectual property rights (IPR) management system and brand practice system with the characteristics of the building materials industry have been established to control IPR protection, the management of scientific research funds, and the confidentiality of information and to fulfil the requirements of the internal control system establishment and risk management, formulated regulations and rules such as the Patent Management Measures and the Trademark Management Measures. The establishment of the system has strengthened the legal protection of intellectual property rights, improved the ability to manage intellectual property rights in its research and development, production and operation activities, and also provided a mechanism to ensure the orderly conduct of scientific research.



A total of **1,200** software copyrights have been successfully registered



In 2023, the Group applied patents

**2,992**

Including invention patents

**1,300**

Authorized patents

**2,357**

Including invention patents

**695**

Cumulative valid patents

**15,235**

Including invention patents

**3,637**





# Modern Governance

## Promotes High-Quality Development

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- ◇ Internal control compliance and risk management
- ◇ Integrity system building



## Statistics in 2023



**179** internal control, risk and compliance audits conducted in the past 2 years, **covering all-level affiliated companies**



Non-executive directors participated in risk management related training for a total of **83 hours**



**0** corruption lawsuit filed and concluded against the Group's companies and employees



### Anti-corruption training

Director coverage rate **100%**

Employee coverage rate **100%**



# Internal control compliance and risk management



The Group attaches great importance to and actively promotes compliance management, risk management and internal control. A sound coordination mechanism for legal affairs, compliance, internal control and risk management has been established to safeguard the Company's high-quality and sustainable development. The Group complies with laws, regulations and rules related to compliant business operations, such as the Company Law of the PRC, the Anti-Monopoly Law of the PRC, the Measures for the Compliance Management of Central Enterprises, the Anti-Money Laundering Law of the PRC, and refers to peers and the internationally accepted COSO risk management framework to formulate policies and systems such as the Compliance Management System, the Compliance Manual, the Internal Control System and the Internal Control System Evaluation Management Measures to provide compliance control guidelines for subsidiaries.



## Robust compliance management

The Group continues to build a robust compliance management system, promote the further integration of compliance management and business activities. These efforts shape a compliance management system with a clearer division of responsibilities, smoother mechanism operation and stronger compliance awareness, which promotes the effective improvement of the ability to manage enterprises according to law.

In 2023, the Group conducted internal audits, underwent external investigations and management reviews of the compliance management system. As evidenced by the investigation and review results, the Group met international first-class standards and obtained the GB/T 35770-2022/ISO 37301:2021 Compliance Management System Certification issued by SGS, which means that the Group's compliance management ability has met both national and international standards. CNBM has become the first company in the building materials industry to pass the "dual certification" evaluation of international and national standards in the field of "compliance management of holding companies".



Certification ceremony for Compliance Management System Certification

### Organizational and Institutional Building

- ◇ The **Board** gives full play to the functions of formulating strategies, making decisions and preventing risks and establishes a compliance management committee led by the chairman of the board of directors, and sets up a chief compliance officer to carry out compliance work in an all-round way, effectively ensuring the implementation of the compliance management system and mechanism;
- ◇ The **Management** initiates strategic planning, executes operational details, and enforces management effectiveness;
- ◇ The **Compliance Management Committee** is responsible for advancing the establishment of the rule of law and guiding the establishment of compliance management system.

### System and Mechanism Building

- ◇ Identify the needs and expectations of stakeholders in a dynamic manner, clarify compliance obligations and analyze compliance risks;
- ◇ Continuously update the Compliance Manual and related compliance governance policies;
- ◇ Promote the operational synergy of various mechanisms such as compliance due diligence, compliance review, compliance risk identification and assessment, compliance risk feedback and compliance reporting, investigation and rectification;
- ◇ Advancing the efficient operation of the closed-loop oversight system for comprehensive compliance management.



## Improve internal control

The Group has established a sound internal control system including internal control environment, risk assessment, internal monitoring process, an internal control system include information and communication, internal control supervision and evaluation, and conducted internal monitoring activities covering all aspects of operation, to ensure the effective implementation of internal monitoring for governance structure, quality management, production safety, environmental management, and human resources policies. In 2023, the group undertook a special project aimed at optimizing systems in conjunction with an analysis of our business processes and continuously revised and improved corporate rules and regulations, further standardizing management, enhancing quality, and increasing efficiency.

The Group carried out a comprehensive review of “risk, internal control, compliance and law” around business or functional matters with value creation as the main theme, revised and updated the Company’s internal control manuals, and developed a “1+2+N” system that is applicable to the Company and its subsidiaries.

# 1

**One** overarching manual on four aspects of collaborative management, describing the policies, objectives, management responsibilities and mechanisms for regular operation, evaluation, supervision, and continuous improvement of the four collaborative management aspects

# 2

**Two** manuals on risk management and compliance management, clarifying the organizational responsibilities and main procedures of risk management and compliance management, regulating the practices of risk management and compliance management;

# N

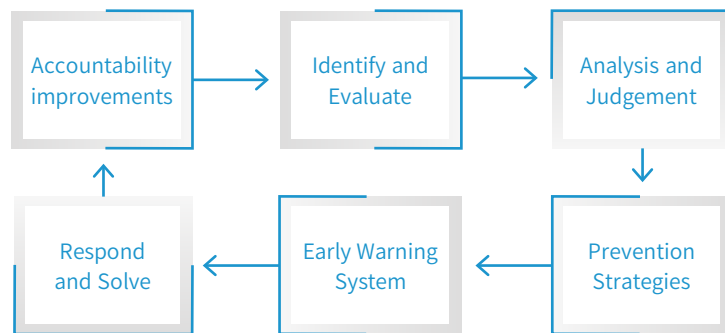
**Multiple** business module fascicles, combining the management functions and division of labor of the Company to form 16 business module fascicles to guide specific business practices.

The Group solidly promotes the supervision of the internal control system, strictly implements the monitoring procedures of all operational process, collects, processes and transmits relevant information, and ensures the authenticity, accuracy and integrity of accounting information, social responsibility fulfillment information, safety and environmental protection management and other information. At the same time, the group conducts self-evaluations of the effectiveness of internal control on a regular basis and issued self-evaluation report, sorting out the defects and deficiencies found in the process of internal control monitoring and internal control evaluation, and promptly supervising the rectification. From 2022 to 2023, the Group conducted 179 internal control, risk and compliance audits, covering the subsidiaries at all levels.

## Closed-loop risk management

The group has established a systematic and effective risk management framework, employing a three-tiered defense strategy for comprehensive risk oversight. The first line of defense involves business and functional departments conducting daily risk management activities. The second line of defense consists of specialized departments, such as legal and compliance, continuing to carry out risk monitoring. The third line of defense, which includes disciplines such as discipline inspection, auditing, and inspection departments, is responsible for implementing risk supervision efforts, thereby solidifying all three lines of defense. The risk management functions of the third line operate independently from the group's business and functional departments and report directly to the management and the board of directors, ensuring an unbiased and thorough approach to risk management.

In 2023, the Group organized the compilation of a risk management manual to clarify the main procedures and work contents of comprehensive risk management, sort out the risk identification, analysis, evaluation, response and reporting processes, improve the risk monitoring indicator system and early warning mechanism, explore the establishment of a risk monitoring work model, promote the institutionalization, standardization and standardization of risk management, and systematically improve the level of risk management and control.



Closed-loop risk management mechanism

At the beginning of each year, the Group conducts risk identification and assessment, identifies risk sources, risk events, their causes and potential consequences in five major areas: strategic risk, financial risk, market risk, operational risk and legal risk, constructs a risk list and indicator system, and conducts quantitative and qualitative assessment by questionnaire survey, analysis and discussion. Based on the results of the risk assessment, the Group studies and analyzes the major risks in turn, determines the prevention and control objectives and responsible units, formulates practical and specific prevention and control measures with an annual risk assessment report, and summarizes the risk prevention and control work of the previous year. In the course of daily production and operation management, the Group formulates detailed risk management and control guidelines and management measures based on actual conditions, monitors risk changes, implements risk prevention and control measures, holds accountable personnel who fail to perform the procedures for handling major risk events in a timely manner in accordance with regulations, and continuously supervises and improves.

The Group provides risk management related training to non-executive directors on a regular basis every year. In 2023, the Company's non-executive Directors participated in a total of 83 hours of various performance training, ESG-specific training and policy interpretation training.



Non-executive Directors participated risk management related training

**83** hours

In addition, the Group has effectively linked risk factors such as safety, environmental protection, energy conservation and consumption reduction, “Dual Carbon”, integrity, privacy protection, and employee development to the performance evaluation of the management in CNBM and its subsidiaries, through the signing of the 2023 Business Performance Responsibility Agreement at all levels. Based on the division of specific duties, the Group systematically breaks down the aforementioned risk factors, assigning responsibility to respective departments. This process is part of our ongoing enhancement of mechanisms for stress transmission and accountability normalization, ensuring responsibilities are clearly defined and integrated with employee evaluation systems. Additionally, the Group encourage staff at all levels to report risks identified in their daily work and extensively conduct risk identification and management training. This approach aims to further elevate our risk management proficiency.

# Integrity system building



The Group strictly abides by the laws and regulations related to anti-corruption, integrity and party discipline supervision. With reference to the ISO 37001 Anti-Bribery Management System, the Group has formulated and continuously improved rules and regulations such as the Responsibility System for Improving the Party Ethic and Upholding Integrity, encouraging all employees, customers, partners, suppliers and contractors and other relevant parties to give feedback and report all violations of business ethics standards. The Group also formulates a series of anti-corruption related management measures, complaint and reporting rules and handling procedures, as well as clear provisions on the details of whistleblower protection, applicable to all employees, customers, partners, suppliers and contractors.

In 2023, the Group did not find any significant risks related to corruption, and no corruption lawsuits against the Company and employees were filed and concluded during the reporting period.



## Integrity commitment

In 2023, CNBM signed 113 Letters of Commitments on Integrity and Self-discipline of Leading Cadres with middle-level cadres and the management level of subsidiaries, which covers the implementation of integrity employment and urging cadres to abide by the rules and regulations. At the same time, the group also signed Letter of Commitment on Complying with the Rules and Disciplines with the new employees, which covers the elimination of illegal acts and truthful reporting of major personal matters and urging employees to consciously comply with laws and regulations and the Company's policies. In addition, in the Measures for the Management of Employees of the Headquarters of the Group, the Headquarters stipulates those employees who violate social morality and professional ethics, such as integrity problems, will be given warnings, demerits, demotions, dismissals or termination of labor contracts according to the seriousness of the circumstances, and corresponding economic penalties will be imposed according to the salary system.



## Conflicts of interests

The Group stipulates that the relatives and other specified relations of the middle-level (and above) leaders and managers are prohibited from having business relations with the Group in the prescribed contents, or forming competition in the same industry, or having other acts that infringe on the interests of the Group, and that the leaders involved in the decision-making process that have business relations with them must recuse themselves, take the initiative to report on the matters that have existed, and make rectification within a certain period of time to effectively strengthen anti-corruption and integrity construction.



## Reporting and supervision

The Group publicizes the email address for reporting complaints on the official website to guarantee the smooth flow of reporting channels, and allows employees to report violations of business ethics and employee standards through email, telephone, mail and other means in the bidding, cadre promotion, inspection and other procedures.

The Group strictly abides by the Chinese Party Discipline Inspection Supervision and Discipline Work Rules, and does not privately retain, disclose or disseminate relevant information such as the contents of problem clues, the progress of clue investigation and the parties and informants of problem clues in any form. The Group keeps secrets for employees who submit complaints and reports and protects the safety of informants. In addition, the Group requires that the work contents of the Discipline Inspection Commission Office related to letters and visits are not processed and transmitted through the public network or local area network, but by CD-ROM copy or paper documents, to strictly prevent information leakage.

The Group will conduct independent investigation and follow-up work in a timely manner upon receipt of reports. After receiving the report of letters and visits, the case trial room of the Commission for Discipline Inspection will hand over the report of letters according to the authority of cadre management. After putting forward the disposal opinions in the case trial room, the supervisory and disciplinary office of the Commission for Discipline Inspection at this level independently carries out the disciplinary work and writes the investigation report, and then hands it over to the case trial room of the Commission for Discipline Inspection to carry out the trial work, so as to ensure that everything reported by letters and visits is answered and implemented.



## Integrity inspection

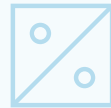
The Group has established the Coordination Group for Party Conduct, Integrity Building, and Anti-Corruption Work within CNBM and formulated the 'Guidelines for Identifying and Preventing Integrity Risks (Trial Implementation)', to identify risks to integrity and develop preventative measures. Additionally, the Group regularly conducts audits, inspections, and daily supervision checks on the construction of Party conduct and integrity, thereby promoting the comprehensive advancement of Party conduct and integrity building.

- ◇ In accordance with the CNBM's Management Measures for the Economic Responsibility Audit and the cadre management authority and property rights relationship, the Group conducts economic responsibility audit for management on "fulfilling the responsibility for improving party ethic and upholding integrity and compliance with provisions on honest practice". The Group plan to achieve full coverage of subsidiary companies every three years.
- ◇ The Group conducts regular and special inspections for its subsidiaries, and rectifies problems on integrity disciplines to strengthen supervision and management. In 2023, the Group conducted regular inspections on 1 subsidiary, and implemented the innovative special inspection on the "four malfeasances (favoring form over substance, bureaucratism, hedonism and extravagance)" and spirit of eight-point decision on improving Party and government conduct. It is planned to achieve full coverage of inspection on sector companies between 2023 and 2027.
- ◇ The Group's Disciplinary Committee conducts periodic in-depth supervision and inspections. In 2023, spot checks were carried out on 16 subsidiaries companies to assess the rectification of "four malfeasances" and implementation on spirit of eight-point decision on improving Party and government conduct. Concerning issues identified during routine supervision, inspections, and investigation of problem clues, timely reflections and summaries are made, and 'Disciplinary Inspection Recommendations' are sent to the party committee of the relevant affiliated companies, demanding that they learn from one case and apply it to others, and make rectifications within a specified time frame.



## Integrity culture

The Group has expanded ways and methods to carry out integrity reminder, warning education and integrity training in a diversified and all-round way to foster a stronger integrity culture.



In 2023 , **100%** of the Group's directors and employees participated in anti-corruption training.

### The Group's efforts to build integrity culture in 2023

- ◇ Compiled 30 issues of the "Disciplinary Inspection Briefing "
- ◇ Sent integrity notices for all employees before festivals. Created 3 columns, including integrity Knowledge, Festival Integrity Notice and Integrity Stories, published 16 articles, collected 491 integrity letters and 556 poems on Company' s WeChat official account;
- ◇ Held warning education conferences and party ethic and upholding integrity conferences with the participation of leading cadres and employees in key areas, and the training content is applicable to all levels of employees;
- ◇ Promoted the initiative of "Monthly Discussions on Party Conduct and Integrity Construction" by the secretaries of the disciplinary committees in enterprises where disciplinary committees have been established, covering policy implementation, work deployment, issue alerts, warning cases, and integrity reminders, with a total of 6,901 "Monthly Discussions on Party Conduct and Integrity Construction" sessions conducted at all levels;
- ◇ A total of 2,501 sessions of warning education films were shown, and 564 visits to warning education bases were organized for employees at all levels;
- ◇ Conducted 408 sessions of integrity training for new employees and 1,904 pre-appointment integrity discussions for newly appointed cadres at all levels.

### Case: exemplifying precedent cases for educational purposes

In December 2023, the Group organized the discipline inspection cadres to visit the Beijing warning education base that advocates full and strict party governance. They visited three thematic exhibitions in order, namely, "Adhering to disciplines and bottom lines", "Learning lessons from educational cases with a proper sense of reverence", and "Staying true to our original aspiration and founding mission". Through on-site visits and video-based study, they have learned lessons from typical cases and individuals serving sentences on job-related crimes investigated and dealt with by the central government and Beijing Municipality. These wake-up calls have helped us build up a firm moral defense against corruption and corruption.

# ESG Performance Table<sup>4</sup>

## Environmental data

Key performance indicators	Unit	2023	2022
Total emission of nitrogen oxides (NOx) <sup>5</sup>	tonnes	62,934	81,470
Total emission of sulfur dioxide (SO <sub>2</sub> )	tonnes	5,877	6,488
Total emission of industrial particulate matter	tonnes	6,649	9,835
Total direct mercury emissions	tonnes	2	/
Total emission of volatile organic compounds (VOCs)	tonnes	14	49
Total emission of chemical oxygen demand (COD)	tonnes	587	605
Proportion of companies meeting noise level standards	%	100	100
Total greenhouse gas emissions <sup>6</sup>	million tonnes	197.35	230.74
Direct greenhouse gas emissions (Scope 1)	million tonnes	192.10	216.67
Indirect greenhouse gas emissions (Scope 2)	million tonnes	5.25	14.07
Greenhouse gas emissions from basic building materials segment	million tonnes	188.10	222.02
Greenhouse gas emissions from new materials segment	million tonnes	8.49	8.11
Greenhouse gas emissions from engineering technology service segment	million tonnes	0.76	0.61
Greenhouse gas emissions intensity	tonnes/million yuan of operating revenue	856	922
The generation of self-produced hazardous solid waste	tonnes	8,252	8,877

<sup>4</sup> All non computational data of for the year 2023 in the Report were collected through the following two methods:

(1) Fill in and summarize the income level by level through the system;

(2) Collect all levels of ESG data using an Excel spreadsheet from the Group.

The revenue data used to calculate various intensity data includes China Jushi.

<sup>5</sup> The emissions of nitrogen oxides, sulfur dioxide, industrial particulate matter and volatile organic compounds are estimated based on monitored and calculated data of the project.

<sup>6</sup> The calculation of greenhouse gas emissions data is based on relevant conversion factors provided by the Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Chinese Cement Production Enterprises and the Notice on the Report and Verification of Greenhouse Gas Emissions for Some Enterprises in Key Industries from 2023 to 2025, and the data is measured in tonnes of carbon dioxide.



Key performance indicators	Unit	2023	2022	
The intensity of self-produced hazardous solid waste generation	tonnes/million yuan of operating revenue	0.0358	0.0355	
The generation of self-produced non-hazardous solid waste <sup>7</sup>	tonnes	2,285,243	2,248,200	
The intensity of self-produced non-hazardous solid waste generation	tonnes/million yuan of operating revenue	9.91	8.98	
Comprehensive utilization volume of non-hazardous solid waste	tonnes	2,181,534	2,102,205	
Comprehensive utilization rate of non-hazardous solid waste <sup>8</sup>	%	95.46	91.88	
Total acceptance and disposal of incoming solid waste	tonnes	97,932,968	103,599,401	
Total acceptance and disposal of incoming solid waste divided by the disposal method	Landfill	tonnes	0	/
	Incineration for power generation	tonnes	0	/
	Incineration without power generation	tonnes	8,639,259	/
	Other <sup>9</sup>	tonnes	89,293,709	/
Total acceptance and disposal of incoming solid waste divided by types	Industrial waste	tonnes	93,924,152	99,556,956
	Domestic waste	tonnes	303,139	420,578
	Hazardous waste	tonnes	181,207	131,285
	Other	tonnes	3,524,470	3,490,582
Wastewater pollutant discharge	Chemical oxygen demand (COD)	tonnes	587	/
	Ammonia nitrogen	tonnes	24	/
Direct energy consumption <sup>10</sup>	MW · h	202,155,182	231,140,502	

<sup>7</sup>During the trial production period of several subsidiaries of Sinoma Science & Technology, the amount of solid waste generated has increased, thus the amount and intensity of self-produced non-hazardous solid have increased this year.

<sup>8</sup>The 2022 comprehensive utilization rate of non-hazardous solid waste calculation deducts the consolidated use of previous years' stockpiles, which will no longer be deducted from the comprehensive utilization rate of non-hazardous solid waste calculation starting in 2023.

<sup>9</sup>Other means of disposal refers to treatment such as the reuse of solid wastes as raw materials.

<sup>10</sup>Calculated according to General Rules for Calculation of the Comprehensive Energy Consumption (GB/T 2589-2020).

Key performance indicators	Unit	2023	2022
Coal consumption	MW·h	177,215,899	212,999,333
Natural gas consumption	MW·h	7,038,345	6,555,493
Other energy consumption	MW·h	17,900,938	11,585,676
Indirect energy consumption	MW·h	27,148,877	31,002,839
Electricity consumption	MW·h	26,770,800	30,585,136
Purchased electricity	MW·h	20,045,995	22,696,703
Self-generated electricity consumption	MW·h	6,724,805	7,888,432
Photovoltaic power generation consumption	MW·h	163,773	103,061
Equivalent to greenhouse gas emission reductions	tonnes of CO <sub>2</sub> e	93,400	58,776
Equivalent to nitrogen oxides (NOx) emission reductions	tonnes	25	16
Equivalent to sulfur dioxide (SO <sub>2</sub> ) emission reductions	tonnes	17	10
Equivalent to soot emission reductions	tonnes	4	2
Waste heat power generation consumption	MW·h	6,561,032	7,785,371
Equivalent to greenhouse gas emission reductions	tonnes of CO <sub>2</sub> e	3,741,757	4,439,997
Equivalent to nitrogen oxides (NOx) emission reductions	tonnes	997	1,183
Equivalent to sulfur dioxide (SO <sub>2</sub> ) emission reductions	tonnes	663	786
Equivalent to soot emission reductions	tonnes	144	171
Purchased heat	MW·h	378,077	417,703
Comprehensive energy consumption	MW·h	229,304,059	262,143,341

Key performance indicators	Unit	2023	2022
Comprehensive energy consumption intensity	MW·h/million yuan of operating revenue	994	1,047
Alternative raw materials contained in cement	%	4.3	/
Alternative raw materials contained in concrete	%	8.0	/
Alternative fuel usage <sup>11</sup>	tonnes	1,045,282	1,364,827
Urban waste	tonnes	240,472	/
Biomass energy	tonnes	424,207	/
Industrial waste	tonnes	271,102	/
Other	tonnes	109,501	/
Greenhouse gas emission reductions for alternative fuels	tonnes of CO <sub>2</sub>	233,326	174,679
Alternative raw material usage	million tonnes	26.58	5.44
Total circulating water <sup>12</sup>	tonnes	1,363,212,282	1,496,185,551
Circulating water utilization rate	%	92	92
Water withdrawal	million tonnes	115	125
Tap water	million tonnes	33	/
Groundwater	million tonnes	23	/
Surface water	million tonnes	57	/
Other <sup>13</sup>	million tonnes	2	/
Total water withdrawals in high-stress areas (Zhengzhou/Xinxiang Henan, Xinjiang, Gansu).	million tonnes	6	/
Water withdrawal intensity	tonnes/million yuan of operating revenue	499	498

<sup>11</sup>This year, the statistical approach to the total volume of alternative fuel usage has been revised to exclude coal gangue, resulting in a reported decrease in total volume. Also, due to the differing composition of alternative fuels used this year, there has been an increase in the reduction of greenhouse gas emissions attributed to these fuels.

<sup>12</sup> Total recycled water volume = single recycled water volume x number of cycles, recycled water utilization rate = total recycled water volume / (total recycled water volume + water withdrawal)

<sup>13</sup> Including seawater, collected rainwater, desalinated seawater, recycled water, etc.

Key performance indicators		Unit	2023	2022
Total amount of water discharged		million tonnes	8.67	7.56
The amount of water discharged by the place of discharge	Discharge to surface fresh water (rainwater, wetland water, river water, lake water, etc.)	million tonnes	0.44	/
	Discharge to a third-party discharge site	million tonnes	8.23	/
The amount of water discharged by disposal methods	After tertiary treatment	million tonnes	3.00	/
	After secondary treatment	million tonnes	0.50	/
	After primary treatment	million tonnes	0.32	/
	Untreated discharge into the natural environment	million tonnes	0	/
The amount of water discharged by discharge types	Untreated discharge into a third party discharge site	million tonnes	4.85	/
	Industrial wastewater discharge	million tonnes	7.85	/
	Domestic water discharge	million tonnes	0.82	/
Total water consumption		million tonnes	106.48	117.11
Cement packing bag <sup>14</sup>		piece	1,135,174,401	1,280,815,544
Recyclable cement packaging bags		piece	1,083,206,000	39,172,679
Consumption of non-renewable materials		tonnes	382,146,527	/
Consumption of toxic and hazardous materials		tonnes	449	/
Material consumption intensity		Tonnes/million yuan of operating revenue	1,657	/
Area of all manufacturing and operating units		m <sup>2</sup>	145,794,636	/
Area for which biodiversity risk assessments have been conducted		m <sup>2</sup>	57,935,148	/
Land affected by the operations		m <sup>2</sup>	479,400	14,237,000

<sup>14</sup>Due to the Group's business nature, the consumption of cement packaging bags is calculated in "piece".

Key performance indicators		Unit	2023	2022
Restored land area <sup>15</sup>		m <sup>2</sup>	3,991,551	8,806,290
Amount of environmental investment		RMB' 0,000 yuan	596,080	373,043
Number of environment-related ISO certifications	ISO 14001	unit	639	685
	ISO 50001	unit	251	302
Operating income from products with inherently green attributes		RMB' 0,000 yuan	3,332,629	/
Operating income of cement products that have obtained the "China Low Carbon Product Certification"		RMB' 0,000	2,145,431	2,541,953
Operating income from products that can promote the social green development		RMB' 0,000 yuan	3,987,764	2,596,779
Number of national green factories <sup>16</sup>		unit	160	129
Number of provincial green factories		unit	65	68
Number of green factories of other levels		unit	14	10
Number of national green mines		unit	43	42
Number of provincial green mines		unit	91	64
Number of green mines of other levels		unit	3	5
Energy expenditures		RMB' 0,000 yuan	1,863,848	2,108,218

<sup>15</sup>The area of land restoration, mine greening, etc. The area varies annually due to actual business situations.

<sup>16</sup>The data presented are the cumulative figures of the Group as of December 31, 2023, of which the statistics of green mines include only those green mines that have been publicly announced.

## Social data

Key performance indicators		Unit	2023	2022
Total number of employees		person	145,277	150,457
Total number of employees by gender	Male	person	111,114	114,870
	Female	person	34,163	35,587
	Numbers of Female in STEM <sup>17</sup>	person	4,113	/
Total number of employees by ethnic group	Han	person	135,293	140,701
	Minority	person	9,984	9,756
Total number of employees by job level	Senior <sup>18</sup>	person	1,871	1,896
	Number of female	person	154	151
	Number of female in the business sector	person	72	/
	Minority	person	142	150
	Mid-level <sup>19</sup>	person	7,449	7,417
	Number of female	person	1,059	1,630
	Number of female in the business sector	person	522	/
	Minority	person	245	318
Total number of employees by employment type	General employees	person	135,957	141,144
	Long term <sup>20</sup>	person	137,302	146,637
	Short-term <sup>21</sup>	person	7,975	3,820

<sup>17</sup>Refers to people working in STEM-Science, Technology, Engineering, Math.

<sup>18</sup>Executives are those who hold senior management positions in the Group and each of its subsidiaries.

<sup>19</sup>Middle management refers to the heads of departments of the Group and its subsidiaries.

<sup>20</sup>Permanent employees are those who have signed a contract for a period of one year or more, and the contract period includes one year or more, three years, five years, and an open-ended period.

<sup>21</sup>Short-term employees are those who have a contract for one year or less.

Key performance indicators		Unit	2023	2022
Total number of employees by age	Under 30 years old	person	21,631	20,595
	30 to 50 years old	person	91,379	102,372
	Over 50 years old	person	32,267	27,490
Total number of employees by region	Mainland China	person	141,193	145,888
	Region of Hong Kong, Macao and Taiwan	person	15	16
	Overseas	person	4,069	4,553
Employee turnover rate by gender	Male employees	%	5.0	4.9
	Female employees	%	5.2	5.0
Voluntary turnover rate	Male employees	%	4.8	/
	Female employees	%	5.0	/
Employee turnover rate by age	Under 30 years old	%	8.3	7.3
	30 to 50 years old	%	4.5	4.4
	Over 50 years old	%	4.4	4.1
Voluntary turnover rate	Under 30 years old	%	7.5	/
	30 to 50 years old	%	4.4	/
	Over 50 years old	%	4.2	/
Employee turnover rate by region	Mainland China	%	5.0	4.9
	Region of Hong Kong, Macao and Taiwan	%	0	0
	Overseas	%	6.4	6.5

Key performance indicators		Unit	2023	2022
Voluntary turnover rate	Mainland China	%	4.8	/
	Region of Hong Kong, Macao and Taiwan	%	0	/
	Overseas	%	6.3	/
Number of internal transfers or internal application		person	5,646	/
Number of newly hired employees		person	11,133	/
Received complaints on violations of employee' s legitimate rights and interest		case	0	0
Received complaints on discrimination against applicants and employees		case	0	0
Total expenses on helping employees with critical diseases		RMB* 0,000 yuan	1,145	1,138
Number of times participated in various activities organized by relevant industry associations (above the provincial level)		times	5,486	242
Total number of employees participated in satisfaction survey		person	9,068	8,499
Percentage of total number of employees		%	6.2	5.6
Participation rate in satisfaction surveys by gender	Male	%	5.9	5.4
	Female	%	7.5	6.3
Participation rate in satisfaction surveys by ethnic group	Han	%	6.3	5.7
	Minority	%	5.6	4.5
Participation rate in satisfaction surveys by job level	Senior employees	%	10.4	8.8
	Middle-level employees	%	21.7	19.0
	General employees	%	5.3	4.9
Participation rate in satisfaction surveys by age group	Under 30 years old	%	7.2	6.3
	30 to 50 years old	%	6.2	5.6
	Over 50 years old	%	5.6	5.5



Key performance indicators		Unit	2023	2022
Employee satisfaction rate <sup>22</sup>		%	97.7	97.2
Employee satisfaction rate by gender	Male	%	97.5	96.9
	Female	%	98.2	98.0
Employee satisfaction rate by ethnic group	Han	%	97.4	97.2
	Minority	%	96.9	96.6
Employee satisfaction rate by job level	Senior employees	%	100.0	100.0
	Middle-level employees	%	99.3	99.2
	General employees	%	97.1	96.7
Employee satisfaction rate by age group	Under 30 years old	%	97.9	97.7
	30 to 50 years old	%	97.3	97.0
	Over 50 years old	%	97.6	97.4
Number of employees for whom the Group contributes an enterprise annuity		person	67,846	/
Number of employees for whom the Group pays supplementary medical insurance and other types of insurance other than five insurances		person	50,119	/
Number of employees joining the labor union		person	144,536	148,292
Percentage of employees joining the labor union		%	99.5	98.6
Percentage of employees signing collective agreements		%	84.7	81.3
Percentage of employee representatives among employees		%	19.5	24.8
Work-related fatalities		person	0	5
Death rate per thousand		‰	0	0.033
Number of zero-fatality project		case	1,585	1,254

<sup>22</sup>"Satisfied" refers to the situation where "Generally satisfied," "Satisfied," or "Very satisfied" was selected in the satisfaction survey.

Key performance indicators		Unit	2023	2022
Percentage of zero-fatality project		%	100	100
Number of work-related fatalities of contractors		person	0	/
Number of working days lost due to work-related injuries		day	32	30,279
Lost Time Injury Frequency Rate (LTIFR) for millions of hours of employees		-	0.01	/
Person-times of employees participated in occupational health and safety training		person-times	1,550,952	1,576,000
Number of safety, environmental and health inspections conducted		times	69,125	65,772
Number of hidden danger investigation		times	343,417	377,669
Rectification rate of hidden danger investigation		%	99.6	99.2
Total recordable incidents		case	3	12
Casualties in total recordable incidents		person	3	13
Number of reported silicosis cases		case	0	0
Amount of investment related to safety and health		RMB' 0,000 yuan	149,292	157,000
Safety and Occupational Health related certifications	Number of factories at safety standardization level I	unit	16	14
	Number of factories at safety standardization level II	unit	266	249
	Number of factories at safety standardization level III	unit	286	227
	Number of factories certified to ISO 45001 occupational health and safety management system	unit	678	692

Key performance indicators		Unit	2023	2022
Percentage of employees participated in safety and environmental training	Senior	%	38.7	36.0
	Mid-level	%	45.1	42.8
	General	%	50.3	45.5
Percentage of employees participated in skills-based business training	Senior	%	32.0	28.4
	Mid-level	%	26.3	24.3
	General	%	54.1	50.7
Percentage of employees participated in management training (including compliance training)	Senior	%	32.9	29.8
	Mid-level	%	51.6	46.3
	General	%	34.0	30.1
Percentage of employees participated in all types of training	Male	%	81.2	75.2
	Female	%	76.2	65.0
	Under 30 years old	%	80.7	77.9
	30 to 50 years old	%	87.1	73.7
	Over 50 years old	%	60.0	80.4
	Han	%	81.8	80.7
	Minority	%	56.9	52.6
	Senior	%	67.6	65.3
	Mid-level	%	64.7	64.7
General	%	81.1	87.8	
Total hours of safety and environmental training	hour		2,519,667	2,432,578

Key performance indicators		Unit	2023	2022
Total number of hours trained in safety and environmental protection		hour	2,380,119	1,964,763
Total number of hours trained in management		hour	754,918	712,966
Training hours per capita (all types of training)	Male	hour	49	47
	Female	hour	48	47
	Under 30 years old	hour	78	78
	30 to 50 years old	hour	41	38
	Over 50 years old	hour	52	45
	Han	hour	48	42
	Minority	hour	67	71
	Senior	hour	94	91
	Mid-level	hour	62	61
	General	hour	47	38
	All employees	hour	49	47
	Training cost per capita		RMB yuan	566
Number of cases involving suspected child labor and forced labor		case	0	0
Number of suppliers who have established long-term cooperation with the Group	In total	unit	26,954	22,852
	Mainland China	unit	26,099	22,237
	Region of Hong Kong, Macao and Taiwan	unit	18	27
	Overseas	unit	837	588
The costs of products or service procured from suppliers with whom the Group has established long-term cooperation		RMB' 0,000 yuan	8,530,884	/

Key performance indicators		Unit	2023	2022
Number of suppliers that have been screened and controlled for environmental and social risks by the Group	In total	unit	18,031	15,594
	Mainland China	unit	17,437	15,104
	Region of Hong Kong, Macao and Taiwan	unit	16	27
	Overseas	unit	578	523
The costs of products or service procured from suppliers mentioned above		RMB' 0,000	7,569,140	/
Among the suppliers that have been screened for environmental and social risks and controlled for long-term cooperation by the Group, the number of suppliers assessed to have significant negative impacts		unit	134	197
Number of suppliers with whom corrective measures/improvement plans have been agreed upon		unit	25	54
Number of suppliers excluded		unit	104	180
Number of suppliers participating in supplier training and capacity enhancement among suppliers that have established long-term cooperation with the Group		unit	4,580	3,857
Number of suppliers screened and controlled for environmental and social risks by the Group		unit	4,096	3,335
Number of all non-long-term suppliers		unit	14,667	23,995
Number of suppliers screened and controlled for environmental and social risks by the Group		unit	8,707	6,289
Number of suppliers certified by systems such as quality, occupational health and safety, environment or energy management		unit	10,795	11,613
Percentage of products subject to recall for safety and health reasons		%	0	0
Litigation cases involving the safety and health of products and services		case	0	0

Key performance indicators		Unit	2023	2022
Number of patents	Number of annual patent applications	unit	2,992	3,067
	Number of invention patents	unit	1,300	1,138
	Number of annual authorized patents	unit	2,357	2,747
	Number of patents for inventions	unit	695	659
	Cumulative number of valid patents	unit	15,235	12,760
	Number of patents for inventions	unit	3,637	2,814
	Cumulative number of successful registrations of software copyright	unit	1,200	588
Number of cases of suspected infringement of intellectual property rights by products and services		case	0	0
Comprehensive product qualification rate <sup>23</sup>		%	100	100
Number of complaints due to disclosure of customer information		case	0	0
Total number of clients		unit	49,952	/
Number of clients participating in satisfaction surveys		unit	25,643	/
Number of clients whose survey results were satisfactory		unit	23,755	/
R&D investment	R&D investment	RMB' 0,000	909,075	/
	Percentage of R&D investment in operating revenue	%	3.9	/
	Number of R&D staff	person	11,072	/
Number of corruption cases initiated and concluded against companies and employees		case	0	0
Number of anti-corruption training sessions held and organized		times	4,149	2,641
Coverage of directors in anti-corruption training		%	100	100
Coverage of employees in anti-corruption training		%	100	100

<sup>23</sup>In 2023, the qualification rate of cement, commercial mix, and aggregate comprehensive products is 100%, gypsum board 98.33%, waterproof membrane 99.13%, coating 98.53%, glass fiber 95%, wind power blade 100%, lithium battery separator 90%, gas cylinder 97%, carbon fiber 96.32%.

Key performance indicators		Unit	2023	2022
Person-times of all employees of the Group who have participated in anti-corruption training		person-times	227,963	112,413
Person times of all directors of the Group who have participated in anti-corruption training		person-times	4,153	3,674
Person times of all other employees of the Group and all subsidiaries who have participated in anti-corruption training		person-times	223,810	108,739
Number of cases in which employees violated the Group's code of conduct	Corruption or bribery	case	0	0
	Discrimination or harassment	case	0	0
	Customer privacy data	case	0	0
	Conflict of interest	case	0	0
	Money laundering or insider trading	case	0	0
Amount of taxes paid		RMB' 0,000 yuan	1,734,241	2,224,919
Amount of public charity investment <sup>24</sup> (including material donations)		RMB' 0,000 yuan	7,057	10,650
Education		RMB' 0,000 yuan	219	400
Medical and health		RMB' 0,000 yuan	11	649
Donation to energy saving and emission reduction		RMB' 0,000 yuan	0	1,454
Rural revitalization category		RMB' 0,000 yuan	6,439	6,189
Donations to disaster areas		RMB' 0,000 yuan	28	0
other		RMB' 0,000 yuan	810	1,958
Number of volunteers among employees		person	10,114	7,543
Number of activities involving or supporting the protection of the rights and interests of women, children or persons with disabilities		times	527	293

<sup>24</sup>This year, the improvement in pandemic conditions has led to a decreased demand for relevant donations, resulting in a lower total amount of charity investment.

# Independent Limited Assurance Report



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## Independent Limited Assurance Report

Ernst & Young Hua Ming (2024) No.70043890\_A01  
China National Building Material Company Limited

### Board of Directors of China National Building Material Company Limited:

#### Scope

We have been engaged to perform a limited assurance engagement, as defined by International Standards on Assurance Engagements, on the specified information ("Key Information") of China National Building Material Company Limited ("China Building") 2023 Environmental, Social and Governance Report ("ESG Report").

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the ESG Report, and accordingly, we do not express a conclusion on this information.

#### Criteria applied by China Building

In preparing the Key Information of ESG Report, China Building applied the Environmental, Social and Governance Reporting Guide issued by the Stock Exchange of Hong Kong Limited (HKEX) and the criteria as defined and disclosed in the ESG Report ("Criteria").

#### Management's responsibilities

China Building's management is responsible for selecting the Criteria, and for presenting the Key Information of ESG Report in accordance with the criteria above, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, so that such key information is free from material misstatement due to fraud or error.

#### EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Key Information of the ESG Report based on the evidence we have obtained. We conducted our engagement in accordance with the *International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ISAE 3000 (Revised)'), and the terms of reference for this engagement as agreed with China Building on 2 February 2024. The standard requires that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Key Information in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error. We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

#### Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements*, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance. Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Key Information and related information, and applying analytical and other appropriate procedures.



## Independent Limited Assurance Report (Continued)

Ernst & Young Hua Ming (2024) No.70043890\_A01  
China National Building Material Company Limited

### Description of procedures performed (Continued)

We performed assurance procedures on the specified information in ESG Report:

- Total coal consumption
- Total electricity consumption
- Total sulfur dioxide emissions
- Total nitrogen oxides emissions
- Industrial waste intake
- Total water withdrawal
- Total amount of public welfare input (including material donation)
- Employee coverage of anti-corruption (anti-commercial bribery) training held and organized
- Cumulative number of factories certified with occupational health and safety management system
- Waste heat generation

Our procedures included:

- 1) Conducted interviews with personnel to understand the business and reporting process
- 2) Conducted interviews with key personnel to understand the process for collecting, collating and reporting the Key Information during the reporting period
- 3) Checked that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the Criteria
- 4) Undertook analytical procedures of the data and made inquiries of management to obtain explanations for any significant differences we identified
- 5) Tested, on a sample basis, underlying source information to check the accuracy of the data; and
- 6) Other procedures deemed necessary

#### Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that need to be made to the Key Information of ESG Report, in order for it to be in accordance with (or based on) the Criteria.





# Index

## Index table of the Hong Kong Stock Exchange's ESG Reporting Guide

### Mandatory Disclosure Requirements

Governance Structure	A statement from the board containing the following elements: (i) a disclosure of the board's oversight of ESG issues; (ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritize and manage material ESG-related issues (including risks to the issuer's businesses); and (iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	Board Statement
Reporting Principles	A description of, or an explanation on, the application of the following Reporting Principles in the preparation of the ESG report: materiality, quantitative, consistency.	About the Report Materiality assessment
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	About the Report

### "Comply or explain" Provisions

#### A. Environmental

##### A1: Emissions

	General Disclosure: relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer Note: Exhaust emissions include nitrogen oxides, sulfur oxides and other pollutants subject to national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Hazardous waste means as defined by State regulations.	Integrating into circular economy, Insisting on green manufacturing
A1.1	The types of emissions and respective emissions data.	ESG Performance Table- Environmental data
A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	ESG Performance Table- Environmental data

<b>"Comply or explain" Provisions</b>		
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	ESG Performance Table-Environmental data
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	ESG Performance Table-Environmental data
A1.5	Description of emissions target(s) set and steps taken to achieve them.	"Dual Carbon" Pathway Insisting on green manufacturing
A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Integrating into circular economy
<b>A2: Use of Resources</b>		
	General Disclosure: Policies on efficient use of resources, including energy, water and other raw materials. Note: Resources can be used for production, storage, transportation, buildings, electronic equipment, etc.	"Dual Carbon" Pathway, Tackling climate change, Creating green products, Integrating into circular economy, Insisting on green manufacturing
A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kW·h in '000s) and intensity (e.g. per unit of production volume, per facility).	ESG Performance Table-Environmental data
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Integrating into circular economy
A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	"Dual Carbon" Pathway, Tackling climate change
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Integrating into circular economy
A2.5	Total packaging material used for finished products (in tonnes), and if applicable, with reference to per unit produced.	ESG Performance Table-Environmental data
<b>A3: The Environment and Natural Resources</b>		
	General Disclosure : Policies on minimizing the issuer's significant impacts on the environment and natural resources.	Protecting ecological conservation
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Protecting ecological conservation
<b>A4: Climate Change</b>		
	General Disclosure: Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Tackling climate change
A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Tackling climate change

**"Comply or explain" Provisions****B. Social****B1: Employment**

	General Disclosure: relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	Caring for employee development and building an employer brand
B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	ESG Performance Table-Social data
B1.2	Employee turnover rate by gender, age group and geographical region.	ESG Performance Table-Social data

**B2: Health and Safety**

	General Disclosure: relating to providing a safe working environment and protecting employees from occupational hazards (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	Caring for employee development and building an employer brand
B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Caring for employee development and building an employer brand ESG Performance Table-Social data
B2.2	Lost days due to work injury.	Caring for employee development and building an employer brand ESG Performance Table-Social data
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Caring for employee development and building an employer brand

**B3: Development and Training**

	General Disclosure : Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities Note: Training means vocational training and may include internal and external courses paid for by the employer.	Caring for employee development and building an employer brand
B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	ESG Performance Table-Social data
B3.2	The average training hours completed per employee by gender and employee category.	ESG Performance Table-Social data

**"Comply or explain" Provisions****B4: Labor Standards**

	General Disclosure: relating to preventing child and forced labor (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Caring for employee development and building an employer brand
B4.1	Description of measures to review employment practices to avoid child and forced labor.	Caring for employee development and building an employer brand
B4.2	Description of steps taken to eliminate such practices when discovered.	Caring for employee development and building an employer brand

**B5: Supply Chain Management**

	General Disclosure: Policies on managing environmental and social risks of the supply chain.	Guaranteeing quality excellence and casting a quality brand
B5.1	Number of suppliers by geographical region.	ESG Performance Table-Social data
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Guaranteeing quality excellence and casting a quality brand
B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Guaranteeing quality excellence and casting a quality brand
B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Guaranteeing quality excellence and casting a quality brand

**B6: Product Responsibility**

	General Disclosure: relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Guaranteeing quality excellence and casting a quality brand Responsible marketing-oriented and establishing a market brand
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	ESG Performance Table-Social data
B6.2	Number of products and service related complaints received and how they are dealt with.	Guaranteeing quality excellence and casting a quality brand ESG Performance Table-Social data
B6.3	Description of practices relating to observing and protecting intellectual property rights.	Responsible marketing-oriented and establishing a market brand
B6.4	Description of quality assurance process and recall procedures.	Guaranteeing quality excellence and casting a quality brand
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Guaranteeing quality excellence and casting a quality brand

**"Comply or explain" Provisions****B7: Anti-corruption**

	General Disclosure: relating to bribery, extortion, fraud and money laundering (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	Integrity system building
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Integrity system building ESG Performance Table-Social data
B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	Integrity system building
B7.3	Description of anti-corruption training provided to directors and staff.	Integrity system building
<b>B8: Community Investment</b>		
	General Disclosure: Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration communities' interests.	Undertaking social responsibility and building a responsible brand
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Undertaking social responsibility and building a responsible brand
B8.2	Resources contributed (e.g. money or time) to the focus areas.	Undertaking social responsibility and building a responsible brand ESG Performance Table-Social data

## TCFD index table

Area	Recommendation	Corresponding Report Location
Governance	Describe the board’s oversight of climate related risks and opportunities.	Tackling climate change-Climate change management
	Describe management’s role in assessing and managing climate related risks and opportunities.	
Strategy	Describe the climate related risks and opportunities the organization has identified over the short, medium, and long term.	Tackling climate change-Climate change management
	Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.	
	Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	—
Risk Management	Describe the organization’s processes for identifying and assessing climate related risks.	Tackling climate change-Climate change management
	Describe the organization’s processes for managing climate related risks.	
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.	
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	“Dual Carbon” Pathway ESG Performance table-Environmental data
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	
	Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.	

## SASB Standard index table

Topic	Accounting Metric	Unit of Measure	Corresponding Reporting Location
Greenhouse Gas Emissions	Direct Greenhouse Gas Emissions (Scope 1)	Metric tonnes (t)CO <sub>2</sub> -e	ESG Performance Table-Environmental data
	Percentage covered under emissions-limiting regulations, such as carbon trading	%	---
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	“Dual Carbon” Pathway
Air Quality	Air emissions of NOx	Metric tonnes (t)	ESG Performance Table-Environmental data
	Air emissions of SOx	Metric tonnes (t)	ESG Performance Table-Environmental data
	Air emissions of particulate matter (PM10)	Metric tonnes (t)	ESG Performance Table-Environmental data
	Air emissions of dioxins/furans	Metric tonnes (t)	---
	Air emissions of volatile organic compounds (VOCs)	Metric tonnes (t)	ESG Performance Table-Environmental data
	Air emissions of polycyclic aromatic hydrocarbons (PAHs)	Metric tonnes (t)	---
	Air emissions of heavy metals	Metric tonnes (t)	ESG Performance Table-Environmental data
Energy Management	Total energy consumed	kW · h	ESG Performance Table-Environmental data
	Percentage grid electricity	%	
	Percentage alternative	%	
	Percentage renewable	%	
Data Analysis Project	The difference between the total amount of electricity purchased and the amount of electricity generated from the grid	kW · h	ESG Performance Table-Environmental data
Water Management	Total fresh water withdrawn	m <sup>3</sup>	ESG Performance Table-Environmental data
	Percentage recycled	%	ESG Performance Table-Environmental data
	Percentage in regions with High or Extremely High Baseline Water Stress	%	ESG Performance Table-Environmental data

Topic	Accounting Metric	Unit of Measure	Corresponding Reporting Location
Waste Management	Amount of waste generated	Metric tonnes (t)	
	Percentage hazardous	%	ESG Performance Table-Environmental data
	Percentage recycled	%	
Biodiversity Impacts	Description of environmental management policies and practices for active sites	-	Protecting ecological conservation
	Terrestrial acreage disturbed	m <sup>2</sup>	ESG Performance Table-Environmental data
	Percentage of impacted area restored	%	ESG Performance Table-Environmental data
Workforce Health & Safety	Total recordable incident rate (TRIR)	Number	ESG Performance Table-Social data
	Near miss frequency rate (NMFR) for full-time employees	%	---
	Near miss frequency rate (NMFR) for contract employee	%	---
	Number of reported cases of silicosis	Number	ESG Performance Table-Social data
Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	%	---
	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	Ten thousand yuan	Creating green products
Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and anti-trust activities	Ten thousand yuan	---



## Index to the Reference Indicator System for the ESG Special Report of Listed Companies Controlled by Central Enterprises

Topic	Accounting metric	Corresponding reporting location
<b>E. Environmental</b>		
<b>E.1 Resource consumption</b>		
E.1.1 Water resources	Including Fresh water consumption; circulating water consumption; proportion of circulating water consumption; water consumption intensity	ESG Performance Table-Environmental data
E.1.2 Materials	Including: Non-renewable material consumption; consumption of toxic and hazardous materials; material consumption intensity	ESG Performance Table-Environmental data
E.1.3 Energy	Including: Fossil energy consumption; non-fossil energy consumption; proportion of non-fossil energy utilization; total energy consumption; energy consumption intensity	ESG Performance Table-Environmental data
E.1.4 Packaging materials	Including: Packaging material usage; reduction of packaging materials through packaging lightweight	Integrating into circular economy ESG Performance Table-Environmental data
<b>E.2 Pollution control</b>		
E.2.1 Waste water	Including: Discharge of waste water up to the standards; waste water management and emission reduction measures; waste water discharge; waste water pollutant discharge; discharge concentration of waste water pollutants	Insisting on green manufacturing ESG Performance Table-Environmental data
E.2.2 Waste gas	Including: Emissions of waste water up to the standards; emissions of waste gas pollutants; emission concentration of waste gas pollutants	Insisting on green manufacturing ESG Performance Table-Environmental data
E.2.3 Solid waste	Including: Compliant solid waste disposal; general industrial solid waste management; general industrial solid waste disposal; hazardous waste management; hazardous waste disposal	Integrating into circular economy ESG Performance Table-Environmental data
<b>E.3 Climate change</b>		
E.3.1 Greenhouse gas emissions	Including: Sources and types of greenhouse gases; greenhouse gas emission management; Scope 1 emissions; Scope 2 emissions; Scope 3 emissions; greenhouse gas emission intensity	“Dual Carbon” Pathway ESG Performance Table-Environmental data

Topic	Accounting metric	Corresponding reporting location
E.3.2 Emission reduction management	Including: Greenhouse gas emission reduction management; greenhouse gas emission reduction	“Dual Carbon” Pathway Tackling climate change
E.3.3 Environmental equity transactions	Including: Trading in the market for carbon emissions; trading in the market for energy, water pollution and emission permits; trading in the green power market	—
E.3.4 Climate risk management	Description of the Company's strategy and management system for climate risk management	Tackling climate change
<b>E.4 Biodiversity</b>		
E.4.1 Impacts of manufacturing, services and products on biodiversity	Description of the impacts of the Company's production activities, services and products on biodiversity	Protecting ecological conservation
<b>E.5 Resource and environmental management system policies</b>		
E.5.1 Formulation of low-carbon development goals and strategic measures	Description of strategies, management systems and specific measures of the Company to achieve green, low-carbon and high-quality development, talent cultivation, as well as publicity and promotion	Insisting on green manufacturing
E.5.2 Resource management measures	Including: Water resource consumption management; material use management; energy use and energy saving management	Tackling climate change Integrating into circular economy
E.5.3 Energy saving and carbon reduction statistical monitoring and assessment reward and punishment system	Description of the Company's specific systems and measures in monitoring, measurement, statistics and reporting, as well as the assessment in terms of energy saving and carbon reduction, including the original records and statistical co-accounting systems, and the establishment of a system for reward, punishment and incentive	“Dual Carbon” Pathway
E.5.4 Green actions and measures	Including: Clean production; green technology innovation and recycling; green building transformation; green office and operation; green procurement and green supply chain management; environmental protection public welfare activities	Insisting on green manufacturing
E.5.5 Green and low-carbon certifications	Including: Environmental management system certification; green and low-carbon enterprise certification; certification of green and low-carbon products and services	Insisting on green manufacturing
E.5.6 Environmental compliance	Including: Emergency plan for environmental emergencies; violations of laws and regulations in the field of environment	Insisting on green manufacturing

Topic	Accounting metric	Corresponding reporting location
<b>S Social</b>		
<b>S1 Employee rights and interests</b>		
S1.1 Staff recruitment and employment	Including: Corporate recruitment policy and implementation; staff structure; avoidance of child or forced labor	Caring for employee development and building an employer brand
S1.2 Employee remuneration and benefits	Including: remuneration philosophy and policy; working hours, leaves and holidays; remuneration and welfare guarantee; democratic management of employees	Caring for employee development and building an employer brand
S1.3 Employee health and safety	Including: Employee occupational health and safety management; employee safety risk prevention and control; response to safety accidents and work-related injuries; staff care and help	Caring for employee development and building an employer brand
S1.4 Staff development and training	Including: Employee motivation and promotion policies; staff education and training; staff career planning and post change support	Caring for employee development and building an employer brand
S1.5 Employee satisfaction	Including: Employee satisfaction survey; labor disputes; employee turnover	Caring for employee development and building an employer brand ESG Performance Table-Social data
<b>S2 Product and service management</b>		
S2.1 Product safety and quality	Including: Production standard management policies and measures; quality management; product recall and withdrawal; negative product or service events	Guaranteeing quality excellence and casting a quality brand
S2.2 Customer service and rights	Including: Customer satisfaction; customer complaints and handling; customer information and privacy protection	Guaranteeing quality excellence and casting a quality brand
S2.3 Innovative development	Including: Research and development and innovation management system; research and development investment; innovation accomplishments; intellectual property protection	Creating green products Responsible marketing-oriented and establishing a market brand
<b>S3 Supply chain security and management</b>		
S3.1 Supplier management	Including: Supplier selection and management; number and distribution of suppliers	Guaranteeing quality excellence and casting a quality brand ESG Performance Table-Social data

Topic	Accounting metric	Corresponding reporting location
S3.2 Supply chain management	Including: Supply chain management policies and measures; supply chain security assurance and emergency plan; significant risks and impacts (supply chain)	Guaranteeing quality excellence and casting a quality brand
<b>S4 Social contribution</b>		
S4.1 Tax payment	Description of the Company's policies and measures on tax payment and amounts	Please refer to CNBM 2023 Annual Report
S4.2 Prosperity with the community	Including: Policies and measures in building local community; contribution to and impact on local community	Undertaking social responsibility and building a responsible brand
S4.3 Social welfare activities	Including: Policies and measures for participating in social welfare activities; the input and effectiveness of participating in social welfare activities; barrier-free environment construction	Undertaking social responsibility and building a responsible brand
S4.4 National strategic response	Including: Industrial transformation; rural revitalization and regional coordinated development; the belt and road and overseas responsibilities; industry characteristics and other social responsibility performance	Undertaking social responsibility and building a responsible brand
<b>G1 Governance policy and organizational structure</b>		
G1.1 Governance policies and processes	Including: Governance strategy formulation; governance strategy monitoring process; governance strategy approval and review process; leadership of the Party building	Internal control compliance and risk management And please refer to CNBM 2023 Annual Report
G1.2 Organizational structure and functions	Including: Ownership duties; organizational structure and functions of the board of directors, the board of supervisors and management; appointment procedures and composition of the board of directors, the board of supervisors and management	Board Statement And please refer to CNBM 2023 Annual Report
G1.3 Remuneration management	Including: Remuneration plan for directors and supervisors; transparency of board remuneration; rationality of management remuneration	Caring for employee development and building an employer brand And please refer to CNBM 2023 Annual Report
<b>G2 standardized governance</b>		
G2.1 Internal control	Including: Internal audit; Internal control structures, mechanisms and processes	Internal control compliance and risk management
G2.2 Integrity building	Including: Integrity building system standard; effectiveness of integrity building measures;	Integrity system building

Topic	Accounting metric	Corresponding reporting location
G2.3 Fair competition	Including: Fair competition system regulations; effectiveness of fair competition measures	Internal control compliance and risk management
<b>G3 Investor relations management and shareholder equity</b>		
G3.1 Investor relations management	Including: Investor relations management strategy; investor communication; construction of investor relations management department	Materiality assessment And please refer to CNBM 2023 Annual Report
G3.2 Shareholders' equity	Including: The shareholders' (major) meeting; shareholder communication; shareholders' rights to information, and participation in decision-making	Please refer to CNBM 2023 Annual Report
G3.3 Creditors' equity	Including: Credit information; bond market performance	Please refer to CNBM 2023 Annual Report
<b>G4 Transparency of information disclosure</b>		
G4.1 Information disclosure system	Including: Financial information disclosure; non-financial information disclosure	About the Report And please refer to CNBM 2023 Annual Report
G4.2 Quality of information disclosure	Regular monitoring, audit and evaluation of all disclosures	Independent Limited Assurance Report And please refer to CNBM 2023 Annual Report
<b>G5 Compliant operations and risk management</b>		
G5.1 Compliant operations	Including: Compliant operation system; compliance system construction; specific process of compliance review	Internal control compliance and risk management
G5.2 ESG risk management	Including: Risk identification and early warning; risk control and tracking; risk reporting and management	Internal control compliance and risk management

# Definitions

In the Report, unless the context otherwise requires, the following terms shall have the meanings set out below:

“CNBM” , “Company”	China National Building Material Company Limited	“Listing Rules”	the Rules Governing the Listing of Securities on the Stock Exchange as amended from time to time
“Group”	The Company and, except where the context otherwise requires, all its subsidiaries	“Two Highs”	High energy consumption and high emissions
“Parent” , “CNBMG”	China National Building Material Group Co., Ltd. (previously known as China National Building Materials Group Corporation)	“Dual Carbon”	Peaking carbon emissions and achieving carbon neutrality
“PRC”	The People’ s Republic of China	“Double Materiality”	Financial materiality and impact materiality
“Country” , “State”	The Chinese government, including all government departments (including provincial, municipal and other regional or local government agencies) and their branches	“Beijing Composite”	Beijing Composite Materials Co., Ltd
“ESG”	Environmental, Social and Governance	“BNBM”	Beijing New Building Material Public Limited Company
“Report”	The Company’ s 2023 Environmental, Social and Governance Report	“BNBMG”	Beijing New Building Material (Group) Co., Ltd
“Reporting Period”	The period from 1 January 2023 to 31 December 2023	“Taishan Gypsum”	Taishan Gypsum Co., Ltd.
“Independent third party”	A person or company independent of the Company or its associates (as defined in the Listing Rules)	“Longpai Gypsum”	Longpai Gypsum Board (Saint-gobain Gypsum Board)
“H-shares”	Overseas listed foreign shares of the registered capital of the Company with a par value of RMB 1.00 per share, which are listed on the Stock Exchange and purchased and traded in Hong Kong dollars	“BNBM Hezhou”	BNBM (Hezhou) Co., Ltd.
“Shares”	Ordinary shares of the Company with a par value of RMB 1.00 each, including domestic shares and H-shares	“Dream Brand”	Dream Brand New Materials Co.,Ltd
“Shareholders”	The holders of shares	“BNBM Tanzania”	BNBM Building Materials Industry (Tanzania) Limited
“RMB”	Renminbi yuan, the lawful currency of the PRC	“BNBM Central Asia”	BNBM Building Materials Central Asia LLC
“Stock Exchange”	The Stock Exchange of Hong Kong Limited	“BNBM Waterproof”	BNBM Waterproof Co., Ltd.
		“Building Materials Academy”	China Building Materials Academy Co., Ltd.
		“TCDRI”	Tianjin Cement Industry Design & Research Institute Co., Ltd
		“CNBM Investment”	CNBM Investment Company Limited (previously known as “Beijing New Logistics Co., Ltd” )
		“China Construction Investment Vanuatu”	China Construction Investment Company Vanuatu Virk Limited
		“BNBM PNG”	BNBM PNG Limited

“China Standard Sand”	China ISO Standard Sand Co., Ltd.
“CBMI Construction”	CBMI Construction Co., Ltd.
“CNBM Trading”	China National Building Material Import and Export Co., Ltd.
“China Composites”	China Composites Group Corporation Limited
“Zhongfu Shenying”	Zhongfu Shenying Carbon Fiber Co., Ltd.
“China Jushi”	China Jushi Co., Ltd. (previously known as China Fiberglass Company Limited)
“Jushi Egypt”	Jushi Egypt for Fiberglass Industry S.A.E
“Sinoma Graphite”	CNBM Graphite New Materials Co., Ltd.
“South Graphite”	South Graphite Co., Ltd.
“Cinda”	China Cinda Asset Management Co., Ltd.
“CTG”	Taishan Fiberglass Inc.
“Ningxia Building Materials”	Ningxia Building Materials Group Co., Ltd.
“Qingtongxia Cement”	Ningxia Qingtongxia Cement Shareholding Co., Ltd.
“Sinoma Gansu Cement”	Sinoma (Gansu) Cement Co., Ltd.
“Kharachi”	Kharachi Grassland Cement Co., Ltd.
“Wuhai Saima”	Wuhai Saima Cement Co., Ltd.
“Saima Kejin”	Ningxia Saima Kejin Concrete Co., Ltd.
“NRDI”	Nanjing Fiberglass R&D Institute Co., Ltd.
“Hengzhou Special Fiberglass”	Hengzhou Special Glass Fiber Material Company
“Sinoma Blade”	Sinoma Wind Power Blade Co., Ltd.
“Sinoma International”	Sinoma International Engineering Co., Ltd.
“Equipment Group”	China Sinoma Equipment Group Company

“Sinoma-CDI”	Chengdu Design & Research Institute of Building Materials Industry Co., Ltd
“Hefei Institute”	Hefei Cement Research & Design Institute Co., Ltd.
“CNBM Smart”	CNBM Smart Industry Technology Co, Ltd.
“Sinoma Overseas”	Sinoma Overseas Engineering Co., Ltd.
“Sinoma Overseas Argentina”	Argentina subsidiary of Sinoma Overseas Engineering Co., Ltd
“Sinoma Shangrao”	Sinoma (Shangrao) Machinery Limited Company
“Sinoma Science & Technology”	Sinoma Science & Technology Co., Ltd.
“Sinoma Intelligent Technology”	Sinoma International Intelligent Technology Co., Ltd.
“Suzhou Limited”	Sinoma Science & Technology (Suzhou) Co., Ltd.
“Sinoma Lithium Separator”	Sinoma Lithium Battery Separator Co., Ltd.
“Inner Mongolia Lithium Separator”	Sinoma Lithium Battery Separator (Inner Mongolia) Co., Ltd.
“Ningxiang Lithium Separator”	Sinoma Lithium Battery Separator (Ningxiang) Co., Ltd.
“Sinoma Mining”	Sinoma Mine Construction Co., Ltd.
“Sinoma Suzhou”	Sinoma (Suzhou) Construction Co., Ltd.
“South Cement”	South Cement Company Limited
“North Cement”	North Cement Company Limited
“New Tianshan Cement”	Xinjiang Tianshan Cement Co., Ltd., the entity after business integration
“Sanmenxia Tengyue Cement”	Sanmenxia Tengyue Tongli Cement Co.
“Southwest Cement”	Southwest Cement Co., Ltd.

“CUCC”	China United Cement Corporation
“CUCC Qingzhou”	China United Cement Qingzhou Co., Ltd.
“CUCC Pingyi”	China United Cement Pingyi Co., Ltd.
“CUCC Donging”	China United Concrete Dongying Co., Ltd.
“CUCC Beichuan”	China United Concrete Beichuan Co., Ltd.
“Yulong Tongli”	Zhumadian Yulong Tongli Cement Co., Ltd.
“CNBM Chizhou”	CNBM Chizhou New Materials Co., Ltd.
“Sanming South”	Fujian Sanming South Cement Co., Ltd.
“Jiahua Special Cement”	Jiahua Special Cement Company Limited
“Yunnan Cement”	Yunnan Southwest Cement Company Limited
“Sichuan Lisen Building Materials”	Sichuan Lisen Building Materials Group Co., Ltd.
“Huzhou South Mining”	Huzhou South Mining Co., Ltd.
“Huaneng Renewables”	Huaneng Renewables Corporation Limited
“CRRC”	CRRC Corporation Limited





# Feedback



Thank you for reading the 2023 ESG Report of CMBM. To better meet your needs and provide you with more valuable information, we expect you to fill the feedback form with valuable opinions and suggestions and send it to [esg@cnbm.com.cn](mailto:esg@cnbm.com.cn).



◇ Which of the following stakeholders do you belong to:

- Government and regulatory institutions  Shareholders/Investors  Employees  
 Clients  Suppliers/Contractors  Business Partners  Members of  
communities/organizations  Media  Others

◇ Your comments on the Report:

- Poor  Average  Good  Very Good

◇ Your comments on CNBM' s fulfillment of social responsibility for stakeholders:

- Poor  Average  Good  Very Good

◇ Do you think the Report reflects the influence of CNBM' s fulfillment of social responsibilities on environment and society:

- No  Average  Yes

◇ Do you think the information disclosed in the Report is complete:

- No  Average  Yes

◇ Do you think the content and format of the Report is clear and understandable:

- No  Average  Yes

◇ Other opinions and suggestions on improving and enhancing CNBM' s fulfillment of social responsibilities and the Report:

Thanks for your concern of and support to CNBM!



WeChat official account

**China National Building Material Company Limited**

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CNBM adheres to green development and builds a globally leading green industrial system.