

2016

CHINA NATIONAL BUILDING MATERIAL GROUP CO., LTD
Sustainability Report

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Sustainability Report 2016



CBMI DEVNYA Cement Project in Bulgaria



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Notes

This Report truly reflects China National Building Material Group Co., Ltd.'s (CNBM) sustainability and social responsibility performance.

Special Announcement

On August 26th, with the approval of SASAC, China National Building Materials Group Corporation (CNBM) and China National Materials Group Corporation (Sinoma) carried out reorganization. Sinoma was transferred into CNBM with no compensation for exchange. After the reorganization, CNBM has a new name and will act as the parent company.

Period Covered by the Report

January 1st to December 31st, 2016; given the ongoing continuity of certain businesses and projects, some contents involve the first and second quarters of 2017, the details of which are indicated in the Report.

Reporting Cycle

Annual report.

Entities Covered by the Report

All wholly-owned or controlled (including absolutely and relatively controlled) members of CNBM. For brevity, the terms 'CNBM', the 'Group' and 'We' are used in the Report to refer to China National Building Material Group Co., Ltd..

Data Sources

All the information and data used herein comes from the Headquarters and member companies of CNBM. Notes have been made in the Report to indicate information from external references. Unless otherwise stated, all monetary amounts are expressed in RMB.

Which report is this? How can I obtain these reports?

This is the seventh social responsibility report released by CNBM and starting from this issue, the report is renamed as Sustainability Report. You can request the print version of each year's report via the contact information on the cover. You can also scan the QR code below or log onto <http://www.cnbm.com.cn/EN/> to download the electronic version and receive further related information.



How was this report prepared?

This report was prepared according to the *Guidelines for the Preparation of Corporate Social Responsibility Reports in China (CASS-CSR 3.0)* issued by the Chinese Academy of Social Sciences, *CNBM Administrative Social Responsibility Fulfillment Measures and CNBM Social Responsibility Management Information Collection Measures*. The detailed preparation process is as follows:

Preparation Process of CNBM Annual Sustainability Report

1.Project startup Defining the annual work plan, convening meetings and issuing documents	2. Identifying core topics and boundaries Analyzing stakeholders' concerns, identifying annual major topics, studying CSR standards and guidelines and new trends	3. Printing and distributing information list Defining the indicators for information system, making list of annual case examples
4. Collecting materials Collecting and analyzing materials from member companies, functional departments and offices and media reports	5. Writing report Drawing up report framework, defining topics, and compiling first draft	6. Consultation Consulting CSR leading group, functional departments and offices of Headquarters, member companies, stakeholders and CSR experts
7. Improvement Revising text, verifying data and self-checking standards	8. Design Readability, innovation and consistency	9. Evaluation Evaluating according to the <i>Rating Standards of Corporate Social Responsibility Reporting in China (2014)</i>
10. Issuance Delivering to stakeholders via multiple carriers and channels	11. Summary and Promotion Analyzing deficiencies and making improvement plans	

How can the data released in the Report be guaranteed?

The financial data in the Report is derived from the CNBM 2016 Annual Financial Statement which has been audited by Baker Tilly China.

The external data in the Report is derived from the data released by third parties through media, the sources of which are indicated in the Report.

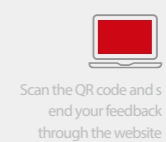
The non-financial data in the Report is derived from CNBM's CSR information management system. The data in the system was faithfully reported by the functional departments and offices of the CNBM Headquarters and its member companies in accordance with the *CNBM Social Responsibility Management Information Collection Measures*. The data of member companies was submitted to the Headquarters after being approved at all levels; each department or office of the Headquarters reviewed the data from member companies and then verified the data through sampling at a proportion of at least 5% in order to ensure its standardization, reliability and authenticity.

Standards, benchmarking and evaluation of the Report

The preparation of the Report is based on the *Sustainable Development Report (G4)* published by the Global Reporting Initiatives (GRI), the *Social Responsibility Guide (ISO26000)* issued by the International Organization for Standardization (ISO), the *Guidelines for the Preparation of Corporate Social Responsibility Reports GB/T36001-2015* and the *Guidelines for the Preparation of Corporate Social Responsibility Reports in China (CASS-CSR 3.0)* issued by the Chinese Academy of Social Sciences, etc. Please refer to pages 88-91 of the Report for the benchmarking between the Report and CASS-CSR 3.0 and the evaluation results.

How to give feedback and contact us?

You can complete the feedback page at the end of the Report and send it to us through fax or mail, visit the official website of our company or scan the QR code below and fill in your opinions on the website or WeChat; you can also contact us directly through the contact information on the back cover.



Scan the QR code and send your feedback through the website



Scan the QR code and send your feedback through WeChat

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Chairman's Address

From 'Large' to 'Great'

—CNBM's Path of Sustainable Development



China National Building Material Group Co., Ltd. (CNBM) is in a new stage of development. On August 26th, 2016, the original CNBM incorporated with SINOMA. CNBM became the "aircraft carrier" in the world building materials area. The objective of the new group is not just to be large in scale but to move from being 'large' towards being 'great' a world-class comprehensive building materials industry group.

China's economy is currently in a crucial stage of the continuous transformation of the old and new momentum, as well as economic restructuring and upgrading. If scale expansion is the first 'Long March' of Chinese enterprises since reform and opening up, the second Long March is transition from Large to Great. A great enterprise has three important features: the first is having large industry scale and strong market influence; the second is achieving top-ranking business performance and creating long-term value for the shareholders; the third is having strong sustainable development capacity to remain invincible through self-regulation regardless of what happens in the market.

The innovative transformation from 'large' to 'great' is an inevitable course, a breakthrough path and a road of opportunity for the second Long March. The new CNBM is determined to become a great company and lay a solid foundation for sustainable development. Our strategic vision is to build a world-class comprehensive building materials industry group in the building materials industry, and our positioning is to become a leader of industrial consolidation, an innovator of transformation and upgrading, and a pioneer of production capacity cooperation among international communities. By creating the 'three curves' through innovation, green development, and international cooperation, we aim at a high-end, intelligent, green and international transformation.

Being high-end means enhancing structural adjustment and technological innovation, further extending the industrial chain through the comprehensive application of such models as manufacturing industry servicization, the combination of production and research, and integrated innovation, constantly upgrading towards higher end of the value chain and increasing the overall value of the enterprise. A large number of high-end CNBM products have sprung up, including special cement, electronic glass, photovoltaic (PV) glass, ultralight and super strong plasterboard, top-grade glass fiber electronic yarn, CIGS cells, T-800 carbon fiber, lithium battery packs and industrial ceramics.

Intelligence is the core of 'Industry 4.0' and 'Made in China 2025', and it's also the major transformation and upgrading direction of the manufacturing industry. China United Cement Taishan Co., Ltd. has built the world's first 'Industry 4.0' intelligent 'dream cement factory'. The factory has realized 'unmanned' production through of GPS positioning, mobile internet, big data

processing, and artificial intelligence systems. The management of the production line is therefore smooth, and the indicators of energy efficiency, environmental protection and performance have reached the world advanced level. Through deeply integrating intelligence with high-end products, we can match individualized consumer demands with mass production, and achieve cross-boundary operation, thus promoting digitization of key equipments, enhancing intelligence of technological flow, reducing costs, saving energy and increasing efficiency.

'Green' means actively responding to climate change and overcapacity, safeguarding global ecological security and adhering to green, low-carbon and cyclical development. Upholding strong moral values, CNBM places the environment, security, quality, technology and costs in order of importance and implemented the 'Blue Sky Responsibility' action plan. We have been vigorously promoting energy conservation, emission reduction, transformation and upgrading in keys fields such as energy conservation and cost reduction, pollution and emission reduction, ecological protection, and circular economy. In terms of raw material, we stick to the idea of circular economy to use industrial waste and urban construction waste as much as we can. Our annual consumption of industrial waste has exceeded 100 million tons. During production, we strive for zero emission of waste water, gas and material, and try to improve our recycling capacity, leading the industry in energy conservation, output-restriction and self-regulated emission reduction. For product application, we place importance on energy conservation, environmental protection, comfort and health, and strive to provide quality and environmentally friendly products.

'International' means actively promoting the 'Going Out' of equipment and international production capacity cooperation, fully exploring the big market of One Belt, One Road, innovating 'Going Out' strategies and trying to build the technical equipment of building materials as the new brand name of Chinese industry. We are committed to build more hidden champions, advance our technology, and explore the international market, with the goal of changing from "being the world's factory" to "the world is our factory". We will focus on the mid-to-high-end international market, improve the cost effectiveness of our products and place emphasis on international production capacity cooperation. While attaching importance to countries along the 'Belt and Road' Initiative, we also view Europe and the United States as our important markets.

CNBM's path of sustainable development is based on the 'three curves' of industrial innovation, transformation and upgrading.

The first curve is the upgrading of existing industries. CNBM has carried out structural adjustment in its two traditional industries of cement and glass, pushed forward supply-side

structural reform improved the quality and efficiency. We will refine our cement business operations, carry out in-depth integration, consolidate the core profit business, promote industrial competition and cooperation, and create a better market condition. We will pursue 'high-performance, specialized, and commercialized' development, strengthen the transformation of equipment and technology, and promote energy conservation and emission reduction and cost effectiveness. We will also strengthen our glass business, extend the industrial chain, upgrade the business in the 'electronic, photovoltaic, intelligent and energy-saving' direction, and increase the added value of our products.

The second curve is the upgrading of new technological industries. We will develop the three-new industries of new building materials, new housing and new energy materials to create new growth points. In terms of the new building materials, we will improve the industrial structure of the plasterboard business and high-end products increase the added value of the products. For the new housing business, we will develop lightweight steel frame structure and prefabricated reinforced concrete structure, as well as a supporting system of housing components. We will promote the Energy Plus 5.0 housing system, build 'green towns' and provide solutions for smart ecological residences and old-age care residences. For the new energy materials business, we will optimize our competitive industries such as wind turbine blades, high-performance fiber glass, electronic glass and high-grade refractories, improve and expand the manufacturing and market capacity of products such as high-performance carbon fiber, photovoltaic (PV) glass, CIGS thin-film solar cells and graphite, and make breakthroughs in the fields of building integrated photovoltaics and photovoltaic agriculture. We will also enter the field of new energy power station and improve our new energy industrial chain.

The third curve is the upgrading of manufacturing services by enhancing innovation and technical services. First, we will develop large-scale research and service platforms. We will give full play to the role of China Building Materials Academy (CBMA) as a magnetic field of innovation, and open platforms for R&D and services. With large scale R&D, we can have a bright future. The second is Internet plus services. We will use "Internet plus" to optimize our service and promote new foreign trade mode such as "cross-border e-commerce+overseas warehousing" and BNBH HOME, so as to build a world-leading comprehensive service system. The third is carbon trading testing and certification services. China Building Material Test & Certification Group Co., Ltd. (CTC) is the largest third-party testing & certification service provider in China's building materials industry and an industrial technology service platform; it is also China's first CDM-designated operational entity in the industry to provide third-party carbon

emission verification service. The fourth is EPC engineering services. We will actively explore the overseas engineering services market and innovate the EPC construction mode. We will also deepen our cooperation with industry partners, make full use of the Internet, information and smart technology, consolidate investment, management and follow-up services, and create a new era of equipment going out. The fifth is production and manufacturing services. Through the construction of smart industry plus smart port, we will adopt the GE mode, focus on customer demands and carry out remote operation and maintenance, as a total service package of operation and maintenance.

Despite the challenges and difficulties, we will forge ahead. A great company is essentially shaped and driven by value creation, which has to be realized through innovation and transformation. We have the confidence, determination and perseverance to build a long lasting enterprise with foresight and commitment to excellence through the second Long March. CNBM's ultimate goal is to join hands with the stakeholders to create the greatest welfare for the greatest number of people.

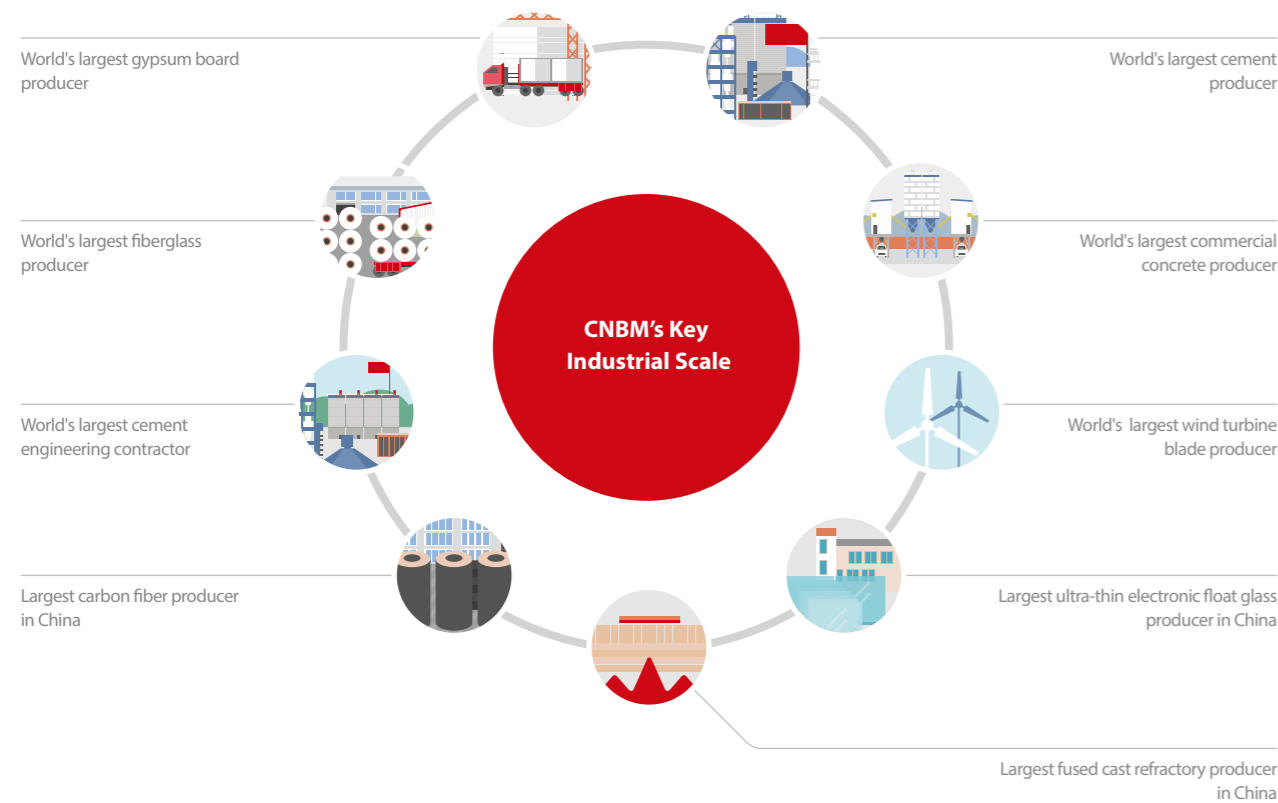
Chairman Song Zhiping

Company Profile

China National Building Material Group Co., Ltd. (CNBM) was founded through the merger of China National Building Materials Group Corporation and China National Materials Group Corporation. Having integrated scientific research, manufacturing and Logistics, CNBM is not only the largest comprehensive building materials group in China, but also the leading such group in the world. CNBM has been listed in the Fortune Global 500 for six consecutive years. As at the end of 2016, the total assets of the Group amounted to RMB 564.5 billion and its total number of employees reached 234,511. In 2016, CNBM achieved a revenue of RMB 261.2 billion and a total profits of RMB 7.6 billion, while its taxes paid amounted to RMB 15.7 billion. Headquartered in Beijing, CNBM has over 1,600 member companies

and controls 15 listed companies, including 3 overseas listed companies. The Group can produce 520 million tons of cement, 470 million m³ of ready-mix concrete, 2 billion m² of plasterboard, 1.85 million tons of fiberglass and a 16 GW capacity of wind turbine blades per year, all of which rank first in the world. The Group is also the No. 1 player in the international cement engineering market and international cogeneration market. The Group has 26 national scientific research and design institutes, 38,000 scientific research and development employees, 33 national industrial quality inspection centers, 8,408 patents, 3 national key laboratories, 8 national engineering (technology) research centers and 18 standardization committees.

The strategic vision of CNBM is to be a world-class comprehensive building materials group. Its strategic positioning is to be a leader of industrial integration, an innovator of industrial upgrading and a pioneer of international capacity cooperation. Its priority is to build six business platforms; namely, the basic building materials platform, international capacity and equipment cooperation platform, three-new industries platform, national scientific material research platform, national mining resources platform, and financial investment and operation platform.



Management Team

The Board of Directors of CNBM has 13 members, 7 of whom are external directors; there are 4 special committees under the Board of Directors, of which the Remuneration and Appraisal Committee and

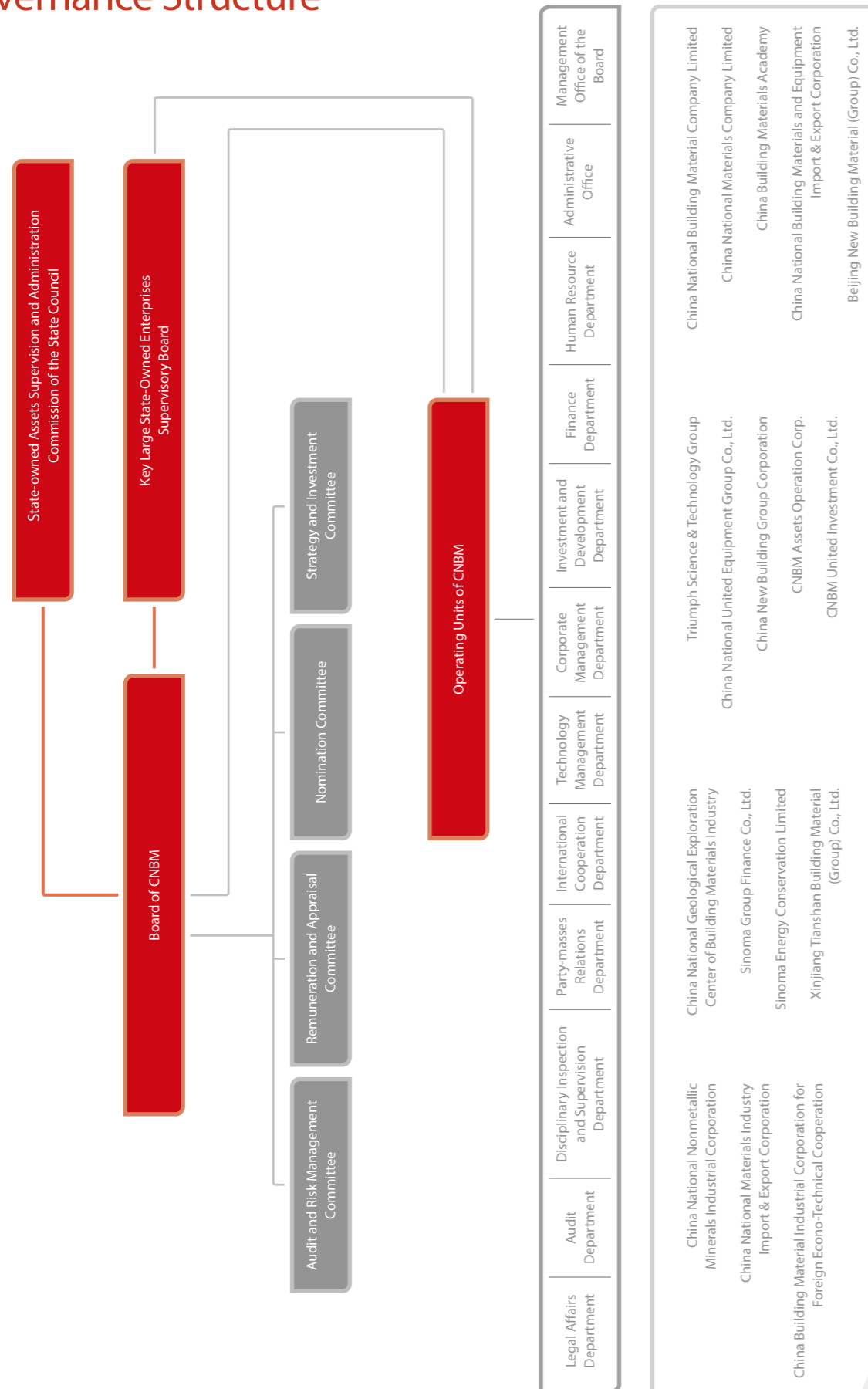
the Audit and Risk Management Committee consist solely of external directors. As the strategic, resource and cultural center, the CNBM Headquarters exercises the rights and perform the duties of the capital contributors.

Management Team of CNBM¹

Song Zhiping Chairman and Deputy Party Committee Secretary	Liu Zhijiang Vice Chairman and Party Committee Secretary	Yao Yan Vice Chairman and Party Standing Committee Member	Cao Jianglin Director, President and Party Standing Committee Member	Li Xinhua Vice Chairman and Party Standing Committee Member	
Zhao Xiaogang External Director	Chen Jin'en External Director	Zhao Jibin External Director	Sha Ming External Director	Xu Lipeng External Director	Zhang Yanling External Director
Liu Xinquan External Director	Wang Yumeng Staff Director and Trade Union Chairman				
Zhang hai Vice President and Party Standing Committee Member	Xu Weibing Vice President and Party Standing Committee Member	Sun Lishi Deputy Party Committee Secretary	Huang Anzhong Vice President and Party Standing Committee Member	Wu Jiwei Chief Accountant and Party Standing Committee Member	Yang Jie Discipline Inspection Commission Secretary and Party Standing Committee Member

¹As of August 2016, Hao Zhenhua does not serve as the Director and Deputy Party Committee Secretary of the Group; Lu Xiaoqiang, Zhu Yanfu and Peng Xuefeng do not serve as External Directors of the Group; and Guo Chaomin and Ma Jianguo do not serve as Vice Presidents and Party Standing Committee Members of CNBM.

Governance Structure



Business Activities

Basic Building Materials Platform

Cement

CNBM has an annual production capacity of 520 million tons of cement and 470 million m³ of ready-mix concrete, both of which rank first in the world.

Leading Enterprises
China United Cement Corporation, South Cement Company Limited, North Cement Company Limited, Southwest Cement Company Limited, CNBM Investment Co., Ltd., Sinoma Cement Co., Ltd., Xinjiang Tianshan Cement Joint-stock Cement Company Limited, Ningxia Building Materials Group Co., Ltd., and Gansu Qilianshan Cement Group Co., Ltd.

Float Glass

CNBM has an annual production capacity of 19.2 million weight cases of high-quality float glass. We can produce ultra-thin glass products from 0.15 mm to 1.3 mm.

Leading Enterprises
Triumph Science & Technology Group

“ You are the best producer of glass in China. You have world-class technologies and the best glass platform in China. ”

—Mr. Liu Qibao, Member of the Politburo of the Communist Party of China, Secretary of the Secretariat and Head of the Publicity Department of the Central Committee

International Capacity and Equipment Cooperation Platform

Engineering and Production Services

We continuously maintain a leading position in the markets of cement and glass engineering, mine engineering, cogeneration engineering, energy conservation and environmental protection, etc; we are expanding our market shares in fields of new glass, new energy, new materials, new buildings and so on.

Leading Enterprises
Sinoma International Engineering Co., Ltd., China Triumph International Engineering Co., Ltd., Sinoma Energy Conservation Limited, China New Building Materials Design & Research Institute, Hefei Cement Research & Design Institute and Qinhuangdao Glass Industry Research & Design Institute

Equipment Manufacturing

With over 20 equipment manufacturing enterprises forming a production base, CNBM has established an industrial service platform with complete categories, advanced technology, high-quality equipment, exquisite workmanship and full support.

Leading Enterprises
Triumph Science & Technology Group, China Triumph International Engineering Co., Ltd., Hefei Cement Research & Design Institute, China National United Equipment Group Co., Ltd. and Sinoma Technology & Equipment Group Co., Ltd.

Logistics & Trading

We use new Internet technologies to efficiently integrate the service links of bulk building material suppliers, logistics and transportation, insurance and credit, and inspection and quarantine; we provide full-package, comprehensive solutions for international trade, and are listed as an import enterprise enjoying major support and a key business circulation enterprise by the Ministry of Commerce.

Leading Enterprises
China National Building Materials and Equipment Import & Export Corporation, Beijing New Building Materials (Group) Co., Ltd., CNBM Investment Co., Ltd. and China National Materials Industry Import & Export Corporation

Three-new Industries Platform

New Materials

Lightweight Building Materials



CNBM's annual production capacity of plasterboard is about 2 billion m², ranking first in the world. We have high-end brands in the international market and proprietary intellectual property rights, as well as 54 major industrial bases. We possess three business sectors; namely, the wall and suspended ceiling system, housing parts and architectural energy conservation system, and exterior building envelope system. We provide an application solutions package for public buildings and family housing with our complete product system.

Leading Enterprises
BNBM Public Limited Company and Taishan Gypsum Co., Ltd.

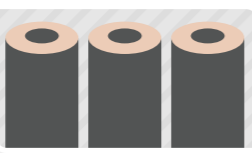
Fiberglass



CNBM's annual production capacity of fiberglass is 1.85 million tons, ranking first in the world. We have the world's largest alkali-free tank furnace production line with an annual capacity of 120,000 tons, and a national enterprise technology center. We possess the proprietary intellectual property rights of such packaged technologies as alkali-free tank furnaces, medium alkali tank furnaces, fiberglass waste silk recycling process, and so on. We also have several production bases in Tongxiang of Zhejiang, Jiujiang of Jiangxi, Chengdu of Sichuan, Tai'an of Shandong, Zoucheng of Shandong and Egypt.

Leading Enterprises
China Jushi Co., Ltd., Taishan Fiberglass Inc. and Sinoma Jinjing Fiberglass Co., Ltd.

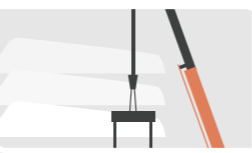
Carbon Fiber



We have a 1,000-ton carbon fiber production line which features the largest scale and most advanced technology in China. We have reached an annual production capacity of 10,000 tons of PAN silk and 4,600 tons of carbon fiber. We possess the first production line in China to successfully produce high-quality T700 PAN silk & carbon fiber and T800S carbon fiber with good performance. We can also produce ACCC conductors with a sectional area of 150-1,250 mm² that can be applied in transmission lines of 35-1,000 KV.

Leading Enterprises
Zhongfu Shenyang Carbon Fiber Co., Ltd. and Zhongfu Carbon Fiber Core Cable Technology Co., Ltd.

Wind Turbine Blades



CNBM's annual production capacity of wind turbine blades reaches 16 GW, ranking first in the world. We have 9 series and 58 types of products with categories ranging from 1.25 MW to 6.7 MW, and blade length varying from 31 m to 80 m. We possess blade production bases in Yanqing of Beijing, Funing, Pingxiang, Handan, Xilinhot, Baicheng, Lianyungang, Shenyang, Jiuguang, Baotou, Hami and Guizhou, an R&D center in Germany and a national blade testing center.

Leading Enterprises
Sinoma Wind Power Blade Co., Ltd. and Zhongfu Lianzhong Composites Group Co., Ltd.

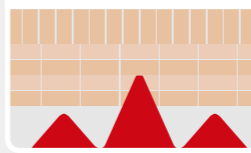
New Glass Materials



CNBM's annual production capacity of ultra-thin electronic float glass reaches 240,000 tons, ranking first in China. We develop such electronic glass as TFT-LCD glass, ITO conducting film glass, and touchscreen glass, as well as PV glass and energy-saving and safety glass including Low-E glass and smart light control glass.

Leading Enterprises
Triumph Science & Technology Group

Refractories



We have world's largest professional fusion-cast refractory production base with an annual production capacity of nearly 40,000 tons, and an automatic unshaped refractory production line with an annual production capacity of 100,000 tons. Our products include refractories in the fusion-cast zirconia alumina and fusion-cast aluminum oxide series, and unshaped, basic, alumina-silica and silica refractories.

Leading Enterprises
Ruitai Materials Technology Co., Ltd.

PV



We have established a whole industrial chain of BIPV (Building Integrated PV) with a focus on thin-film solar products and technologies. We are committed to the integrated application of new energy materials and distributed energy, and carrying out the R&D, application and dissemination of new-energy housing. We have several solar cell production bases at home and abroad. We also possess a 100 MW CIGS thin-film solar cell production base in Germany, and have developed several PV power stations in China, Great Britain, the United States, Thailand and Japan respectively.

Leading Enterprises
Triumph Science & Technology Group and China Triumph International Engineering Co., Ltd.

New Housing



We are an advocate and promoter of the new environmentally friendly and energy-conservation housing industry of China, and have several product systems including steel, wood, PC, etc. As one of the first national demonstration bases of housing industrialization, we have many demonstration bases of new housing in Beijing, Sichuan, Jiangsu, Hainan, etc.

Leading Enterprises
Beijing New Building Material (Group) Co., Ltd. and China New Building Group Corporation

4

National Material Scientific Research Platform



R&D

We established the Central Research Institute of the Building Materials Industry which concentrates on carrying out R&D, experiments and applications concerning the key common technologies in the fields of building materials and high-end new materials. We have also built a technical innovation system with international competitiveness.

Leading Enterprises
China Building Materials Academy, Tianjin Cement Industry Design & Research Institute Co., Ltd., Chengdu Design & Research Institute of Building Materials Industry Co., Ltd., Suzhou Concrete & Cement Products Institute Co., Ltd., Nanjing Fiberglass Research & Design Institute Co., Ltd., Beijing Composite Materials Co., Ltd., Hefei Cement Research & Design Institute, Bengbu Design & Research Institute for Glass Industry, Harbin FRP Institute, China New Building Materials Design & Research Institute, Qinhuangdao Glass Industry Research & Design Institute, Xi'an Research & Design Institute of Wall & Roof Materials, Xianyang Research & Design Institute of Ceramics, Horological Research Institute of Light Industry, Wuhan Building Material Industry Design & Research Institute Co., Ltd., Shandong Industrial Ceramics Research & Design Institute Co., Ltd., Suzhou Sinoma Design and Research Institute of Non-metallic Minerals Industry Co., Ltd., Beijing Sinoma Synthetic Crystals Co., Ltd. and Xianyang Non-metallic Minerals Research & Design Institute Co., Ltd.



Testing & Verification

We provide testing and verification services including certification testing, energy efficiency assessment, carbon asset checking, energy performance contracting, comprehensive utilization and evaluation of resources, production approval and evaluation of green building materials, energy conservation building materials and supporting building materials products for construction.

Leading Enterprises
China Building Materials Test & Certification Group Co., Ltd.



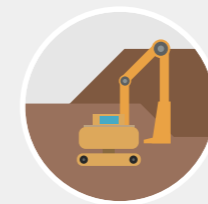
Geological Survey

Through utilizing our advantages in resources and technologies, applying the mode of the 'integration of geological survey and exploitation', and exploring the international market, we have become a provider of comprehensive service capabilities which integrates the survey, selection, processing, R&D, design and construction of the non-metallic minerals field.

Leading Enterprises
China National Geological Exploration Center of Building Materials Industry

5

National Mining Resources Platform



Development of Non-metallic Minerals

Focusing on such minerals as bentonite, kaolin, graphite, and so on, we have established a complete industry chain integrating upper and lower operations, and become a provider of non-metallic mineral products with strong international competitiveness.

Leading Enterprises
China Non-metallic Minerals Industry Co., Ltd. and South Graphite Co., Ltd.

6

Financial Investment and Operation Platform



Businesses of Financial Investment Companies

We give full play to the advantages of a fund concentration platform, fund settlement platform, fund monitoring platform, financial service platform and financial information resources; we expand our financing channels and realize the efficient integration of industrial capital and financial capital.

Leading Enterprises
Sinoma Group Finance Co., Ltd. and CNBM United Investment Co., Ltd.



Market Performance

We reward our shareholders and investors with excellent performance, serve our clients with quality products and services, grow together with our suppliers and industrial partners, and provide a value creation platform for all our stakeholders. Meanwhile, upholding the philosophy of 'industrial interest overweighs corporate interest', we are dedicated to promoting industry restructuring, transformation and upgrading, and seek to achieve mutual development and win-win situation with the industry and our peers in the same industrial chain.

- Excellent Performance
- Responsible Operation



Total assets of RMB
564.5 billion in 2016



Revenue of RMB
261.2 billion in 2016



Total profit of RMB
7.6 billion in 2016



Taxes paid of RMB
15.7 billion in 2016



A full view of CBMI's cement project in Bulgaria

Excellent Performance

2016 saw the launch of the '13th Five-Year Plan'. In the first year following the restructuring and integration, CNBM took great pains to improve its quality and efficiency, and exerted every effort to advance reform and innovation. Faced with complicated economic situations at home and abroad, as well as the heavy tasks of reform and development, the Group won the tough battle of benefit-recovering growth by making concerted efforts and braving difficulties. The achievements are hard-earned and the gained experience is valuable.

In 2016, upon the unremitting efforts made in the complicated macro-environment and grim industrial situation, the Group achieved a profit of RMB 7.58 billion (year-on-year growth rate: 34.6%), a net profit of RMB 5.01 billion (year-on-year growth rate: 60.4%) and an operating revenue of RMB 261.23 billion (similar to that of last year), which represented a good start following the restructuring.

Over the year, the Group performed

excellently in the management of major products. The costs of cement, commercial concrete, gypsum board, glass fiber and ultra-thin glass decreased by 5%, 7%, 7%, 10% and 12% respectively. The sales volumes of cement, commercial concrete, gypsum board, glass fiber, carbon fiber, refractory materials and ultra-thin glass increased by 7%, 4%, 13%, 7%, 71%, 2% and 12% respectively. The price of wind turbine blades remained stable.

Individual Champion of the Manufacturing Industry

'Individual Champion of the Manufacturing Industry' refers to an enterprise persistently engaged in certain specific market segments, equipped with internationally advanced production technologies or processes, and leading globally in terms of individual product market share. This definition involves two aspects: 'Individual' means that the enterprise concentrates on its target market and is persistently committed to the 'intensive cultivation' of related fields; while 'Champion' means that the enterprise should hold a champion-level market position and possess technical strength regarding the sectors in which it operates.

Dedicated to manufacturing glass fiber and glass fiber products, Jushi Group Co., Ltd. ('Jushi Group') constantly occupies a leading position in terms of scale, technology, market share and efficiency. Alkali-free glass fiber roving and alkali-free chopped fiber glass are the major segments of its business. Both reinforced composites, these two products are widely used in such fields as wind power, automobiles, electronics & electric appliances and building materials. The Jushi Group is the highest ranking player (market share: 22%) in the global market of these two products, with a share as high as 35% in the domestic market.

According to the *Special Action Plan for Cultivating and Promoting Individual Champions of Manufacturing Industry* issued by the Ministry of Industry and Information Technology, by 2025, 200 individual champions of the manufacturing industry will be promoted to demonstrators, and 600 enterprises with the potential of becoming individual champions will be identified and cultivated. The Jushi Group has been included in the list of first-batch demonstrators. This initiative is of practical significance for improving manufacturing technologies and processes in China. It can not only guide China's manufacturing enterprises to be committed to innovation and product quality improvement, spur the industry to march towards the middle and high ends and drive 'Made in China' to rise onto the world stage, but also guide enterprises to embody the philosophy 'it takes ten years to grind a sword' and increase the core competitiveness of China's manufacturing industry.

▼ The robotic arms on a tank-kiln wire drawing assembly line of Jushi Group



With an eye on the whole situation of the industry, CNBM has done a great deal of work to maintain the stability and supply-demand balance of the building materials market, and pursue off-peak production, energy conservation, emissions reduction and the elimination of grade 32.5 cement, thereby giving full play to the guiding role of leading enterprises and making positive contributions to achieving profits in excess of RMB 50 billion for the cement industry in 2016.



—Qiao Longde, Chairman of China Building Materials Federation

Quality and Efficiency Improvement

...

We continuously improve our operation and carry out 'slimming' by continuing to streamline the organization and refine the manpower. Specifically, in 2016, 12 departments of the Headquarters have been streamlined and their numbers of members fixed, the original 36 subsidiaries have been combined into 17 subsidiaries, the number of enterprises was reduced by 126 and enterprise cleanup was completed on 7 levels.

Based on price maintenance and efficiency improvement, we vigorously impel the industry to cut overcapacity, strictly control increased capacity, eliminate outdated capacity and actively take part in varied competition (capacity swap, off-peak production, capital integration and so on) with the aim of deepening supply-side reform. To practically lower costs and improve efficiency, we pay great attention to digital management, enhance KPI benchmarking and take the measures of centralized purchasing, energy conservation, emissions and technical upgrading.

We also continuously establish new growth points to improve efficiency through the use of new products, technologies and business modes. As regards efficiency improvement in new markets, we take great pains to exploit large markets in countries along the 'Belt and Road' route so as to gradually improve the market share.

In order to improve the quality of capital operation, we actively explore and steadily innovate in financing modes, make the investment decision-making process more scientific, improve investment efficiency and enhance control over trade, guarantee and advance payment. To improve the operating quality of the industry, we transform existing industries with new technologies and operation types, accelerate the development of emerging industries and continuously create new driving forces. In addition, we improve the quality of our technology, services and products, and continuously consolidate and expand our competitive advantages so as to promote our quality and brand.

- Interacting and optimizing; enhancing quality and increasing efficiency

- Benefits and efficiency as priority

CNBM's Four Principles for Operation and Management

- Sophisticated and pragmatic

- Stabilizing price, guaranteeing amount, reducing costs, controlling capital, increasing stock and making adjustment

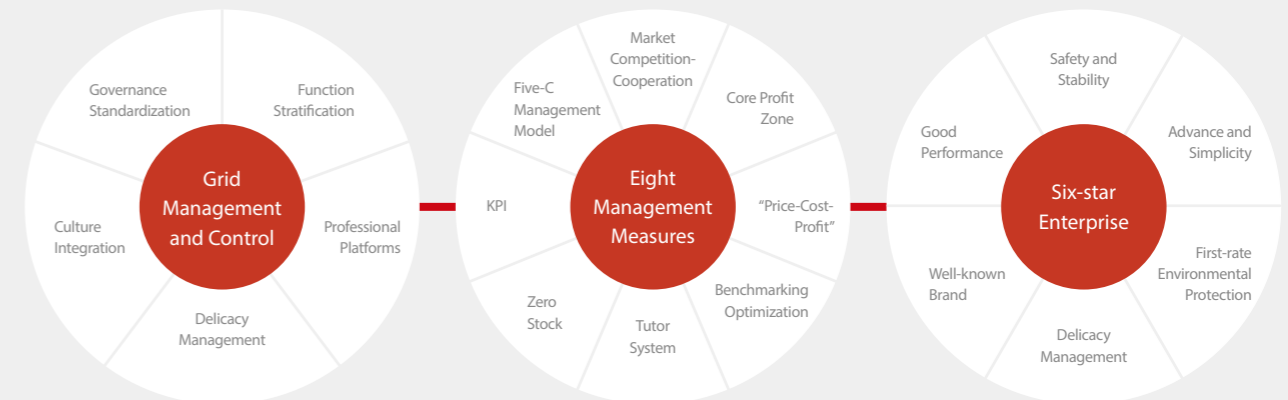
Refined Management

...

We adopt a 'grid' management and control model in which we fix the function division, operation mode and development orientation of the enterprise in a specific grid through accurate management and control, thus avoiding 'rights exercise and investment chaos' and keeping rights exercise smooth and the operation of each enterprise orderly and consistent.

We adhere to the 'six star enterprise' rules, 'eight management measures' and 'increasing efficiency and reducing expenditure and consumption working method'. The 'six star enterprise' rules are six standards that we set for a good enterprise; the 'eight

management measures' represent a set of effective experience obtained during reorganization and integration, which combines marketing with cost control and helps CNBM to steadily maintain good benefits in the economic new normal. The 'increasing efficiency and reducing expenditure and consumption working method' requires us to promote activities that can help us increase revenue, economize and reduce consumption by virtue of project management, wherein all the staff participate in continuously encouraging the enterprises to improve their operation quality through fundamental innovation and management optimization.



Transformation & Upgrading

We promote the orderly structural adjustment of industries on 'Curve 1' (cement, etc.). Continued efforts are made to refine the cement business, accelerate development in the direction of high performance, specialization, commercial concrete and productization, and promote the improvement of industrial standards. The share of high-grade cement in the Group's product portfolio is 10% higher than the national average. Depending on its technical advantages, the Group has built 7 special cement virtual operation platforms. In the meantime, we vigorously promote Jiahua's HLMC (high-performance low-carbon micro-clinker) cement and optimize the layout of the commercial concrete business according to the market and resource orientation principle. In particular, the work of laying out the aggregate business has been launched, involving the construction of 24 aggregate lines with a combined capacity of 43.31 million tons. Furthermore, continued efforts are being made to substantialize and optimize the glass business, and accelerate its development in the direction of 'electronics, PV, intelligence and energy conservation'.

We make efforts to rapidly improve the profitability of industries on 'Curve 2' (the three-new industries). Thanks to the optimization and perfection of the layout, the scale of the gypsum board business has maintained first place in the world. A professional platform for the management of new-type housing has been built to develop and promote Energy Plus 5.0 House, and contracts have been signed for 24

domestic and overseas projects. In the glass fiber business, the formula of E8 high-modulus glass fiber has been released. In the carbon fiber business, a 1,000-ton T800 line has been built up and put into operation to launch the export of carbon fiber. In the new glass business, a range of high-end industrial projects have been put into operation or are currently under construction, which is represented by the volume production of ultra-thin 0.15 mm touchscreen glass and 0.2 mm TFT liquid crystal glass substrate. In particular, we have commenced the construction of a CIGS thin film module line which sets a world record for photoelectric conversion rate (17.9%), and launched a 200 million m²/y lithium battery diaphragm material project.

We actively develop the new types of operation on 'Curve 3' (R&D and services). Manufacturing services are being actively developed by accelerating business transformation and upgrading. China Building Material Test & Certification Group Co., Ltd. ('CTC') has been awarded multiple international and national qualifications for building technical service platforms; CBMIE is building Internet of Things (IoT) platforms; Sinoma International Engineering Co., Ltd. is building overseas spare parts maintenance bases; the China National Geological Exploration Center of Building Materials Industry is developing in the direction of mineral development and overseas markets; and Sinoma Group Finance Co., Ltd. has built up a financial service system that allows more than 2,000 member units to be simultaneously active.

Deepening Reform

After being identified by SASAC as a 'dual-pilot enterprise' for the '4 reforms' experiment in 2014, CNBM was identified as a 'pilot enterprise for 10 reforms' by the same authority in 2016. At present, the Group is undertaking 4 tasks of pilot reform. Specifically, a stage summary has been completed for the mixed ownership economy experiment; the *Study on Practices of Mixed Ownership Development in SOEs - Illustrated by the Case of CNBM*, a project of the Publicity Department of the CPC Central Committee for studying Marxist theories and summarizing important experience in implementing construction projects, has been completed in cooperation with a think tank; continued efforts have been made to deepen the experiment of putting the board of directors' functions and powers into practice, and actively explore how to perfect the professional

management system; the CNBM-Sinoma merger has been advanced stably and has had significant effects; and Sinoma Jiangxi Electrical Ceramics Co., Ltd. ('Sinoma Jiangxi'), a member of CNBM, has been included in the first batch of pilot enterprises for implementing the employee stock ownership system in mixed ownership enterprises. CTC was successfully listed, making it China's first state-owned listed company to integrate the functions of testing and certification. In addition, several stock equity diversification projects have been accomplished, including restructuring 35% of the stock equity of Taishan Gypsum Co., Ltd. under the stock-for-stock method by BNB, injecting 100% of the stock equity of Taishan Fiberglass Inc. into Sinoma Science & Technology Co., Ltd., and the purchase of K & D Technology by Triumph.

IPO of CTC (603060) at Shanghai Stock Exchange

On November 9th, 2016, CTC was successfully listed at the Shanghai Stock Exchange, becoming CNBM's 15th listed company. As an important achievement in the market-oriented reform of a testing and certification body, the official appearance of CTC in the A-Share market was of benchmarking significance.

As a third-party high-tech modern service enterprise, CTC responds on its own initiative to requirements for reform and development in the process of enterprise-oriented transfer and market-oriented transformation, improves its professional development capability through technological innovation and continuously

integrates its domestic testing and certification resources so as to expand its business scope primarily via M & A, thereby rapidly growing into the largest and most competitive modern technological service enterprise in China's building materials testing and certification field, and exploring testing and certification service development modes in China. In the process, CTC has accumulated practical experience of enterprise-oriented transfer and market-oriented transformation from research institutes, as well as the expansion and strengthening of production service enterprises. In 2016, *Technology-driven Capital-driven Resource-integrating Development in*

Testing & Certification Enterprises prepared by CTC won the First Prize at the 23rd session of the 'National Business Management Modernized Innovation Achievement Awards'.

On November 21st, 2016, CTC was included in the first batch of 19 enterprises identified as industrial technological, basic and public service platforms. CTC is determined to raise a gilded signboard, make good achievements for the shareholders and struggle to be a top-ranking testing and certification body in China.



Every family is an energy factory

A building dedicated to saving and even outputting energy in all the steps of component production, erection, use and recycling must be awesome. If such buildings are realized, every family will be an energy factory.

BNBM's 'Energy Plus 5.0 House' effectively integrates the functions of PV power generation, wind power generation, ground source heat pump (GSHP), solar water heating and biogas production, and combines smart home, primary air and rainwater collection systems. It aims to be a type of green and ecological smart house with a high-end humanized design.



The roof and car shed are equipped with PV modules (total power: 7.54 kW; daily mean generated energy: 24 kWh).



The 4 sets of GSHPs keep the indoor temperature within the range of 22-25°C. The blue film solar water heating system is equipped with 2 heat-collecting plates and a 200 L water tank.



The independent biogas system generates 1.2 m³ of biogas every day.



The air-suspension fan is equipped with a battery energy storage system (daily generated energy: 2 kWh).

Responsibility Operation



In 2016, **156,000 person-times** of employees participated in legal publicity and education activities



In 2016, the rate of the legal review of rules, regulations, management decisions and management contracts hit **100%**



In 2016, the performance rate of business contracts reached **98.9%**

Lawful Operation

We insist on the working rule of lawful, compliant and honest operation. The Group has been awarded an AAA credit rating for many years. The CNBM-Sinoma merger has been continuously supported by financial institutions. A line of credit of RMB 375 billion has been established by signing contracts with 8 banks; the CNBM Industrial Development Fund (total amount: RMB 80 billion) has been jointly established with China Insurance Investment Co., Ltd.; and the member enterprises have issued bonds of over RMB 100 billion.

We insist on fair competition without infringing on the rights of our competitors and partners through improper means or misconduct (fraud, bribery, malicious price-cutting, etc.), and we advocate building good partnerships based on free will and equality. In international operations, we firmly maintain national interests and our own dignity, and actively respond to malicious anti-dumping events. With great attention paid to promoting the concept of fair competition, our staff are organized to participate in fair competition training.

We continue to improve our legal affairs mechanism. Major decisions and management



I'm proud of and encouraged by the fact that OKorder.com was selected for the enterprise-level experiment of comprehensive foreign trade services on behalf of Beijing. I hope that CNBM can continue to play the demonstrating role of a 'national team' and make more contributions to foreign trade services in Beijing and even the whole country.



—Cheng Hong, Deputy Mayor of Beijing

OKorder.com selected for pilot program for comprehensive foreign trade services

According to the principles of 'steady advancement, rights-duty balance and risk controllability', the Ministry of Commerce, General Administration of Customs, State Administration of Taxation, General Administration of Quality Supervision, Inspection and Quarantine, and State Administration of Foreign Exchange finally selected 4 units, including OKorder.com, for pilot programs for comprehensive foreign trade services.

OKorder.com is a cross-border e-commerce platform based on modern service concepts and supply chain integration. It aims to provide one-stop purchase and supply solutions for overseas buyers, and supply China's manufacturing industry with 'sweeping, controllable, creditable and value-added' comprehensive export solutions.

OKorder.com creatively solves the storage and logistics problems of foreign trade in the 'cross-border e-commerce + oversea location' mode. So far, it has put 24 overseas locations into operation with a focus on countries along the 'Belt and Road' route.



scan the QR code
for more information

contracts must be subject to a strict legal review procedure. Rules and regulations can be issued and put into practice only if approved by the Legal Affairs Department; we adhere to the integration of law popularization and legal affairs management through such means as organizing law popularization activities of different forms; and we publicize the concept of 'legal systems' and prevent risks in a systemic way.

With much attention paid to anti-corruption, we deeply integrate anti-corruption into the reform, development and stabilization of the enterprise; we emphasize integrity in work and make efforts to create a culture of integrity; we make efforts in efficiency supervision and inspection so as to give full play to its effects; and we establish and perfect discipline inspection and supervision bodies, and further develop discipline inspection and supervision organizations and teams, so as to continuously improve the working efficiency and quality of the Group.

Regular Governance

CNBM established a standard corporation management system. As the strategic, resource and cultural center, the CNBM Headquarters exercises the rights and performs the duties of the capital contributors. Its business platforms focus on their expertise and principal businesses to build up profit centers. As operating entities, enterprises at the primary level implement strict cost control while assuring quality. We align the pace of different enterprises with orderly management in the course of rapid development.

The public companies truthfully, accurately, completely and compliantly disclose periodic financial data, significant matters and matters required to be disclosed in accordance with

the Information Disclosure System issued by a supervisory authority. The public companies have built an efficient and streamlined shareholders' communication model. The shareholders exercise their rights by holding shareholder meetings. They implement the daily operation, supervision and management of each company through its board of directors and board of supervisors. Decision-making by major shareholders or controlling shareholders and their control over the board of directors and board of supervisors are regulated to give full play to the role of independent directors in protecting the interests of medium and small shareholders, and an effective mechanism to maintain seats for and allow disinvestment by small shareholders is in place.

Winning the 'China Industry Award' with ingenuity

In 2016, Beijing New Building Material (Group) Co., Ltd. ('BNBM') won the 'China Industry Award', which is honored as the 'Oscar of China's Industrial Community'. As the supreme award of China's industrial community, established with the approval of the State Council in accordance with the Party Central Committee's instructions and decisions, this award aims to elect and commend industrial enterprises and projects that represent the highest level of industrial development, and make significant contributions to enhancing comprehensive national strength, promoting ecological progress and national economic and social development, and playing a demonstrative and driving role in industrial, regional and corporate development.

Adhering to the concept of 'create the future with greenness', BNBM has built a full life-cycle green industry chain through technological innovation, and is supplying various new building materials and new-type total solutions for composite wall renovation, interior decoration industrialization and prefabricated construction to public buildings, industrial traffic facilities, military support facilities and innumerable private homes.

BNBM's gypsum board business has leaped into first place in the world from third place in China, and increased its net profit at an annual mean compound growth rate above 30% for 10 consecutive years with the asset-liability ratio lowered to 30%. In the wide-open common manufacturing sector full of competition,

BNBM has obtained a market share as high as 50% and built China's ingenious high-end brand 'Dragon', which is superior to brands of foreign Fortune 500 colleagues in quality, technology, benefit and scale, and achieves better sales at a higher price than foreign-funded brands. As an industrial enterprise of China, BNBM persistently takes the path of green and innovative development, becoming China's ingenious brand superior to those of foreign Fortune 500 colleagues in scale, quality, technology and benefits on the basis of the transformation from 'China Product' to 'China Brand', the evolution from 'Made in China' to 'Created in China', and the leap from 'First in China' to 'First in Asia' and 'First in the World'.

Assuming the mission of promoting the green buildings, cities and human settlements, BNBM is dedicated to developing into a world-class leading enterprise and transnational company with proprietary brands and IPRs, bringing its core business up to the world's first place and making itself a world-class industrial benchmark.

▼ BNBM's plaster board production line



Quality Service

We provide material support and technical services for national key projects and urban infrastructure, and systemic building materials solutions for residents' daily lives. Through our products, sufficient production capacity, reliable quality assurance, globalized marketing system and convenient and friendly service system, we offer customers returns beyond commercial value.

Our member companies are trained in the construction and certification of standard quality management systems, and implement quality management by QC group activities throughout the procedure, from the procurement of raw materials to the delivery of the products. We commit ourselves to public quality and maintain a full customer evaluation and feedback mechanism. Our customers are actively invited to become involved in product quality control, and we will compensate them for any losses caused by defective quality products.

Our service systems for pre-sales consultation, sales reception and after-sales services are well established. Complaints and inquiries from customers are responded to and handled without any delay. We have professional customer service teams who regularly provide professional training for our agencies. Customer training meetings and product publicity meetings are held to provide customers with the basic knowledge of green building materials, notes on the selection and use of building materials, and knowledge concerning counterfeit identification. With attention paid to protecting customer privacy, we execute a strict confidentiality system for customers' personal information.

Triumph's new energy business: development of a 'sunshine team'



The New Energy Business Unit of China Triumph International Engineering Group Co., Ltd. (CTIEC) continues striding forward on the path of being a world-class company in line with the Group's strategic layout: 'innovation-driven development, green development and international cooperation'.

In 2016, CTIEC's new energy business achieved a total contract amount of RMB 3.2 billion, turnover of RMB 2 billion and net profits of RMB 74 million, all of which increased at a rate in excess of 10%. The team achieved turnover per capita of RMB 200 million and profit per capita of nearly RMB 10 million. It is this rigorous risk management and high-standard professional services that ensure that our partners reap satisfactory benefits.

Creating value for customers with quality products

'Ensure quality, place emphasis on reputation and supply satisfactory products and services to the users' is the quality guideline constantly adhered to by Taishan Fiberglass Inc. ('Taishan Fiberglass'). Over the years, Taishan Fiberglass has kept abreast of market demands and continuously innovated its management ideas to improve the quality of the 'CTG' brand.

Taishan Fiberglass has developed a management mechanism that facilitates the unblocked transfer of quality information, made innovations to information communication channels in the forms of data sharing, abnormality reporting, daily quality reports and monthly quality reports, and built a WeChat group-based information platform, thereby improving the efficiency of information transfer and communication, and effectively promoting the timeliness of solving quality problems. The original large-scale quality-themed meeting has been divided into multiple professional communication meetings. To keep the production process under control and ensure that the Quality Management Department carefully performs its duties as the 'judge', Taishan Fiberglass gradually improves its site quality control by strengthening multiple supervision and inspection modes (process review, product review, quality inspection, system patrol and special tour inspection).

Taishan Fiberglass continuously perfects its quality assurance system to make it scientific, rigorous and efficient, and gives full play to its effective role in production. This lays a firm foundation for building the image and improving the reputation of 'CTG', while building Taishan Fiberglass into the world's most competitive glass fiber enterprise.

'4-most' high-end industrial ceramics service project



Commenced in May 2016, the 'Changji-Guquan ±1,100 kV EHV DC Transmission Line Project' is the world's first DC transmission project in the highest voltage class, and the '4-most' DC Transmission & Distribution Project ranks highest in terms of voltage class, transmission capacity, transmission distance and technical level. The EHV porcelain rod post insulator is a material critical to system success. With its high-tech advantages, Sinoma Jiangxi won the bidding in one stroke.

Sinoma Jiangxi is an industrialization platform built by two national-level transformed research institutes (Shandong Industrial Ceramics Research & Design Institute and Beijing Sinoma Synthetic Crystals Co., Ltd.) to incubate technologies and products. All its products and technologies are developed by transforming the technological achievements of the institutes. Its major product is the porcelain insulator for power transmission and distribution. Specifically, the AC 1,100 kV, DC 800 kV and DC 1,100 kV rod post insulators of the company reach the internationally advanced level, while its AC 800 kV rod post insulator is cutting-edge in the world.

In the last 3 years, the operating revenue of Sinoma Jiangxi has been rapidly increasing with an annual mean rate above 50%. In China's electrical ceramics industry, the high-end rod products of the company are the well-deserving champions of sales volume. Moreover, the EHV products of the company enjoy a domestic market share of more than 50%.

“

CNBM has shown outstanding leadership and influence in the building material sector of China and the world.

”

——Filaret Galchev,
Eurocement Group President

Win-Win Partnership

Keeping the responsibilities of leading enterprises in mind, we serve economic and social development, pay taxes, offer employment opportunities and support public benefit programs, making contributions to the national economy and the harmonious development of society.

Under the concept of 'industrial interests outweigh corporate interests, and corporate interests create industrial interests', we firmly curb illegal and blind capacity expansion, and practice expansion based on stock combination, technological transformation and upgrading based on increment input, and benefit creation based on management integration;

we maintain a balance between supply and demand in the market, execute industrial reconstruction, improve the concentration ratio of the industry and endeavor to create a new intra-industry ecosystem.

We actively promote the supply-side structural reform of the industry by giving full play to our industry-leading role. On the one hand, overcapacity cutting in the cement industry is being accelerated. We have taken the lead in eliminating grade 32.5 cement, limiting increased capacity, carrying out off-peak production, mergers and restructuring, and enhancing inter-regional coordination. On the other hand, the optimization and upgrading

of product structure are accelerated so as to increase the supply of high-end products. Based on overcapacity cutting, such products as cement and concrete are promoted to high end development, and cement products are promoted to evolve in the direction of "high-performance, specialized, ready-mixed and commercialized" development, thereby improving the added value of businesses and products, and meeting the requirements for industrial structure adjustment.



Energy Conservation and Environmental Protection

We comprehensively utilize industrial and urban waste resources and manufacture low carbon products with minimal consumption and emissions; we are committed to providing society with green and environmentally friendly building materials with reliable quality, and providing product and service support for the new energy industry; we are delighted to share effective energy conservation technologies and management experience, explore development modes for the industry and ecological environment to co-exist in harmony, and advocate the sustainable development of the whole industry and society.

- Green Operation
- Green Manufacturing
- Green Products
- Green Synergy



In 2016, CNBM's investment in energy conservation and environmental protection reached RMB

4.3 billion



In 2016, CNBM's installed cogeneration capacity reached about

2,025.3 MW



In 2016, the treatment and reuse amount of solid waste reached about

149.1 million tons



Offshore wind turbine blade self-developed by Zhongfu Lianzhong Composites Group Co., Ltd.

Green Operation

Compliance with Laws and Regulations

We strictly abide by the industrial access system and resolutely close down outdated production facilities. We strictly implement the national quota on energy consumption, continuously improve the efficiency of energy utilization and keep the energy consumption of our main products at an advanced level. We strictly abide by standards for pollutant emissions, improve our monitoring and emission reduction systems, and ensure clean production and the meeting of emission standards.

Mining is carried out according to the *Green Mine Convention*. We carry out ecological restoration in good time while developing limestone mines. We respect the *Biological Diversity Convention*; carry out strict evaluation discussions on the site selection and layout of factories; protect natural

habitats, wetlands, forests, wildlife corridors and agricultural land during the construction of projects; and reduce adverse effects on the surrounding environment and communities to the minimum.

We strictly perform the environmental assessment approval procedures for our projects, implement the '3 simultaneousities' requirements of energy conservation and environmental protection for fixed asset investment projects, and earnestly organize and carry out the feasibility evaluation and environmental impact evaluation of new reconstruction or expansion projects. We maintain our environmental risk warning mechanism, prepare contingency plans and prevent and reduce potential environmental hazards.

Systematic Management

We have established a social responsibility and energy conservation and emissions reduction office at the CNBM Headquarters. Member companies have established related functional organizations of different categories and levels, achieving the overall coverage of the Group's energy conservation and emissions reduction management system.

We attach great importance to the construction of our energy conservation and emissions reduction team. Management personnel on key positions have obtained professional certificates. We continuously enrich the knowledge of employees responsible for energy conservation and emissions reduction, and improve their professional qualities and management competence.

We manage our member companies based on their categories; formulate strategies, general policies, plans and systems for energy conservation and emissions reduction; and improve our work through the three systems of measurement and statistics, monitoring and analysis, and evaluation and assessment.

We implement a standardization management system and realize energy conservation, consumption reduction and clean production through refined management. The manufacturing companies of the Group have established standardization management systems regarding quality, the environment and energy, most of which have been certified.

We integrate the fund for energy conservation

and emissions reduction into the overall budget management system, and formulate a related expenditure plan to guarantee the implementation of technological upgrading and management improvement.

We have established an information disclosure mechanism. We disclose our annual energy conservation and environmental protection performance via annual CSR reports, and accept the supervision of stakeholders. During the feasibility study, construction, reconstruction and acceptance of a project, we take advice from nearby residents and stakeholders in the region, and reduce the adverse impact of the operation activities of enterprises on the environment and society to the minimum.

Initiatives and Guidance

We have formulated detailed green office plans in such aspects as power saving, water saving, reduction of office consumables and so on. Our green office performance is included in the routine monitoring and evaluation system. We actively promote the construction of a video conference system, and we arrange business travel in a scientific way, favoring low-carbon vehicles.

We are active in environmental protection welfare and publicity activities, doing our best to promote environmental protection concepts. We donate money and supplies to support the construction of environmental protection facilities; we develop ecological forests with local community entities to jointly cope with climate change; and we

actively promote energy conservation, low-carbon lifestyle and green consumption awareness.

Keeping the responsibilities of enterprises in mind, we endeavor to become a practitioner, demonstrator and advocator of coping with climate change. We actively undertake national energy conservation and emissions reduction missions, have initiated and signed conventions and written proposals, and advocate a robust response to climate change, environmental protection, dust-haze treatment and low-carbon development. We also advocate and implement peak-shifting production, relieving the problems of overcapacity and exploring sustainable development.

Continued greenness

In the mines that it provides with limestone mining services, CNBM Xi'an Engineering Co., Ltd. actively and effectively implements side slope revegetation work. With multiple factors (rock texture, rock property, slope ratio, soil thickness, scour resistance, drought resistance, cold resistance, re-greening effects, etc.) taken into consideration, the 'grass planting through hydro-seeding (CBS) + evergreen planting on side slope' scheme is adopted. Specifically, CBS substrate is sprayed and different types of shrub and grass seeds are sown to constitute a vegetation-based landscape which is well-matched and coordinated in the vertical direction. So far, the company has completed revegetation work with a high survival rate on a total area greater than 40,000 m², thus effectively controlling soil erosion at the mines and creating a green landscape belt equivalent to original natural vegetation. This work has been unanimously praised by local governments, owners and residents.



Mine before revegetation vs. mine after revegetation



▲ CBMI Garadagh EPC project in Azerbaijan



In 2016, we organized or participated in **1,271** environmental protection publicity events



In 2016, **80,000** person-times of employees attended training regarding energy conservation and environmental protection



In 2016, **80** on-site conferences were replaced by video conferences

Green Manufacturing

Aiming at sustainable development, CNBM realizes green manufacturing throughout the life cycle (source reduction, process control and end treatment) with advanced technologies and management measures.

Source Reduction

Our mines are blasted by means of multi-row core short delay blasting to reduce shock and resource waste; the components of mineral resource batches are measured accurately to establish reasonable proportions, effectively use low-grade ore, improve homogenization and give full play to the value of mineral resources; and closed belt corridors are built to avoid the raised dust and energy consumption of automobile transportation.

The layout of the production line is optimized. Such measures as physical isolation, greening shields and occupational protection are taken to reduce noise, reach national standards on noise treatment and relieve the impact of noise on the staff and surrounding communities.

Process Control

The technological transformation of staged combustion is carried out to improve energy efficiency while controlling the production of pollutants (NOX, etc.). Denitration systems are built to significantly reduce NOX emissions. Information-based control technologies are adopted to reasonably control the consumption of reductant, prolong the service life of the systems and control the cost of denitration.

The technological transformation of staged combustion is carried out to improve energy efficiency while controlling the production of pollutants (NOX, etc.). Denitration systems are built to significantly reduce NOX emissions. Information-based control technologies

End Treatment

Bag-type dust collection technology is adopted to bring the emissions of industrial dust and smoke in waste gas up to the standards.

With attention paid to water resource protection, water recycling is realized in both waste gas systems and cooling systems. Auxiliary process water (washing water, etc.) is also effectively recycled through the sedimentation and sewage treatment system. Industrial wastewater is drained according to the standards.

Outdated production equipment is put out of service in good time. Kilns and furnaces are reconstructed and upgraded to improve combustion efficiency.

Industrial solid waste is utilized in a holistic way to reduce the consumption of natural mineral resources.

Clean energy is selected to reduce the formation and emission of pollutants (SO₂, etc.) in waste gas. Natural gas is selected as the fuel for transportation to reduce the environmental pollution of tail gas.

Waste heat generation units are provided on eligible production lines to convert waste heat to electricity, which is returned to and consumed on production lines. This reduces the consumption of electricity.

are adopted to reasonably control the consumption of reductant, prolong the service life of the systems and control the cost of denitration.

We have upgraded and transformed the pulverizing system by replacing the vertical mills with roller presses and the steel balls with ceramic balls, thereby improving pulverizing efficiency and lowering power consumption.

The thorough integration of industrialization and informatization is deeply promoted, and intelligent factory construction is greatly advanced to achieve unmanned, intelligent and remote production control, and energy-saving and efficient operation.

Waste residue from production, reclaimed packing materials and nonconforming products are re-treated and recycled as raw material after passing inspection in order to achieve the recycling of self-produced solid waste.

Attention is paid to mine reclamation and landscape greening to build state-level green mines and garden-type eco-factories.



Over the years, CNBM has taken the lead in making outstanding contributions in multiple undertakings, such as environmental protection and the comprehensive utilization of resources.



—Lu Hao, NPC Environment and Resource Protection Committee Director



In 2016, the total energy consumption reached 35.9 million tons of standard coal equivalent



In 2016, power generation from the waste heat of cement production reached 8.7 billion kWh



In 2016, the recycling rate of water hit 93.7%



In 2016, the average greening rate of plants was 16.1%



In 2016, we had 9 state-level green mines

A garden-like factory

Based on internationally advanced production technologies, the 3 Million m³/y Technological Transformation (Relocation) Project Initiated by China United Concrete Nanjing Co., Ltd. has thoroughly changed the profile of the traditional concrete enterprise by enabling full enclosure, zero emissions, automatic loading, automatic truck washing, overpressure protection and remote control. It is a world-class, modern, intelligent, environmentally friendly and demonstrative concrete project.

The stockyard is an enclosed space that allows the stacking and transshipment of aggregates (such as sand and stone) for the mixing plant. The dust and noise produced inside meet the applicable environmental standards.

Dust is forcibly collected. Dust from each dust emission point of the mixing buildings is actively treated.

This unit undertakes the automatic washing of concrete trucks in the mixing buildings. All the waste material and slurry left over after washing are recycled.

Enclosed stockyard

Overall packaging of main building

Dust collection system

Zero emissions of waste water, material and slurry

Automatic truck washing unit

Powder bin overpressure protection system

The main building of the mixing plant is packaged as a whole for the purpose of dustproofing and noise reduction. Its design is elegant with a focus on greenness and environmental friendliness.

The most advanced filter pressing and sewage treatment systems are adopted to collect and recycle waste water from each waste water drainage point of the mixing buildings, and recycle all waste material and slurry.

The safety protection function will be enabled in case the feed pressure of the powder bin exceeds the specified level, thereby preventing the roof of the powder silo from falling and avoiding the external discharge of dust.

A full view of the 3 Million m³/y Technological Transformation (Relocation) Project initiated by China United Concrete Nanjing Co., Ltd.



Green Products

In order to supply systematic low-carbon environmentally friendly products, we have integrated the concepts of low carbon and environmental friendliness into the whole process of R&D, design, production, packaging, sales and recycling.

Adjusting the basic building material product mix: We actively encourage the cement industry to develop in the direction of 'high-performance, specialized, ready-mixed and commercialized' so as to supply our customers with high-quality, green and low carbon cement products. By making innovations in and extending the industry chain, we guide the glass industry to transform and upgrade in the direction of 'electronics, PV, intelligence and energy conservation' so as to improve the added value of the products.

We research and develop new building materials in accordance with the four core concepts of energy conservation, safety, comfort and ecology. We improve the quality and extend the service life of our products, and reduce repetitive production. We

develop and use industrial waste resources as raw materials to produce building materials, thereby reducing the consumption of natural mineral resources and achieving maximized recycling and effective disposal after service life.

Our new housing products not only integrate high-performance green building materials, but also joint seamlessly with new energy technologies and intelligent control technologies, creating 'zero emission', 'energy plus' and 'future core' dream homes.

We provide high-end and serialized rotor blades, thin-film solar cell packs and specialized cement products, guaranteeing the sound development of such new energy industries as wind power, solar power, hydropower.

Zhongfu Lianzhong ingeniously develops 75 m typhoon-resistant blade for offshore wind turbines



Ingeniously developed by Lianyungang Zhongfu Lianzhong Composites Group Co., Ltd. ('Zhongfu Lianzhong'), the LZ75-5.0 blade for offshore wind turbines was successfully released at the company's blade factory in Lianyungang. The blade is 75 m in length and typhoon-resistant (design generating area: IEC IB), and has been successfully applied in the Pinghai Bay 50 MW Offshore Wind Power Project in Fujian. In July 2016, the super typhoon Nepartak landed in the coastal area of Fujian. Although the maximum wind force near the center was as high as 17, the blades rode out the super typhoon and withstood the test.

Nice! Green town!

After nearly 40 years of unremitting exploration and efforts devoted to creating new-type housing, the green towns put on the market by CNBM have blossomed everywhere at home and abroad, responding to Deng Xiaoping's entrustment to 'make housing built with new-type light building materials better and better, and suit them to the affordability of the people.'

Green town in Shicheng, Miyun

In the planning and construction, all 43 households of the village were taken as a whole. One of Beijing's most beautiful rural areas, this green town has effectively improved housing conditions for locals and created income.



Green town in Xiexing of Guang'an, Sichuan

Integrating the functions of dwelling, entertainment and business, this green town is well-proportioned and possesses diversified house patterns. Each household is provided with a vegetable garden and garage to make life easier.



Green town in South Sudan



Qingdao International Beer Festival-themed green town

As the main venue for the Qingdao International Beer Festival, this green town consists of German-style buildings.



Green town in Erhai, Dali, Yunnan

This scenic green town has both detached houses and townhouses. It is located behind Cangshan Mountain and overlooks Erhai Lake.



'Blooming' green town in Wusheng

The dwelling style of east Sichuan prevails among the housing, built as hotels for rural tourism and recreation. This green town was ranked among the 'National Beautiful Rural Areas 2014'.



Green town in Xiangshawan Desert

As China's first green and low-carbon five-star hotel located in a desert, this green town combines buildings for lodging, catering, entertainment and business. It is China's only hotel to be included in the 'Global Most Anticipated Resort Hotels 2016'.



Green towns built after disasters

CNBM became involved in reconstruction efforts following the Wenchuan Earthquake, Yushu Earthquake, Ya'an Earthquake and Beijing '721' Flood. The green towns were constructed rapidly to raise the livability indexes.



Green town (1,000 buildings) in Papua New Guinea

Stilted buildings were specially designed to fit in with the habits and customs of the locals.



Green town in Zambia

As part of Zambia's national housing program, this green town has significantly improved daily life conditions of the local people.

There are additional green towns such as Chengdu Green Town (Sichuan), Sakura Green Town (Dalian), Songjiang Green Town (Tianjin) and Yujingyuan Green Town (Suzhou). In November 2016, CTIEC signed a strategic cooperation agreement to develop 'Energy Plus' green towns in the UK. According to the agreement, at least 5,000 'Energy Plus' green homes will be built in the UK every year.

Green Synergy

Following Industrial Chain Trends

We implement green procurement. In our procurement of raw materials, we give priority to products that are produced in low carbon and environmentally friendly ways and cause a lower degree of damage to the environment; when selecting energy, we choose clean energy and vigorously promote the use of such non-fossil energies as low-grade energy, municipal refuse, biomass energy, etc.; and when choosing daily office supplies and other consumer goods, we prefer products that have simple packaging and are convenient for recycling.

CNBM advocates the policy of simple packaging. We insist on promoting bulk packaging for cement products and bare

packaging for glass products. We seek to maximize the use of recyclable packing materials to reduce waste while ensuring the quality and transportation safety of the products.

We adopt the green sales model. We reduce resource occupation and improve marketing efficiency through establishing modern logistic parks and rational plans for supply, marketing and logistics. We provide online transaction services for worldwide building material products and reduce the carbon released by the business travel of clients and sales personnel through establishing an online marketing platform.



1 assigned operation utility of CDM



12 technical service agencies of energy conservation and environmental protection



1 building materials industry training base of national carbon market competency construction

Supporting Industrial Chain Extension

We provide low-carbon technologies and full life-cycle services. In the three fields of technical transformation, smart control and refined management, CNBM provides industrial enterprises with the five low-carbon services of detection and diagnosis, transformation and upgrading, intelligent control systems, expert consultation and financing management. As such, we contribute our share to continuously enhancing industrial energy efficiency and environmental performance, as well as achieving sustainable development.

Harmless co-processing in cement kilns: We carry out the co-processing of urban garbage, hazardous solid waste and sludge by giving full play to our technological advantages. We also continuously improve our co-processing

capability and quality in order to boost the eco-development of cities.

Rapid development of intelligent industry: We provide operation management, expert diagnosis and production line debugging services for 14 production lines in 7 countries. Our scope of production services has expanded from cement plants to other categories of entities (such as mixing plants and sugar refineries). Our service mode combines field services with remote centralized diagnosis. Our industrial operation data expert diagnosis center in Beijing can provide expert diagnosis and data services to production lines all over the world.

Exploration of intelligent agriculture: We have signed a strategic cooperation agreement with DALSEM, a well-known greenhouse company based in the Netherlands. Based on the Group's industrial advantages, talent advantages and expertise in the field of high-transmittance ultra-clear glass, we are dedicated to creating a new agricultural domain and propelling China's agriculture to develop in the direction of high end and intelligence. The intelligent greenhouse sheathed with new-type ultra-clear rolled glass has such advantages as high output, long service life, stable climate, low energy consumption and high land utilization rate, and can fully recycle rainwater and carbon dioxide. Compared with traditional field planting on the same area, it yields 5-6 times more crops and consumes 95% less irrigation water, thereby making agricultural production more efficient and environmentally friendly.

▼ CNBM marches towards intelligent agriculture



Playing the role of industrial leader

In 2016, CNBM was rated by the NDRC as a training base of the building materials industry for national carbon market capacity development. As a key link in national carbon emission trading capacity development, the training and demonstration bases for national carbon market capacity development are supposed to lay a foundation for officially launching the carbon emission trading market throughout the country in 2017. CNBM constantly and industriously cultivates and establishes energy conservation and environmentally friendly technical service platforms. Its member enterprises, among

which CTC takes the lead, actively practice the implementation of the energy management system, carbon emission management system, CDM project, CCER project, low carbon product certification and carbon inspection, as well as the development of carbon emission accounting methods and standards in the building materials industry, through which it has accumulated rich experience. In order to practically perform the duties of a training base of the building materials industry, by giving full play to the Group's technological superiority in the industry and using the large platform provided by the

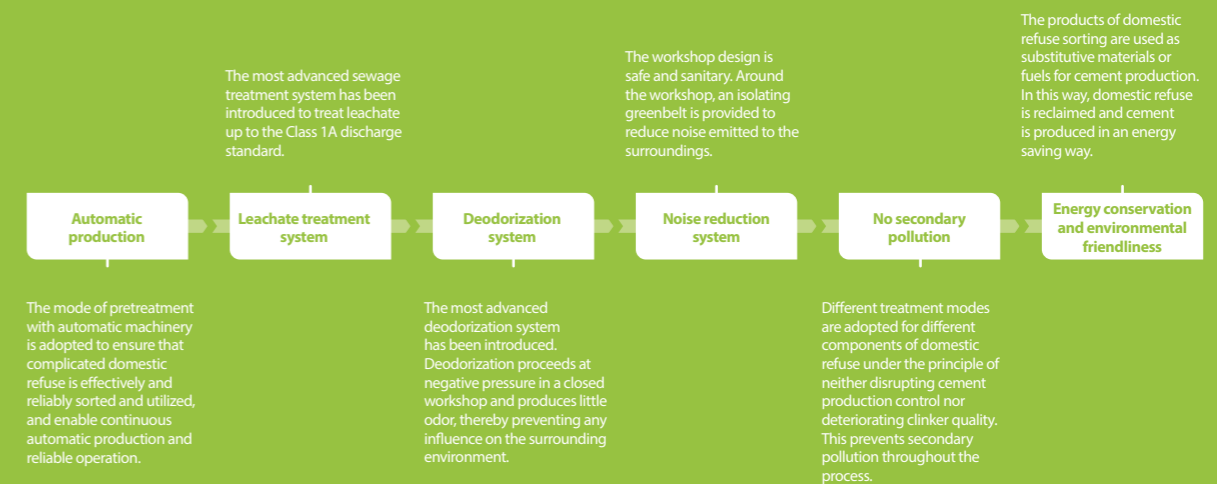
National Carbon Trading Capacity Development Training Center, we lead trainees to go deep into the workplaces of member enterprises, give them a detailed understanding of carbon accounting, carbon inspection, examination and verification of voluntary emissions production projects and carbon asset management on the spot, and share cases of low carbon, energy conserving and emission reducing actions taken by advanced enterprises. This makes the carbon emission trading capacity development of the building materials industry both visible and reproducible, and has brought about standards to which to conform.

The pioneer of co-processing demonstration

The 450 t/d Domestic Refuse Co-processing Project initiated by Sinoma Liyang Environmental Protection Co., Ltd. is one of six demonstration projects identified by MIT. Backed by the 5,000 t/d cement line of the Liyang Tianshan Cement Plant, this project realizes the harmless treatment and day-to-day clearing of domestic refuse in Liyang by using the internationally advanced technologies of co-processing in cement kilns. In 2016, it treated 155,000 tons of urban domestic refuse with a treatment rate in excess of 90%. As the project with the largest co-processing capacity in China, it additionally carried out the emergency treatment of more than 5,000 tons of non-local illegally dumped refuse within the same year.



▲ A full view of the 450 t/d Domestic Refuse Co-processing Project initiated by Sinoma Liyang Environmental Protection Co., Ltd.





Employee Care

We make every effort to safeguard the rights of our employees, respect their differences and make the company a reliable partner and a happy and comfortable home for our employees. We try to jointly build a brighter and more sustainable future with all our employees, and deliver happiness to society.

- Safety
- Health
- Dignity
- Happiness



At the end of 2016, the total number of employees reached

234,511



In 2016, the number of member companies carrying out employee satisfaction surveys stood at

602



In 2016, the employee turnover rate was

12.3 %



The overseas project staff of Sinoma International Engineering Company Limited

Safety

We have established a domestically top-ranking management system for safe production with the safe production accountability system as the core, the standardization of safe production and workplace safety technical regulations as the emphases, the troubleshooting and treatment of potential accidents as the methods, the informatization of safety management as the tool and the development of safety culture as the guarantee, thereby ensuring safe production and the occupational health of the staff.



In 2016, **218,000** person-times of employees participated in emergency response drills



In 2016, the recordable injury rate per 1,000 employees was decreased by **44.4%** on a year-on-year basis



Zero production safety accidents occurred in 2016

Management & Control System

We have established an organizational system for safe production. The Party and administration heads of the enterprises are the primary persons responsible for safety in the workplace, and they take charge of safe production matters. All key production safety enterprises within the Group employ full-time production safety management personnel. We establish smooth channels for feedback and encourage all staff to participate in safety management.



We have established a safety production management system covering penalties for safety violations. We have also introduced special regulations and work guidelines for overseas projects, non-coal mines and so on.

We place emphasis of investment in safety, continuously improve and maintain our safety equipment and facilities, implement technical innovations for the purpose of essential safety, organize training in safety procedures, and popularize safety culture.

Potential risks identification

We intensify inspections for hidden dangers. We take the development of the 'capacity to identify and prevent hidden hazards' as an important part of our efforts to improve the basic management level of enterprise safety and promote closed-loop control, composed of 'basic capacity building - assessment and control of hidden dangers - work and performance reward assessment - the ability to enhance safe operation', thereby achieving the continuous improvement of the PDCA. We explore and establish a six-in-one screening and governing system of accident potential, the six items being 'focusing on the fulfillment of post responsibilities, using listed investigation standards as the tool, taking closed-loop self-examination and self-reporting of hidden hazards as the means, taking team construction and all-staff participation as the basis, taking the reward and penalty incentive system as the guarantee, and taking information management means as the support.

We continue to improve our emergency management system. In this system which covers all levels of the CNBM, the Group's emergency management team takes general

charge while the emergency management teams of the member companies are responsible for specific measures. A comprehensive emergency response plan is established and supplemented by special emergency response plans and on-site response schemes. We organize the member companies to regularly check the reserves of emergency supplies, conduct emergency response drills and give on-site instruction in emergency response work.

Informatization technology is applied for the purpose of daily safe production management. A safety production prediction and alert system independently developed by CNBM is also utilized. We generate monthly warning information according to the data on the reporting and rectification of hidden dangers, and promptly publish work safety warning information to remind enterprise leaders and all staff to take targeted precautions for the purpose of identifying, handling and removing hidden dangers as soon as possible, thereby minimizing the probability of accidents and their consequences.

Standard Safety

As a national pilot enterprise of standard safe production, we actively promote the work of meeting the safety standards of cement enterprises, improving the safety management system, increasing the safety management level and boosting safety management performance. By the end of 2016, all the manufacturing enterprises affiliated to the Group passed their work safety standardization reviews. In particular, 131 of the 280 cement clinker manufacturers (45%) passed the national Class 1 review, representing a 60% share of the total number of Class 1 standardized enterprises in the building materials industry.

We attach great importance to building up our safety management team. We have continuously fostered the sense of responsibility and awareness of safety procedures in the workplace, and improved the professional quality of safety management personnel. We strictly follow the CNBM Safety Training Rules and guarantee the popularization of safety knowledge, execution of safety procedures, implementation of contingency plans, knowledge of occupational hazards and the self-protection abilities of the staff through training and assessment.

We actively organize such safety promotion activities as 'Safe Production Month' and 'Safe Production Year', prepare and issue safety culture manuals and incorporate the idea of 'people first and life foremost' into our corporate culture. The Guilin South Cement Company Limited was rated as a 'National Model Enterprise of Safety Culture Development 2016'. China United Cement Qufu Co., Ltd., China United Cement Zaozhuang Co., Ltd. and Hangzhou Shanya South Cement Co., Ltd. all passed the review for identification as 'National Model Enterprise of Safety Culture Development'.

In order to build a safety culture ecosystem, we share safety knowledge and experience with interested parties (such as suppliers, customers and communities) and popularize safety concepts.

Reassuring the staff with safety

On December 23rd, 2016, the building of China United Cement Nanjing Co., Ltd. into a work safety standardization model enterprise sailed through the acceptance check by the State Administration of Work Safety, making the company one of the first batch of work safety standardization model enterprises in China. During the 960-day total involvement in the mission, the company abstracted and summarized 6 improvement priorities and a new concept of safety management ('223355'), thereby developing corporate safety culture with its own style. The 6 improvement priorities are as follows: to bring all posts to the standard by fulfilling the responsibilities of safe operation post by post and level by level; realize the complete coverage of safety education and training by flexibly using various media; realize visual safety management by normatively improving workplace standardization; expand the concept of safety management through international benchmarking; make innovations in the safety management of outsourcing units by controlling the 5 'strategic passes'; perfect the management system and operation mechanism of hidden danger identification by skillfully operating the prediction and warning system platform; and move the 'strategic passes' forward and the emphasis down by transforming safety management concepts.

New safety management concept: '223355'

2 'zero' projects	Zero accidents
	Zero tolerance
2 emergency operation normalization projects	Normalization, completion, improvement and innovation of emergency exercises
	Normalization, completion, improvement and innovation of emergency rescue
'3 + 5' hidden danger identification projects	3 levels: company, department, team/group
	5 inspection modes: comprehensive inspection, special inspection, daily inspection, seasonal inspection, festival inspection
3 guarantee projects	Guarantee of safety management system
	Guarantee of reasonable safety investment
	Guarantee of safety facilities
5 learning processes	Mutual learning among posts
	Departmental learning
	Peer learning
5 '100%' projects	Legal learning
	Cross-industry learning
	Coverage of safety training: 100%
	Pass rate of safety specification exam: 100%
	Coverage of codes and systems: 100%
	Compliance rate of team: 100%
	Identification rate of hidden dangers: 100%

State Administration of Work Safety Deputy Director Sun Huashan conducts the safety inspection of a member enterprise of CNBM



Health

Occupational Health

We have revised the *Administrative Measures for Occupational Health Supervision in the Workplace* so as to perfect the occupational health protection and management, and effectively prevent, control and eliminate occupational hazards.

We have enhanced the '3 simultaneities' management of occupational health in construction projects for the purpose of source control.

We have installed and optimized supporting facilities for dust prevention, gas defense, noise reduction and emergency alerts, as well as first-aid equipment in the production place, on the basis of our in-depth study and analysis of the features of building materials production. For the purpose of labor protection, we offer labor protection articles which are put in place and replaced in a timely manner to ensure their efficacy.



In 2016, 342,000 person-times of employees received training in occupational health and safety



In 2016, RMB 795.3 million was invested in occupational health and safety



In 2016, the physical examination completion rate of employees reached 96.0%

It is our established practice to organize employees to take health examinations, arrange extra health checks for staff in jobs with exposure to dust or radiation, establish Personal Health Records and conduct regular reexaminations.

We regularly detect and evaluate occupational hazard factors in the workplace,

put up visible notice boards at detection points and widely publicized the detection and evaluation results to all staff.

In order to popularize occupational health knowledge, we conduct occupational health induction training and regularly conduct occupational health in-service training.

We actively promote our member companies to implement occupational health system certification and establish scientific and systematic management systems.

We attach great importance to the safety and occupational health management of our suppliers and subcontractors, include terms on safety and occupational health in service contracts, and cooperate with companies in the supply chain in carrying out routine safety checks, training, emergency response drills and culture transmission.

▲ The coal mill of Nanjing CUCC



Mental Health

We gradually incorporate mental health into our occupational health management. We encourage member companies to establish mental health consultancy or cooperate with mental health institutions to build health record archives and pay attention to the mental health of our employees.

Providing more warmth

'Learn more about the issues and difficulties of concern to the staff, pay close attention to changes in the thoughts, sentiments and moods of the staff, help the staff to cope with stress, create a family-like atmosphere in enterprises and draw hearts close.' This reflects the humanistic care of Beijing Composite Materials Co., Ltd. This company regularly invites mental health counselors to discuss how to cope with stress in the workplace and family life, how to treat and change the current workplace and family life from the perspective of psychology, how to establish scientific and healthy life concepts, and how to awaken the inherent force of the staff by skillfully using cases, photos and on-site interaction, thereby helping and guiding the staff to work and live in a more positive and healthier mental state.

▼ Celebrating birthday for a staff member



Share of employees in the Group's safety committee: 67%

Dignity



In 2016, the number of female employees reached **46,000**



In 2016, the ratio of the average salary of male employees to that of female employees was **3.3:1**



In 2016, the total amount of remuneration for overtime work was about **RMB 350 million**

Equality

We respect and support the international covenants on human rights and labor standards, strictly forbid forced labor and discrimination, guarantee a decent working environment for our employees and strictly prohibit and reject employing child laborers in any form.

We adhere to equal employment and treat employees of different nationalities, ethnicities, genders, ages, religions and cultural backgrounds with respect and equality. Employees are recruited and employed in an open, fair and impartial

Legal Compliance

In strict compliance with the *Labor Contract Law of the People's Republic of China* and relevant laws and regulations, we sign labor contracts with our employees and standardize our labor contract management.

We pay our employees basic pension insurance, basic medical insurance, unemployment insurance, work injury insurance, maternity insurance and other social insurance in accordance with the law, and establish supplementary medical

manner.

In line with the principle of equal pay for equal work, we treat our part-time employees, temporary staffs and the workers of our subcontractors with equality. Their legitimate rights and interests are well protected.

We respect the privacy of our employees and have established a privacy management system covering such management links as recruitment, assessment and health records.

insurance and corporate pension schemes, and a periodic physical examination system. We also encourage our member companies to purchase comprehensive accident insurance and other supplementary insurance for their employees in line with their actual conditions.

We adopt a paid leave system according to such related regulations as *Regulations on Paid Leave of Employees*, and pay remuneration for overtime work.



▲ Employees of BNB HOME (a supermarket chain built by CNBM in Papua New Guinea)



In 2016, our coverage rate of collective bargaining and contracts was approximately **27.4%**



In 2016, **91.7%** of the proposals of the Workers' Congress were handled and settled

Democracy

We keep widening our trade union network and establishing and improving trade union organizations and work organizations at all levels; we develop the members of these organizations and make the trade unions more attractive and cohesive.

We support our employees in expressing their rational appeals and safeguarding their own rights in such aspects as laboring, labor remuneration, work time, rest and vacation, work safety and health, social insurance and welfare, special protection for female employees, etc., through collective

bargaining, signing collective contracts and other forms.

We implement the Workers' Congress system, implement regulations on the disclosure of factory affairs, and ensure employees' rights regarding participation, information and supervision. We share corporate operation information with our employees through such channels as the disclosure board of factory affairs, employee discussion meetings, managers' mailboxes and company websites.

Bumi's attachment to CBMI



▲ Foreign staff working for the RAPID Project in Malaysia

In Nigeria, a country thousands of miles away, CBMI's Sokoto project group is implementing the 'Belt and Road' initiative. Bumi, a youngster indigenous to Yoruba, has worked for 7-8 years in the project group to manage the supplies and material requisition and related archives

of the project. When he joined the EWK Project initiated by CBMI in Nigeria in 2009, his family was poverty-stricken and had a child to foster, which was a very difficult situation to sustain. Through hard work, Bumi has gradually increased his family's income. During his 8 years

of work, the members of the project group helped him in his life, work and diet, and he was promoted from a temporary 'materialman' to a storekeeper officially appointed by the project department. In 2016, Bumi followed the project group to Sokoto in northern Nigeria. In order to help this employee who had never left home to adapt to his new living environment, the project group provided Bumi with a residence, paid him a non-local work premium and gave him the benefit of annual paid, which greatly improved his living conditions. The Nigerian youngster is now deeply rooted in CNBM's 'Belt and Road' shipping line. As Bumi said, he feels very lucky to work in CBMI, enjoys working with his colleagues and views them as his closest brothers.

Happiness



Sense of Identity

We spare no efforts in the construction of learning groups. We aim to build a multi-channel, multi-form, multi-level and differentiated employee cultivation and training platform. Following the training approach of 'based on internal training and supplemented by external training', we share education resources to build a comprehensive training system for the Group. We support the autonomous training of employees and encourage them in active learning. We also support and guarantee the re-education, re-training and re-learning of employees in the aspects of working hours, training investment and reward mechanism.

We attach great importance to the quality training of our employees. Aside from encouraging vocational education and training, we create a unique model for the quality promotion of enterprise talents and establish a unique corporate culture system to improve the executive ability, professional quality and cultural identity of our employees.

Sense of Belonging

We care for the health and lives of our female employees, and treat them equally with their male counterparts in salary, management positions, professional training and vocational development opportunities. We purchase maternity insurance for them and provide antenatal examination leave, maternity leave, breastfeeding leave and birth allowance. We are concerned about the lives and mental needs of our young employees. We bring young people together through the Communist Youth League, providing them with a platform on which to demonstrate their talents and exchange ideas. We care for the work and lives of expatriates, especially those who are long stationed abroad or in communities of minority ethnic groups, hold special after-work activities and provide mental health

counseling to relieve their pressure. We also improve the home leave system to remove their worries and promote happiness. We respect disabled employees and provide them with a convenient working environment and the necessary amenities.

We improve the system of employee support and relief, and help employees to overcome their difficulties through the 'Mutual Fund for Combating Serious Illness', 'Golden-autumn Grant-in Aid', 'Sunshine Employment Program' and so on. We carry out practical measures, solve difficult problems and do good deeds for employees in difficulty, and make such actions regular, institutionalized and standardized. We stick to the custom of visiting needy groups in winter and during two major festivals, mainly including childless

and widowed elderly people, families of martyrs and poor retired employees.

We encourage our member companies to strengthen the construction of gymnasiums, recreation rooms, libraries and psychological counseling rooms. We also organize colorful cultural and art activities, sports competitions, visits and educational tours, and special educational activities, offering a broad stage for our staff to show their gifts and improve their capability to improve themselves, care for their families and benefit society. Through continuously improving the physical qualities, cultural literacy and life qualities of our employees, we strive to make the company a happy and comfortable home for them.



In 2016, the proportion of member companies with an average salary higher than that of the local level was **50.3%**

Sense of Achievement

We establish a scientific remuneration system and incentive mechanism, and set a competitive salary standard. We also maintain two career paths for the promotion of employees, leading to management positions and technical positions respectively, through which we try to meet the development needs of different kinds of talents by allowing talents from different fields and with different specialties to give full play to their respective expertise.

We implement the mechanism of intragroup

communication and in-position learning for employees, thereby effectively allocating the human resources within the Group and providing a broad platform for our employees to develop their careers.

We encourage enterprises to carry out corporate pension plans and equity diversity according to their actual situation. We spare no efforts to motivate employees and retain talents, while improving their sense of achievement by allowing them to feel the development and growth of our enterprise.



In 2016, our employees attended training for **3.3 million** hours



In 2016, RMB **14.7 million** was spent to help and reward special groups of employees

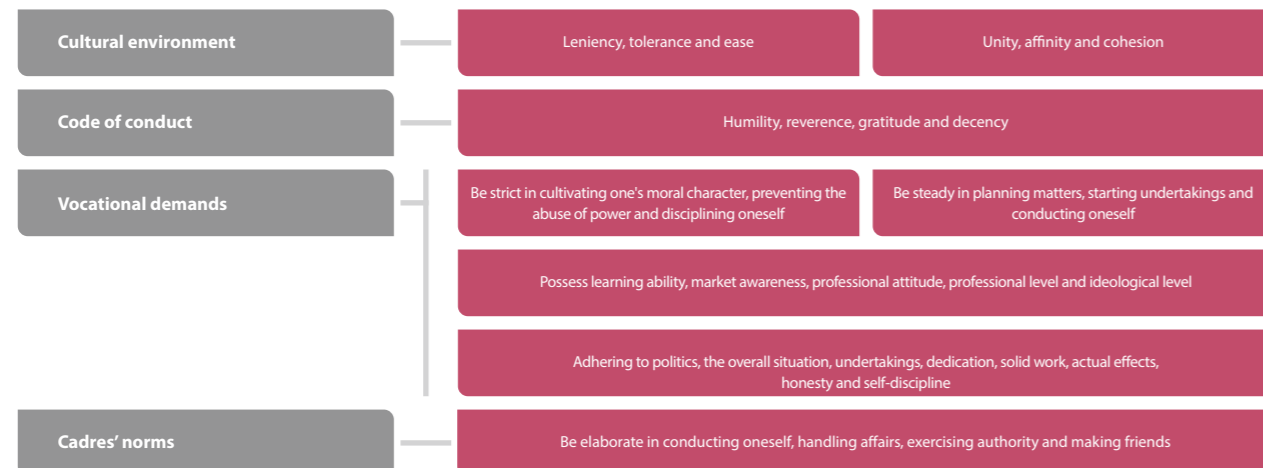


In 2016, **11,608** person-times of special groups of employees received help and rewards



In 2016, we organized **228,000** person-times of employees to participate in various cultural and sports events

Employee quality model of CNBM



Outstanding achievements through ordinary work



Fan Qi is a mechanical engineer of Beijing Triumph International Engineering Co., Ltd. At CCTV's Chinese Poetry Competition, with exceptional poetry knowledge and literary accomplishments, she entered the final four by beating multiple competitors. She once correctly answered 9 consecutive questions, bringing the house down and reflecting the style of talented woman. Fan's outstanding performance was praised by all the experts, professors and presenters, who commended her by saying, "This female mechanical engineer engaged in the general contracting of international cement projects under the 'Belt and Road' initiative has admirable literary attainments and a mien comparable



to her male peers." Guided by the 'Belt and Road' initiative and following in CNBM's footsteps in developing the international engineering business, Fan became involved in the promotion, design and development of multiple overseas cement lines and new-type prefabricated buildings, and realized her working dream. More than a peer in our midst, she is a common member among the numerous citizens of CNBM. Undertaking their responsibility for their families, the Group and the country, while also keeping their own dreams in mind, CNBM's citizens are writing the most beautiful and magnificent chapter in the great picture roll of the 'Chinese Dream'.

Fu Zhuanxia, an ordinary 'CNBM citizen', holds the post of production management division director of the Gansu Qilianshan Cement Group's Pingshan Commercial Concrete Company. In May 2016, the company was required to supply concrete products higher than international railway standards in order to guarantee the quality of a railway bridge and culvert section built by China Railway No. 5 Engineering Group Co., Ltd. Faced with incredibly demanding requirements, Fu led the members of the production management division to select indigenous materials, carry out pre-mixing in the daytime and study institutions and specifications at night. Hard work pays off. At last, the construction party's requirements were met with high quality within the specified period, enabling the project to proceed smoothly. By virtue of the unremitting efforts made by normal 'CNBM citizens', the company has output and sold more than 240,000 m³ of concrete without any quality accidents or production upsets.



Corporate Citizenship

During production and operation, we seek to achieve mutual development with the region in which we operate. Our accomplishments could not be achieved without the support of the stakeholders and people from all walks of life, and we give back to society through our unique social welfare projects. Our employees are delighted to make contributions and dedicate themselves to voluntary activities, exercising their responsibilities as corporate citizens with their actions.

- All-win Harmony
- International Cooperation
- Sunshine Welfare
- Poverty Alleviation



In 2016, the number of new employees hit

22,000



In 2016, the amount of taxes paid to local governments reached RMB

9.4 billion



In 2016, CNBM Headquarters took up posts in

57 organizations



In 2016, the donation amount reached RMB

24.0 million



Night view of CMBI's project in Bulgaria

All-win Harmony

We have established an overseas operation system with the characteristics of CNBM and integrated the concepts of responsibility and sharing into our business activities. Particularly in the practice of overseas business, CNBM abides by local laws, respects local culture, makes good use of local resources and serves regional construction, safeguards the rights and interests of shareholders and the safety of employees through its effective risk management and control system, popularizes the concept of responsibility through 'sunshine procurement' and sharing cooperation, and takes environmental protection and the quality of life into consideration in a comprehensive manner based on regional civil interests. We have held many exchanges with Saint-Gobain, Röchou, CRH, Owens Corning, Vale and the Mitsubishi Corporation. Our responsible and sustainable business philosophy makes us highly recognized and fully accredited in local areas as we engage in 'Going Out'.



CNBM has been in rapid development in recent years and top-ranking in multiple international business areas. It is hoped that the two parties will continuously enhance their communication and cooperate in more fields in China and even the world so as to promote the continuous and healthy development of the industry.



—Michael Thaman, CEO of Owens Corning

'Going out' culture featuring 'amity, sincerity, mutual benefits and inclusiveness'



Amity

We insist on good neighborly and friendly relations and mutual aid: we strictly carry out social and environmental impact assessments for investment projects, and thoroughly seek the opinions of interested parties with regard to economic and environmental benefits so as to minimize the negative effects of our operation on the local environment and society. We also actively take part in local public benefit programs and community activities in order to increase our attractiveness, emotional appeal and influence.



Sincerity

We treat cooperative countries sincerely and strive for more friends and partners: we strictly observe international conventions as well as local laws and regulations, pay taxes in accordance with the law, pay attention to environmental protection and respect local religious beliefs, customs and habits. We also stick to public bidding and 'sunshine procurement'; that is, excellent subcontractors are selected through the comprehensive assessment of their business strength, credit standing and management level. In contracts, we have clear provisions on rights, interests, safety and occupational health protection applicable to the employees of subcontractors. In the process of cooperation, our subcontractors are supervised and reminded to implement such provisions. We have won respect, trust and support from surrounding countries by virtue of our sincere devotion.



Mutual benefits

We cooperate according to the principle of reciprocity and mutual benefits: we strive to build competitive value chains by using local superior resources in combination with the Group's advantages in technology and management, thereby providing a value-added space for local raw material suppliers and product sellers, helping the local economy to prosper and generating taxes. We also build advanced cement and glass lines for developing countries and regions to meet local construction demands, and advocate the concepts of green consumption and architectural energy conservation by promoting new-type building materials and housing. In addition, we optimize local resource circulation and allocation by building large logistics parks and sales networks, for the purpose of growing together with the regions in which the member enterprises are located.



Inclusiveness

We advocate the concept of inclusiveness-based cooperation: we respect local religious beliefs, customs and habits, and execute a staff localization policy. Specifically, job opportunities are provided locally, and local employees are trained to spread advanced technologies and management experience, and improve the quality of local talents. Through proper operation, we enhance the management of overseas enterprises and projects. Furthermore, we have established a comprehensive risk management system covering the risks involved in overseas operation (i.e. political risk, country risk, financial risk, legal risk, bidding and tendering risk, tax risk, labor service risk and industry risk) and developed a risk analysis & warning system and an emergency response mechanism for the purpose of protecting the safety of the staff and assets. In the future, we will promote regional cooperation with a broader mind and higher enthusiasm so as to share opportunities and enjoy mutual prosperity.

Standing out at the Lancang-Mekong Cooperation Exhibition

On March 23rd, 2016, as the only representative of the building materials industry, CNBM took part in the Lancang-Mekong Cooperation Exhibition which was jointly sponsored by the Ministry of Foreign Affairs, National Development and Reform Commission and China Council for the Promotion of International Trade. The Group exhibited such internationally advanced products and technologies as ultra-thin electronic glass, carbon fiber, glass fiber and refractory materials.

State Council Premier Li Keqiang visited the exhibition. With much attention paid to the 0.2 mm ultra-thin electronic glass ingeniously developed by CNBM, Li answered questions about the performance, application, technology and R&D of ultra-thin electronic glass. As Song Zhiping said, attaching importance to the protection of IPRs, CNBM strives to catch up with and surpass the world's advanced levels by adopting integrated and innovative development modes, setting a new milestone in the development history of China's glass industry and launching the industrialized production of ultra-thin electronic glass in Bengbu. Li highly praised the Group's internationally advanced carbon fiber technologies, and experienced the performance and usage of the carbon fiber bicycle in person at the venue. He also highly praised the efforts CNBM made during the transformation of the industry, and expressed his hopes that the Group will enhance its technological innovation and industrial upgrading by making full use of its industrial advantages, deepening its cooperation with Lancang-Mekong countries and playing a guiding role in promoting the implementation of the 'Belt and Road' initiative and international capacity cooperation.



In 2016, the hiring rate of local employees reached 64.8%



In 2016, the hiring rate of local senior management reached 57.5%



Shen Jianying: the first female welder assigned to Egypt



I don't exactly know what kind of people can be called a craftsman. I just carefully weld every piece of plate. I'll be very glad if the bushings others make can be used for only a few months, while the bushings I make can be used for years.



—Shen Jianying

Shen Jianying has been honored as a 'May 1st Female Pacesetter of Tongxiang 2013-2016'. She is softly spoken and persistently works with a mask by bending her head. She likes welding pieces of platinum-rhodium alloys together with a welding gun. She is the only female welder assigned to Egypt's platinum processing workshop by the Jushi Group. Through undertaking the task of passing on experience, she has trained 2 apprentices in the technology of argon arc-welding.



International Cooperation

By the end of 2016, CNBM had built 312 large-scale cement lines in 75 countries, representing a 65% share of newly-built cement lines worldwide, and was ranked 1st in terms of global market share for the 9th consecutive year. In particular, in the role of general contractor, we have built or designed nearly 60 glass lines and established factories in the US, Egypt and Mongolia. Our green and environmentally friendly housing business covers 39 countries on 5 continents. By rapidly duplicating and promoting the 'building material + home furnishing' supermarket chain and 'cross-border e-commerce + overseas location' modes, we have established 24 overseas locations and 13 overseas building material and home furnishing supermarkets. In addition, we have founded 166 overseas business enterprises in 55 countries and regions.

As a brand new exploration of international cooperation and governance modes, the 'Belt and Road' initiative is epoch-making for promoting economic growth and supply-side reform, and creating regional new-type partnerships. By making full use of our advantages in technology, capital and human resources, we vigorously develop the large markets of the 'Belt and Road' countries, actively carry out overseas investment and explore the 'EPC + investment + management + service' mode for 'Going Out'. In this way, CNBM has become a new business card in the 'Going Out' of China's industry.

Jushi USA and Jushi Egypt

On December 8th, 2016 (local time), in Richland, South Carolina, USA, a foundation stone was laid for the 80,000-ton Glass Fiber Line Project in which the Jushi Group invested USD 300 million. This project will be provided with the world's most advanced technologies and process equipment for environmental protection, realize equipment intelligence, intelligent control, intelligent production and collaborative manufacturing under the support of information technology, and provide 800 jobs for locals.

So far, Jushi Egypt has paid various taxes and duties in excess of EGP 320 million and employed 1,480 locals, bringing the staff localization rate up to 97%.

“ This foundation stone laying is ground-breaking. This project will supply better services to customers in North America, thereby further improving the Jushi Group's global competitiveness. ”

—Zhu Hong, Economic and Commercial Counselor of China's Embassy to the US

“ Jushi Egypt is world-class in terms of investment, production, management and sales, and it has set an example for investment and international capacity cooperation under the 'Belt and Road' initiative by Chinese enterprises in Egypt. ”

—Liu Deheng, SASAC Capital Operation and Gains Administration Director



Zambia Building Material Industrial Park—a new step for international capacity cooperation

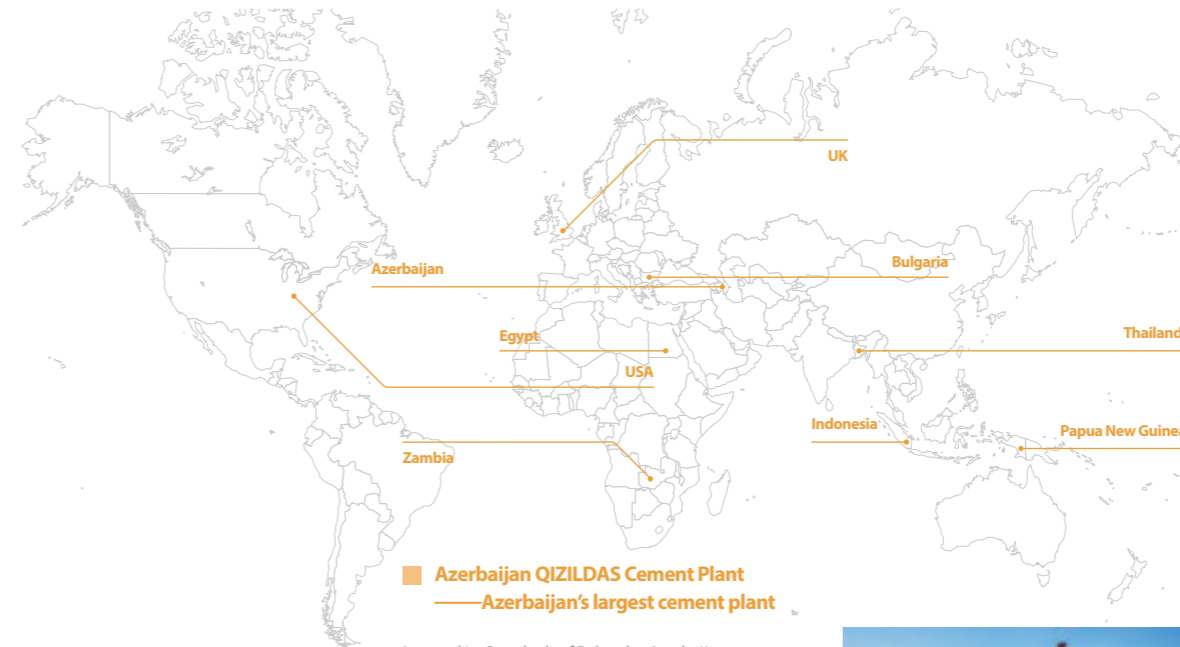
“ The industrial park in Zambia will make immeasurable contributions to developing the local economy and improving the living standards of local people. It is an excellent investment project as well as an excellent 'Going Out' case of Chinese enterprises under the 'Belt and Road' initiative. ”

—Yang Youming, China's Ambassador to Zambia

On November 23rd, 2016, the commercial concrete station of Zambia Building Material Industrial Park, in which Sinoma Cement invested USD 500 million, was officially put into operation. The park is developed as a circular economy industrial park, and multiple building material projects are planned including cement, aggregate, manufactured sand, commercial concrete and baked brick. In addition, Sinoma Cement invested USD 1.5 million to build modern schools and hospitals for locals beside the park.

Bulgaria DEVNYA Cement Project—a new milestone of construction in EU countries

The Bulgaria DEVNYA Cement Plant New Cement Line Project is a project implemented by CBMI in an EU country following projects implemented in Italy, Spain, France, Hungary and Cyprus, another genuine EPC project implemented in an EU country and Bulgaria's highest-investment project in over 30 years. It was implemented with European design in the mode of localized operation. The number of Chinese employees was controlled in line with a constructor ratio of 1:20 and a project manager ratio of 1:1, ensuring that many job opportunities would be provided locally. In addition, the project won Bulgaria's 'Best Building Award' and 'Annual Best Investment Award', and the cups were personally presented by the President of Bulgaria.



Azerbaijan QIZILDAS Cement Plant—Azerbaijan's largest cement plant

Located in Garadagh of Baku, the Azerbaijan QIZILDAS Cement Plant outputs 5,000 tons of cement per day. Undertaken by CTIEC in the role of general contractor, it is the largest cement line in the Caucasus and can save cement importing funds of USD 150 million for Azerbaijan every year. In addition to employing 400 persons, this project created 2,500 jobs for the chemical, transportation and fuel industries. It also transformed Azerbaijan from a cement importer to a cement exporter.



Indonesia Baturaja Project—“Spider-Men” on the net rack

The Indonesia Baturaja Project is a milestone created by the Tianjin Institute in Indonesia's EPC cement service market. The project was implemented under hard conditions; in particular, the net rack installers were called 'Spider-Men' because almost all the tasks of the constructors had to be performed on net racks. Chinese World, a program broadcast by CCTV-4 (a Chinese international channel), once held a special interview on the topic. This project fully demonstrated the Tianjin Institute's advanced management level and technical strength, improved the international influence of CNBM's brands and highlighted the high 'combat effectiveness' of Chinese enterprises.



'Building material + home furnishing' supermarket chain of Papua New New—an innovative 'Going Out' mode

After nearly 30 years of development, the CNBM Investment Papua New Guinea Company has become Papua New Guinea's largest 'building material + home furnishing' one-stop comprehensive service provider, and has extended its business to all the main islands of the country. By the end of 2016, there were 13 'building material + home furnishing' supermarkets in the country. The company appointed local employees as the backbones of the middle management and filled all front-line posts with locals, bringing the staff localization rate up to 93%. During his visit to China, Prime Minister of Papua New Guinea Sir Michael Somare specially visited the CNBM Investment Company Limited and highly praised the company for its huge contributions to the development of the country.



All 5 of the UK's aboveground PV power station projects successfully connected to the grid—creating a global model of new energy projects

In 2016, all 5 of the aboveground PV power station projects (Shotwick Farm (72 MW), Swindon Farm (60 MW), Stanton Under Barton (3.65 MW), Wormit (4.96 MW) and Lower Stanley Farm (4.92 MW)) built by CTIEC in the UK in the role of general contractor were successfully connected to the grid. Among them, Shortwick Farm and Swindon Farm were respectively ranked 1st and 2nd in the country in terms of installed capacity. These solar PV power stations were the core projects of a range of cooperation agreements that the Group signed during CPC Secretary General Xi Jinping's visit to the UK. Their construction was very difficult because they were all implemented in winter. Depending on top-ranking technologies, management, quality and services, CTIEC has set a construction speed record in the UK and created a global model of new energy projects.



Siam Cement TS4 & 6 CAPACITY MAXIMIZATION Project—new breakthroughs in biomass power generation

On December 21st, 2016, the Siam Cement TS4 & 6 CAPACITY MAXIMIZATION Project, which was undertaken by Sinoma Energy Conservation Limited, passed its acceptance check and obtained a PAC certificate. With the actual operation indicators 20% higher than the contractually guaranteed values, and as the first biomass power generation EPC project undertaken by the company, this project created returns on investment beyond the owner's expectations.



Sunshine Welfare

We firmly believe that a responsible social welfare system is the basis for promoting social justice and for central enterprises to fulfill their social responsibility, and more importantly an important measure for protecting the interests of investors and the safety of state-owned assets. According to the principle of being accountable for beneficiaries and shareholders, we carefully assess invitations for social welfare support prior to implementing any donation, and cautiously select projects to support in order to guarantee public rights and interests by evaluating the importance, reliability and public benefits of projects, as well as our annual business performance.



In 2016, the total environmental protection and public welfare donation amount reached RMB **338,000**



In 2016, the number of foreign donation projects reached **360**



In 2016, total foreign donations reached RMB **24.0 million**

Donation Standardization

We establish emergency response mechanisms in order to provide rapid disaster relief, civil defense and other public safety services.

We provide support for disaster affected areas, poverty-stricken areas, science, education, culture, and hygiene causes, welfare projects and environmental protection causes in kind and capital, thereby supporting the development of society.

We standardize our donation management regulations. We establish and improve the

donation organization and management system, and strictly implement the annual budget and procedure for process examination and approval; we have established a mechanism for periodically analyzing and reporting on donation project progress, evaluating the effects and conducting return visits when the project ends, and rejecting apportioned, duplicated, ineffective or poorly run public welfare projects, as well as those that are beyond the enterprise's capacity, so as to focus on the donation effect and guarantee the interests of investors.

Sinoma Cement—a new chapter of public good abroad

Education and medical care are the basic fields most closely associated with improving people's livelihoods. Sinoma Cement's Zambia Building Material Industrial Park built a school-hospital complex for Chiyeya of Lusaka, and the villagers gladly named the complex 'Naqitete'. After 5 months of planning and construction, the complex was delivered. Its facilities were designed and built in strict accordance with Zambia's national standards. Constructed with a total investment of USD 1.5 million, the complex consists of 5 classrooms, a 711m² hospital and other facilities (offices, teachers' dormitory, doctors' dormitory, solar power generation and lighting system, water supply and drainage system, etc.). The school is capable of admitting school age children from the surrounding villages and communities, and supplying educational services from the 1st grade to the 6th grade. The hospital will supply high-quality medical services to local residents and benefit a population as large as 15,000. The complex gives an impetus to the long-term development of the surrounding communities.

The Zambia Building Material Industrial Park is an important action taken by Sinoma Cement in response to the government's calls for 'Going Out' under the 'Belt and Road' initiative. It has not only made significant contributions to the economic development of Zambia, but also written a new chapter in the Sino-Zambian relationship.



Voluntary Activities

We advocate a harmonious social atmosphere and encourage our employees to provide voluntary services and participate in social welfare activities. We provide guarantee and support for voluntary activities in such aspects as organizational structure, work mechanism, scheduling, financial support, communication and liaison. Under the voluntary service system with the Communist Youth League at its core, companies at different levels have established several volunteer activity groups which carry out a variety of voluntary activities, demonstrating the enthusiasm of the participants and spreading happiness.



BNBM—the 'painter' of the primary school for children of migrant workers

Beijing Xingzhi Experimental Primary School (Gongcun Department) is a primary school for the children of migrant workers. Located near Jinyuan Overpass on the West 5th Ring, Haidian District, Beijing, it has more than 550 enrolled students. The infrastructure of the school was run-down. Specifically, most of the exterior walls of the classrooms and playground had not yet been painted, and some walls were peeling badly. To this end, BNBM Assistant General Manager Chen Haoya, who was pregnant at the time, led volunteers from BNBM's 'Youth BNBM' volunteer service corps and Tsinghua University's Whitewasher Studio to make the campus colorful and full of warmth by painting the walls with BNBM's star product, 'Dragon Paint'.

'Youth BNBM - Colorize Our Homeland with Paint' is a public benefit activity persistently developed by BNBM's 'Youth BNBM' volunteer service corps in collaboration with Whitewasher Studio. The activity has been developed several times for Hongqinglan Primary School (Shunyi), Sun village (Beijing), Taiyuan Town (Chongqing), Huairou Yucai School, Zhongqingjing Primary School (Hebei's Lingshou County) and Mingyuan School (Beijing's Daxing District). It is popular with all teachers and students, and praised by all social sectors.

▼ Volunteer, Chen Haoya



In 2016, the total voluntary activity donation amount reached about RMB **3.4 million**



In 2016, **28,000** hours of voluntary services were provided by our employees

Poverty Alleviation

In active response to the government's call, we carefully promote fixed-point poverty alleviation in difficult areas in accordance with CPC Secretary General Xi Jinping's important instructions to 'come down to earth, suit the local conditions, guide according to classes and take targeted measures in poverty alleviation'. In addition, we enhance our aid for ethnic autonomous regions facing special difficulties, promoting aid for Xinjiang, Tibet and the Tibetan regions of such provinces as Qinghai in a down-to-earth way.

Targeted Poverty Alleviation

We constantly focus on poverty reduction to fulfill our social responsibility as an enterprise. Since 2002, CNBM has established site-specific poverty-reduction relationships with Shitai County of Anhui Province, Zhaoyang District, Suijiang County and Yongshan County of Yunnan, and Jingyuan County of Ningxia. By donating poverty alleviation funds, we help local areas to withstand natural disasters, improve the educational environment, solve housing difficulties, repair roads and build electricity and water conservancy facilities.

Meanwhile, in order to help poor areas to completely escape from poverty, the Group

actively transforms its poverty alleviation concepts and creates new modes to reduce poverty. Focusing on alleviating poverty through improving education, developing industries, introducing talents, protecting the ecology and developing integrated resources, we have introduced the new mode of 'Internet + Poverty Alleviation' in which we dispatch talents, identify the objects of poverty alleviation and arrange products and use funds in a targeted way. We also conduct multi-dimensional poverty alleviation work and earnestly solve the basic needs of poor people, enabling the results of poverty alleviation to improve people's living standards.

'He Bao Dan': a new Internet celebrity arising on the path of poverty alleviation

On September 26th, 2016, CNBM's micro business account 'He Bao Dan' was formally activated. So far, more than 2,000 families from 87 counties (county-level cities) in 27 provinces have enjoyed agricultural products from Shitai County, a fixed point of poverty alleviation identified by the Group.

Shitai County of Chizhou, Anhui Province, is a poverty-stricken old revolutionary base area identified by CNBM as a fixed point of poverty alleviation. With an excellent eco-environment and abundant natural resources, the county has great potential for the development of tourism and modern agriculture. With an eye to the county's characteristics and CNBM's industrial advantages, CNBM's member enterprises the Triumph Group and CNBM International signed a framework agreement concerning 'green town', 'intelligent agriculture' and 'agricultural product and special local product e-commerce' projects so as to vigorously support the further development of eco-tourism, agricultural sightseeing and selenium-enriched agricultural products in the county.

On the same basis, under the leadership of Li Zhisong, a poverty alleviation cadre of the Group, 'He Bao Dan' entered Yunnan's Yongshan County to conduct an on-the-spot investigation. Specifically, the team visited 9 towns on the winding south bank of Jinsha River and discovered many agricultural products and special local products. These products are being directly put on the e-commerce platform from local agricultural cooperatives, and entering thousands of households.



Aid for Xinjiang and Tibet

In order to support the development of underdeveloped western areas facing special difficulties, we invest in and found enterprises in Xinjiang, Qinghai and the Tibetan regions of Sichuan and Gansu, actively develop the cement, cogeneration, PV and new energy industries, vigorously support local infrastructure construction and sustainable development, and create many job opportunities for minorities and local graduating students. In addition, we have assigned multiple Xinjiang-aiding and Tibet-aiding cadres to deliver advanced technologies and management experience, with the aim of facilitating local industrial development.

Investigating conditions, improving wellbeing and gathering the people together

The 'investigate-improve-gather' concept is an important measure and long-term mechanism for practicing the mass line, enhancing ethnic unity, strengthening mutual trust among ethnicities, improving the livelihood of the people and maintaining social stability in the Xinjiang Uygur Autonomous Region. In 2016, Xinjiang Tianshan Building Materials (Group) Co., Ltd. ('Tianshan Building Materials') assigned a work team consisting of 5 excellent cadres to enter and be stationed in Ahonglukumu 1st Village of Ahonglukumu Town, Yopurga County, Kashgar, to provide partnering-based assistance on 2 levels: first, the members of the leading group and 'investigate-improve-gather' work team stationed in the village partnered with 11 households; and second, 48 middle-level cadres partnered with the families of 48 impoverished employees of the Group. This visit and exchange among different ethnicities deepened communication, promoted trust and gathered the people together.



The Group's first Tibet-aiding senior executive heads for Tibet

On July 27th, 2016, Li Mingchun, who was selected by CNBM in the eighth batch of SOEs' Tibet-aiding senior executives, headed for Tibet. At that time, as a business backbone of a member enterprise, Li held the post of Deputy General Manager of the Investment and Development Department of Shanghai South Cement Company Limited. His actions of overcoming family-related difficulties and entering his name on his own initiative demonstrated the sufficient courage of CNBM's young executives to shoulder heavy responsibilities. During his aid work, based on carefully studying the policies, present situation and trend of Tibet's building material industry, Li combined the Group's advantages and mature management experience in terms of building materials with the economic development of Tibet, and actively promoted industrial cooperation between Tibet Tianlu Co., Ltd. and CNBM in extension of the building materials industry chain, new-type housing and precast concrete parts. He also struggled to promote the informatization-industrialization fusion of aided enterprises in Tibet, and promote trade and logistics in the Autonomous Region to develop in the direction of 'information, intelligence and efficiency'. Li said that aiding Tibet is a serious and glorious task, and he will make contributions to the development of Tibet with all his wisdom and abilities.





Technological Innovation

We shoulder the responsibility of making innovations in the industry by leveraging our strong research capability. We also promote the transformation and upgrading of the industry with our foresight, vision and advanced technology. We promote and share our technical information, and we are committed to building more environmentally friendly, comfortable and intelligent living environments, and creating a sustainable future.

- Research Strength
- Security Mechanism
- Conversion of Achievements
- Open and Sharing



In 2016, expenditure on R&D activities amounted to about RMB

6.6 billion



In 2016, RMB

33.9

billion was recorded from the sales of new products



In 2016, the number of personnel engaged in scientific and technological activities was nearly

38,000



In 2016, we held a total of

8,408

patents



The robotic arms on the 650t/d production line of China Luoyang Float Glass Group

Research Strength

In addition to the transformation and improvement of traditional industries, we vigorously develop the three-new industries, enhance services for technological innovation and the development of the technological talent team, deeply perform the task of 'encouraging people to start their own businesses and make innovations', and strengthen IPR protection by implementing the patent portfolio strategy. We strive to build the largest comprehensive scientific research platform with the strongest power in the building materials and inorganic non-metallic materials fields of China, and provide services and security for nationwide innovation.



R&D investment in 2016: RMB 5.1 billion



In 2016, the number of personnel engaged in scientific and technological activities in the Group was nearly 38,000



In 2016, the percentage of science and technology personnel of the Group accounted for 16.2% of the total number of employees

Establishing Platforms

We have established an integrated scientific research innovation center that comprises national research and design institutes, state and industry key laboratories, national research centers, technology development and promotion centers, scientific and technological

cooperation demonstration bases, and public service demonstration platforms. We intend to build China's largest integrated scientific research platform with the greatest strength in the field of building materials and inorganic non-metallic materials.

Attracting Talents

We build a strong contingent of scientific researchers by attracting and cultivating scientists and engineers. We set up the academician workstation and post-doctoral research stations and workstations, and implement the 'Thousand Talents Program'

in order to maintain smooth channels for the introduction and exchange of high-caliber talents from overseas and domestic universities and institutes. We also make innovations in the incentive mechanisms and improve intellectual property rights protection so as to retain talents.

Ensuring Input

We place emphasis on science and technology investment. We increase financial support for hardware construction and scientific research rewards. Aside from ensuring the requirements for research into the basic theories and cutting-

edge technologies of material science, we also specifically boost our investment in the R&D of low-carbon environmental protection technologies and products.



16 State-level Accredited Enterprise Technology Centers and Sub-centers



13 State-level Product Quality Testing Organizations



20 Industrial Product Quality Testing Organizations

Scientific Research and Service Platforms of CNBM

	China Building Materials Academy	Tianjin Cement Industry Design & Research Institute Co., Ltd.
	Hefei Cement Research & Design Institute	Sinoma International (Nanjing) Engineering Co., Ltd. (Nanjing Cement Institute)
	Bengbu Design & Research Institute for Glass Industry	Chengdu Design & Research Institute of Building Materials Industry Co., Ltd.
	China New Building Materials Design & Research Institute	Nanjing Fiberglass Research & Design Institute Co., Ltd.
	Harbin FRP Institute	Beijing Composite Materials Co., Ltd.
	Qinhuangdao Glass Industry Research and Design Institution	Suzhou Sinoma Design and Research Institute of Non-metallic Minerals Industry Co., Ltd.
	Xi'an Research & Design Institute of Wall & Roof Materials	Shandong Industrial Ceramics Research & Design Institute Co., Ltd.
	Xianyang Research & Design Institute of Ceramics	Beijing Sinoma Synthetic Crystals Co., Ltd.
	Hangzhou Mechanical and Electrical Design and Research Institute of Light Industry	Suzhou Concrete & Cement Products Institute Co., Ltd.
	Horological Research Institute of Light Industry	Xianyang Non-metallic Minerals Research & Design Institute Co., Ltd.
	Light Industrial Xi'an Mechanic Design and Research Institute	Wuhan Building Material Industry Design & Research Institute Co., Ltd.
	Research Institute for Automation of Light Industry	Sinoma Science & Technology Development Center Co., Ltd.
	Suzhou Waterproof Research Institute	Sinoma Geological Engineering Exploration Academy Limited
3 National Key Laboratories	State Key Laboratory of Green Building Materials	National Key Laboratory of Special Fiber Composites
	National Key Laboratory of New Float Glass Technologies	
1 National Engineering Laboratory	State Key Laboratory of Pulp and Paper Engineering	
	National Glass Deep Processing Engineering Technology Research Center	National Non-metallic Minerals Deep Processing Engineering Technology Research Center
8 National Engineering (Technology) Research Centers	National Resin Matrix Composites Engineering Technology Research Center	National Industrial Ceramics Engineering Technology Research Center
	National and Local United Engineering Research Center for Glass Industry Energy-saving Technology	National Fiber Reinforced Moulding Compound Engineering Technology Research Center
	National Fiberglass and Products Engineering Research Center	National Research Center of Cement Energy Conservation & Environmental Protection Engineering
	Technology Center of China National Building Materials Group Co., Ltd.	Technology Center of Sichuan Jiahua Enterprise (Group) Co., Ltd.
	Technology Center of Beijing New Building Material (Group) Co., Ltd. (Sub-center)	Technology Center of Sinoma Technology & Equipment Group Co., Ltd.
	Technology Center of China Luoyang Float Glass Group Co., Ltd. (Sub-center)	Technology Center of Taishan Glass Fiber Co., Ltd.
	Technology Center of Lianyungang Zhongfu Lianzhong Composites Group Co., Ltd. (Sub-center)	Technology Center of Taishan Glass Fiber Zoucheng Co., Ltd. (Sub-center)
16 National Accredited Enterprise Technology Centers	Technology Center of Hefei Smarter Technology Group Corporation (Sub-center)	Technology Center of Xinjiang Guotong Pipeline Co., Ltd.
	Technology Center of Jushi Group Co., Ltd. (Sub-center)	Technology Center of Sinoma Science & Technology Co., Ltd.
	Technology Center of Hefei Cement Research & Design Institute (Sub-center)	Technology Center of Sinoma Energy Conservation Limited
	Technology Center of Hefei Zhongchen Light Industrial Machinery Co., Ltd. (Sub-center)	Technology Center of Xinjiang Tianshan Cement Joint-Stock Cement Company Limited
4 Academician Workstations	Academician Workstation of China Building Materials Academy	Academician Workstation of Zhengzhou Cement Industry Functional Refractory Material
	Academician Workstation of Bengbu Design & Research Institute for Glass Industry	Academician Workstation of Enterprises in Jiangsu Province
	Post-doctoral Scientific Workstation of China Building Materials Academy	Post-doctoral Scientific Workstation of Bengbu Design & Research Institute for Glass Industry
	Post-doctoral Scientific Workstation of Xianyang Research & Design Institute of Ceramics	Post-doctoral Scientific Workstation of Zhongfu Shenyang Carbon Fiber Co., Ltd.
	Post-doctoral Scientific Workstation of Triumph Heavy Industry Co., Ltd.	Post-doctoral Scientific Workstation of China Luoyang Float Glass Group Co., Ltd.
14 Post-doctoral Scientific Workstations	Post-doctoral Scientific Workstation of Jushi Group	Post-doctoral Scientific Workstation of Anhui Ruitai New Materials Technology Co., Ltd.
	Post-doctoral Scientific Workstation of Zhongguancun Haidian Park BNBM Sub-station	Post-doctoral Scientific Workstation of Xinjiang Tianshan Cement Joint-Stock Cement Company Limited
	Post-doctoral Scientific Workstation of Harbin FRP Institute	Post-doctoral Scientific Workstation of Tianjin Cement Industry Design & Research Institute Co., Ltd.
	Post-doctoral Scientific Workstation of Zhongfu Lianzhong Composites Group Co., Ltd.	Enterprise Post-doctoral Scientific Workstation of Nanjing Fiberglass Research & Design Institute Co., Ltd.
1 Mobile Post-doctoral Scientific Workstation	Mobile Post-doctoral Scientific Workstation of China Building Materials Academy	
	Industrial (Building Materials) Product Quality Control and Technical Assessment CTC Laboratory	Industrial (Building Materials for Roofs, Walls and Road Surfaces) Product Quality Control and Technical Assessment Laboratory
	Industrial (Building and Sanitary Ceramics and Products) Product Quality Control and Technical Assessment Laboratory	Industrial (Non-metallic Mineral Products) Product Quality Control and Technical Assessment Laboratory
10 Industrial Product Quality Control & Technical Assessment Laboratories	Industrial (Light Industrial Machinery) Product Quality Control and Technical Assessment Laboratory	Industrial (Glass) Product Quality Control and Technical Assessment Laboratory
	Industrial (Fiberglass & Thermal Insulation Material) Product Quality Control and Technical Assessment Laboratory	Industrial (Horology) Product Quality Control and Technical Assessment Laboratory
	Industrial (Decorative Building Materials) Product Quality Control and Technical Assessment Laboratory	Industrial (Composites) Product Quality Control and Technical Assessment Laboratory
3 State International Scientific Cooperation Demonstration Bases	International Scientific Cooperation Base of Green Building Materials	State International Scientific Cooperation Base of HV Insulating Materials Research & Development
	State International Scientific Cooperation Base of Glass Industry Design & Research of Bengbu	
3 National SME Service Demonstration Platforms	Hangzhou Mechanical and Electrical Design and Research Institute of Light Industry	Xianyang Non-metallic Mineral Design Institute
	Horological Research Institute of Light Industry	

Security Mechanism



In 2016, we held a total of **8,408** patents



In 2016, we gained **173** scientific and technological awards at provincial or ministerial level or above

IP Protection

Focusing on such aspects as the protection of intellectual property and the management of scientific research funds, we have combined the development of internal control systems with risk management requirements to form

Incentives

We have gradually established a talent development mechanism to promote the development of talents, and an assessment and reward mechanism according to their performance and contribution. Inside the Group, we provide the 'Scientific and Technological Progress Award', 'Technical

Collaborative Innovation

We attach great importance to cooperation with famous universities and professional institutions in jointly tackling key problems and engaging in technical cooperation, academic exchange, talent cultivation, the incubation and transformation of achievements, thereby establishing an innovation alliance with various levels. We explore the establishment of an open scientific research system. Aiming at

a scientific research management system which conforms to national scientific research management requirements and has the features of the building materials industry, providing the efficient progress of scientific research with a security mechanism.

'Improvement Award' and 'Group Technical Center Project' to boost the enthusiasm of researchers for innovation. We have established the Youth Science Foundation and organized youth scientific research competitions to promote the fast growth of young backbones of scientific research and inject vigor into the scientific research teams of the Group.

research hotspots and challenges which attract the attention of the country and the industry, we mobilize social technological resources to tackle difficult problems. We promote the close combination of production, learning and research, establish new production-study-research relationships on the basis of the mutual benefits and cooperation of enterprises, and build up a technical innovation cooperation system external to the Group.

Awards given to CNBM from the '11th Five-Year Plan'

Year	Type of award	Name of project	Completed by
2016	Second prize for technological progress	Development of key technologies and complete equipment for industrial production of ultra-thin information display glass	Bengbu Design & Research Institute for Glass Industry
2016	Second prize for technological progress	Development of technologies and complete equipment for low-cost large-scale production of high-performance glass fiber	Jushi Group
2014	Second prize for technological progress	Key technologies for mechanical property testing and assessment of structural ceramics under typical application conditions and their application	China Building Materials Academy
2014	Second prize for technological invention	Structural design, control, preparation and application of multi-directional preformed carbon fiber for anti-ablative composite material	Sinoma Science & Technology Co., Ltd.
2014	Second prize for technological progress	Integrated technology for stirring-type indirect heat drying of sludge and clean incineration on compound circulating fluidized bed	Nantong Wanda
2014	Second prize for technological invention	Epitaxy and chip technologies of F-30902-2-02 low thermal resistance and high optical efficiency sapphire-based GaNLED material	Yangzhou Zhongke
2013	Second prize for technological progress	Key technologies for micro-defect control and energy conservation of float glass and their industrial application	Bengbu Design & Research Institute for Glass Industry, CTIEC
2013	Second prize for technological progress	Key technologies for preparation and application of high-performance fibrous composites for civil engineering	Beijing FRP Design Institute, Sinoma Science & Technology Co., Ltd.
2011	Second prize for technological progress	Development and application of key equipment for pulverization on large-size new-type dry-process cement line	Hefei Cement Research & Design Institute
2011	Second prize for technological progress	Complete technologies and industrialized development of micro-ferrum high-transmittance filter glass for solar battery	Bengbu Design & Research Institute for Glass Industry, CTIEC
2009	Second prize for technological progress	Key technologies for long-distance water supply works in deserts and severe cold regions	Xinjiang Guotong Pipeline Co., Ltd.
2008	Special prize for technological progress	XXX project	Harbin FRP Institute
2008	Second prize for technological progress	Development and application of complete engineering technologies for 'level-by-level refining' of float glass and upsizing of melting furnace	Qinhuangdao Glass Industry
2007	Second prize for technological progress	Development and engineering application of major support equipment for new-type dry-process cement line	Hefei Cement Research & Design Institute, Tianjin Cement Industry Design & Research Institute Co., Ltd.
2006	First prize for technological progress	Application of complete technologies and key equipment for ultra-thin float glass production in industrial production of electronic glass	China Luoyang Float Glass Group Co., Ltd.
2006	Second prize for technological invention	Preparation and application of high-performance low-heat Portland cement (high belite cement)	China Building Materials Academy

Two projects awarded the national prize for technological progress

On the morning of January 9th, 2017, the Party Central Committee and State Council grandly held the National Science and Technology Award Conference. Party and state leaders Xi Jinping, Li Keqiang, Liu Yunshan and Zhang Gaoli attended the event and presented prizes to the prize-winning representatives. The project ingeniously developed by the Jushi Group, 'development of technologies and complete equipment for low-cost large-scale production of high-performance glass fiber', and the project jointly developed by the Bengbu Design & Research Institute for the Glass Industry ('Bengbu Institute'), CTIEC and another 5 units, 'development of key technologies and complete equipment for industrial production of ultra-thin information display glass', each won the second prize for technological progress.

The project 'development of technologies and complete equipment for low-cost large-scale production of high-performance glass fiber' made significant breakthroughs in high-performance glass formulae, surface modification, technologies and equipment for large-scale production, as well as technologies and equipment for green manufacturing. Specifically, a new formula of high-strength high-modulus fluoride-free boron-free glass fiber was created to significantly lower the liquidus temperature and

crystallization degree of glass, and achieve the kiln with the greatest capacity in the world; high-COD reducible sulfur clarification technology was developed to significantly increase the heat absorptivity of glass; a few melting technologies and types of equipment (e.g. vertical combustion with pure oxygen in the kiln, longitudinal dual-H channel structure, matrix-type electric boosting, etc.) were developed to increase the melting capacity, bring the melting rate up to 3.0 t/m²/d and lower the energy consumption to the internationally advanced level (32.7% lower than the value specified in the entry criteria of the glass fiber industry); IoT technologies were adopted to enable the automatic preparation of mineral materials, automatic delivery of products and intelligent tridimensional storage, and bring labor productivity up to 270 tons/person/year; and green production was improved by using the technologies of melting glass fiber filament scraps, recycling blast furnace slag and controlling waste gas and water. The achievements of this project have been applied on 15 production lines for more than 3 years. In addition, a demonstration line has been built in Egypt to successfully apply the complete technologies abroad. The spread of the achievements of this project is of great significance for promoting the structural adjustment, energy conservation and emissions reduction of China's glass fiber

industry, and guiding its progress.

In the project 'development of key technologies and complete equipment for industrial production of ultra-thin information display glass', the technologies for the overflow forming of ultra-thin TFT-LCD glass, material size grading of ultra-thin electronic float glass and variable melting and forming upon constant-gradient temperature drop, as well as the major supporting equipment, were successfully developed, thereby creating the key technologies and complete equipment for the industrial production of ultra-thin information display glass with complete proprietary IPRs; China's thinnest (0.2 mm) electronic float glass line was put into operation and successfully realized the industrial, continuous and stable production of 0.5 mm, 0.4 mm and 0.3 mm TFT-LCD glass substrates, and a complete range of 1.1-0.2 mm ultra-thin electronic float glass. The products of this project have been applied in more than 20 domestic well-known manufacturers in place of imports. By virtue of the successful implementation of this project, the application area of Chinese float glass products and technologies has transformed from traditional building materials to electronic information display technology.

▼ A winding workshop of Jushi Group



▲ The industrialized key technology and complete sets of equipment project of Ultra-thin information display glass

Conversion of Achievements

Enterprises as major players

Backed by 16 national accredited corporate technical centers in the fields of special cement, equipment manufacturing, glass fiber, composite materials and new-type building materials, we further optimize and integrate our technical centers, and have established a professional R&D department to strengthen the traction effect of core industrial sectors and enhance collaborative innovation between enterprises and research institutes, as well as the transformation of technological achievements. On this basis, a technical cluster integrating advanced production technologies, core technical equipment and testing & certification services has been formed. We have also

enhanced the top-level design of our technological innovation strategy and promoted the all-round implementation of the Group's technological development plan for the '13th Five-Year Plan' period. Our competitive enterprises including the China Building Materials Academy, Bengbu Institute, BNBM, Jushi Group and Taishan Fiberglass were organized to file project applications. As a result, 6 projects under the National Key R&D Program and 2 IM projects, involving the 5 fields of new energy, new materials, green building materials, new IM modes and service platforms, have been approved.

Market-oriented

We have scientifically set our research direction on the basis of the principles of technology productization, product marketization and market efficiency. We give full play to the advantages of an integrated production-study-research platform, closely link the industry and market so as to respond to market demands without any delay,

and scientifically plan our R&D direction and technical research focuses. Our R&D achievements have solved the technical problems in the production process, met the higher standards of market demands and provided a guarantee for the Group's R&D achievement transformation.

Production and Research Integration

We accelerate our scientific R&D application and benefit transformation. Relying on the special cement technology of the Key Laboratory of Green Building Materials, we have achieved the promotion of the industrialization of special cement with the four cements of the Group, become the largest manufacturer and supplier of special cement, and widely applied it in power plants, oil and gas fields, harbors, high-speed railways and other major construction projects, thereby generating direct economic benefits reaching a billion dollars. We have implemented a range of new production and research projects centered on carbon emission trading, functional glass and intelligent equipment, and taken the lead in establishing a carbon fiber industry alliance

in a very real sense: the China Glass Fiber and Composite Material Industry Development Alliance. The project 'application of Zhongfu Shenyang's carbon fiber in lightweight electric vehicles' was identified as a major special NEV project under the National Key R&D Program, and a wind energy field workgroup was set up to strengthen industry chain-based collaboration inside the Group. The China Building Materials Academy and the Lanhai Group jointly built the 'China Building Materials Academy Ocean Engineering Material and Technology Promotion Base', which has now become a 'production-study-research-application' platform for the industrialization of the technological achievements of China's ocean engineering field.

Long March 5 (China's first powerful launch vehicle) successfully launched with the help of 4 technological achievements

On November 3rd, 2016, Long March 5 (China's first powerful launch vehicle) was successfully launched at the China Wenchang Spacecraft Launch Site in Hainan. It is the launch vehicle with the largest carrying capacity in China so far. Its launch symbolized that 4 technological achievements developed by the Harbin FRP Institute ('Harbin Institute'), Nanjing Fiberglass Research & Design Institute ('Nanjing Institute') and China Building Materials Academy ('CBMA') had been successfully applied.

As components of the rocket propulsion subsystem, the tank support and gas cylinder support produced by the Harbin Institute with composite materials have high requirements for dimensional accuracy and bear high loads. Compared with traditional metal supports, these supports are 50% lighter, 4 times greater in bearing capacity and much higher in structural efficiency, representing another successful application case of the Harbin Institute in the aerospace field. Used as substrate in the interior trim parts and structural

members of Long March 5, the high-strength fiber with proprietary IPRs produced by the Nanjing Institute improved the performance and reduced the weight of the products. Used in the sighting telescope testing & calibration instrument of the navigation system, the optical fiber image mirror developed by CBMA met the requirements for high-accuracy integrated testing, and enabled the accurate calibration of the sighting telescope, thereby assuring the complete success of the launch.

CNBM (Hefei) Powder: dedication and persistence

Generations of R&D personnel from CNBM (Hefei) Powder Technology Equipment Co., Ltd. have been dedicated to the pulverizing technology field. The HFCG roll squeezer, a product of the company with proprietary IPRs, ranks 1st in the world for multiple parameters, and the number of units in service (1,500) also ranks 1st in the world. In addition, the company has set a world record for the capacity of a

cement grinding system (350 t/h/set). By constructing the world's first large-scale ultra-fine steel slag powder line, the company has effectively solved the worldwide problem of efficiently treating steel slag on a large scale, and earned inclusion in China's first batch of Individual Champion Demonstration Enterprises of the Manufacturing Industry.

The company undertakes the grinding of 40% of all the cement produced in China, and saves electric energy in excess of 7 GWh every year. Furthermore, its products have been exported to more than 20 countries and regions, including some countries in the EU. They have been purchased and successfully applied by such large domestic and overseas enterprises as Harsco, Baowu, Conch and TCCIH.

▼ A powder raw material roller press of CNBM (Hefei)



Open and Sharing

Leading & Popularization

We undertake the secretariat work of standardization organizations, industrial organizations, professional societies and scientific agencies, and lead the technology innovation and industry revolution of the professional sector. We develop extensive science services. Industry websites and professional publications are run to promptly publish the

latest information and share technological results and commercial messages. By building resource repositories (technical innovation institutional repository, technological results database, etc.) and information inquiry platforms, we offer multiple channels of information exchange and technical communication for building materials enterprises.

Opening Services

We have actively built a service platform system in the open industry style, a comprehensive technical service platform system for the building materials industry integrating industry-wide inspection and certification resources, industrial product quality control and technical evaluation laboratories, and a national public service demonstration platform for enterprises. The system provides SMEs with services including inspection and detection, management system certification, standardization, technical product development, intellectual property and brand building, promotes advanced practical

technologies and provides entrepreneur services. CTC has been approved as a 'National Construction Engineering Corrosion and Protection Quality Supervision & Inspection Center', and included in the first batch of enterprises identified as industrial technological, basic and public service platforms. The building of international platforms (such as the Jushi Group's Sino-Egyptian Fiberglass United Library) is proceeding smoothly. Platform-building for the glass and equipment sectors is also being accelerated to serve the transformation and upgrading of the Group.

Sharing & Exchange

To give full play to our role as a demonstration base of international scientific and technical cooperation, we hold domestic and overseas academic meetings, run forums, develop exchange and visit activities to provide specialists and scholars with communication and promotion platforms, serve innovation and common progress, accelerate technological upgrading and reform in the industry and related

fields, and motivate technological innovations to more rapidly and effectively serve the sustainable development of society. We also undertake professional exhibitions to collectively exhibit and recommend new technologies and products, offering platforms and services for the industrialization of technological results, and thereby promoting technological progress and result-sharing in the industry.



In 2016, **906** academic exchange activities were held and organized



In 2016, **30,000** person-times of industrial technology and knowledge training were organized and held

CBMA successfully holds ACCRA's annual meeting of 2016

On September 8th, 2016, the annual meeting of the Asia Cement and Concrete Research Academy (ACCRA) was held in Beijing. It was attended by nearly 100 experts from different international organizations including the United Nations Industrial Development Organization (UNIDO) and Cement Sustainability Initiative (CSI), and countries including Japan, Thailand and Iran. Officially founded in October 2015 in Beijing and backed by CBMA, ACCRA aims to provide a platform for technical exchange among Asian countries, and promote the sustainable development of the industry in the context of the 'Belt and Road' initiative. The theme of the annual meeting was 'Low Carbon for Co-development'.



Involvement in 'encouraging people to start their own businesses and make innovations'

We have set up a leading group and established organizations to comprehensively promote the work of 'encouraging people to start their own businesses and make innovations'. The Group's cases in such work have been included in *Typical Cases of 'Encouraging People To Start Their Own Businesses and Make Innovations' in Centrally-administered SOE*;

the Group's achievements in the area have been included in *Collection of Achievements of 'Encouraging People To Start Their Own Businesses and Make Innovations' in Centrally-administered SOEs*; and the complete technologies of infrared glass and vacuum glass have been included in *Summary of Significant Technological Achievements of Centrally-administered SOEs* prepared by

SASAC and exhibited at the Exhibition of Technological Innovation Achievements of the '12th Five-Year Plan' organized by MOST. In addition, 2 projects of OKorder.com ('cross-border e-commerce + overseas warehousing and glass curtain wall testing robot) entered the intermediary heat of the 2016 'Yixing Centrally-administered SOEs Innovation & Creativity Contest'.

Bengbu China New Glass Material Technology & Industrial Park: a pacesetter backed by high technology

At the Bengbu China New Glass Material Technology & Industrial Park, the 'new glass' entities represented by the Bengbu Design & Research Institute for Glass Industry ('Bengbu Institute') are accelerating the successful transformation of technological achievements based on ingenious innovation and production-study-research cooperation, aiming to establish a development mode featuring the fusion and interaction of the innovation chain and industry chain.

The world's thinnest electronic float glass (0.15 mm) was created in Bengbu. Although glass is hard and fragile in general, it can become tough and flexible when the thinness reaches a certain level. The 0.15 mm glass, which is a little thicker than A4 paper, not only overturns people's traditional knowledge but also heralds a promising market.

While the glass becomes thinner and thinner, the profits are becoming 'thicker and thicker'. The sales price of ultra-thin electronic glass per m² is more than 20 times that of common glass. The difference in thickness between the glass created in 2013 (1.1 mm) and that created in 2016 (0.15 mm) is no more than 0.95mm. However, to realize this difference, it was necessary to break multiple barriers. Such breakthroughs were completely dependent on the National Key Laboratory of New Float Glass Technology and multiple innovation platforms.

In order to encourage innovation, the Bengbu Institute has established a chief scientist and chief research institute system. Specifically, each scientist leads a research team to tackle key problems, thereby constituting an R&D system centered on national key laboratories. Due to its

industrialization of project achievements and option and stock right incentives, the Bengbu Institute has increased its number of talents by 2.5 times within 5 years, and attracted a range of high-tech talents including several talents enrolled in the 'Recruitment Program of Global Talents' (initiated by the Organization Department of the Central Committee of the CPC). Furthermore, the Institute has been awarded the 'National Prize for Technological Progress' 3 consecutive times.

Depending on its core technologies with proprietary IPRs, the Bengbu Institute has activated its original business and built a national-level new glass material technology & industrial park in which many upstream and downstream enterprises have been attracted to settle. So far, led by the Institute, more than 100 upstream and downstream enterprises have gathered in the park to create a total output value in excess of RMB 40 billion.

▼ The CIGS thin film cell plant of Avancis, Germany





Responsibility Management

We pay close attention to the expectations of our stakeholders, such as investors, government, employees, clients, partners, related groups, communities, the media and the environment. We insist on the core philosophy of 'making efficient use of resources to serve construction' and regard 'innovation, performance, harmony and responsibility' as our core values. We insist on establishing a harmonious relationship with our competitors, the ecology, our employees and society. We stress both technology and management innovation in our development, pursuing a coordinated and win-win situation with the market, environment and society, and constantly improving our capacity for fulfilling responsibilities.

- Value Discovery
- System Building
- Communication
- Sharing



352 quantitative indicators of social responsibility management



12th in Top 300 Enterprises in the 2016 CSR Development Index of China



5 stars in the 2016 Evaluation of Corporate Performance of Social Responsibilities in the Industries of China

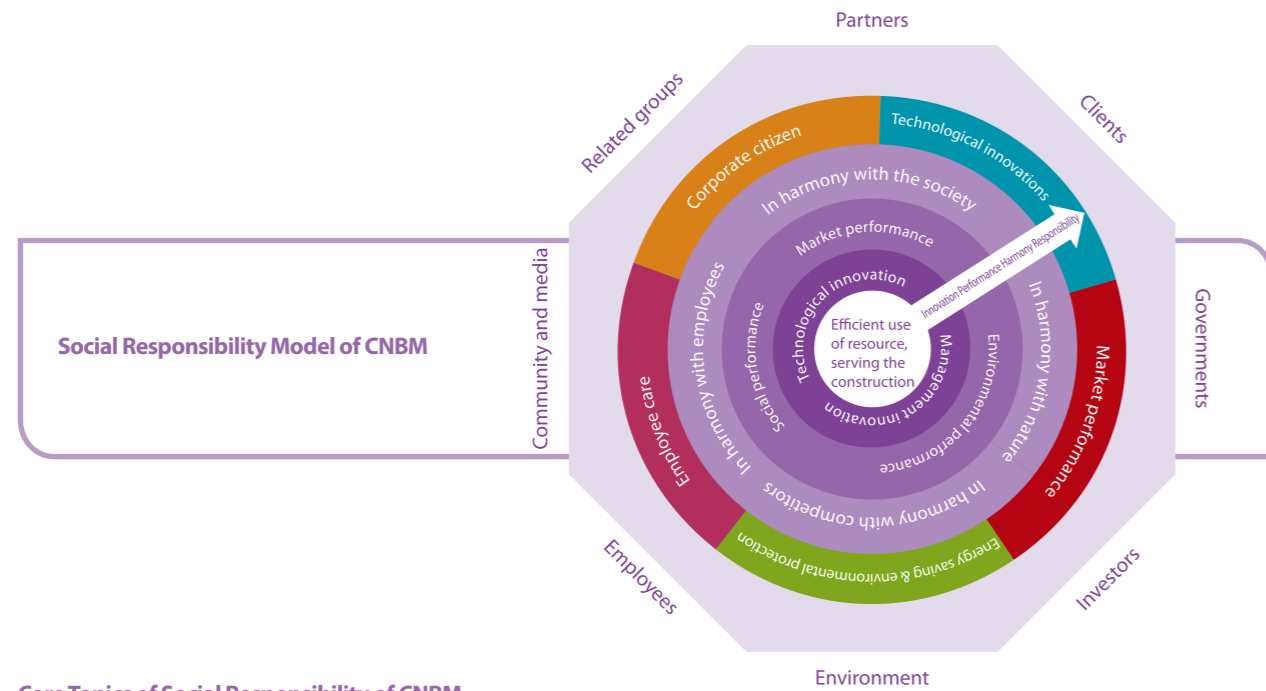


Value Discovery

Responsibility Concepts

We pay close attention to the expectations of our stakeholders, such as investors, government, employees, clients, partners, related groups, communities, the media and the environment. We insist on the core philosophy of 'making efficient use of resources to serve construction' and regard 'innovation, performance, harmony and responsibility' as our core values. We insist on establishing a harmonious relationship with our competitors, the ecology, our employees and society. We stress both technology and management innovation in our development,

pursuing a coordinated and win-win situation with the market, environment and society, and constantly improving our capacity for fulfilling responsibilities. We perform our social responsibility in the five aspects of Market Performance, Technological Innovation, Energy Conservation and Environmental Protection, Employee Care and Corporate Citizenship. We are committed to becoming a world-class comprehensive building materials industry group with sustainable innovation capability and outstanding international competitiveness.



Core Topics of Social Responsibility of CNBM

<p>Market Performance</p> <p>We reward our shareholders and investors with excellent operating results, serve our clients with quality products and services, grow together with our suppliers and industrial partners, and provide a platform for all our stakeholders to create value. Meanwhile, upholding the philosophy of 'industrial interests outweigh corporate interests', we seek to achieve mutual development and win-win results with the industry and our peers in the same industrial chain.</p>	<p>Energy Conservation and Environmental Protection</p> <p>We comprehensively utilize industrial and urban waste, producing low-carbon products with minimized consumption and emissions. We are committed to providing reliable and green building materials, sharing effective green technology and management experience, exploring development modes for the harmonious coexistence of industries and nature, and advocating the sustainable development of industries and society.</p>	<p>Employee Care</p> <p>We pledge to guarantee the safety and health of our employees, safeguard their rights, respect their differences and make the Company a reliable partner and a happy and comfortable home for our employees. We will build a brighter and more sustainable future with all our employees and deliver happiness to society.</p>	<p>Corporate Citizenship</p> <p>In the process of production and operation, we pursue mutual development and growth with the regions in which we operate; our achievements could not be realized without the support of relevant stakeholders and society, and we reward society through characteristic public welfare undertakings. Our employees are pleased to contribute to society and actively participate in voluntary services, practically performing the responsibilities of corporate citizens.</p>	<p>Technological Innovation</p> <p>We take up the task of industrial innovation with our strong scientific prowess, advance industrial transformation and upgrading with our forward-looking vision and advanced technology, disseminate and share technical information, devote ourselves to creating a greener, more comfortable and more intelligent living environment, and build a sustainable future.</p>
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Doing business on the moral high ground

CNBM integrates the concept of sustainable development into the Group's development strategy and combines corporate development with human wellbeing, national destiny, industrial interests and the welfare of the staff, so as to operate on the moral high ground.

Making money in the right way

Pursuing human value and welfare in a human-oriented way

We view our staff as our most valuable wealth and always adhere to the principle that 'an enterprise should be humane and rely on, serve and care for the people'. CNBM's tenet is to serve the people, including our investors, customers, staff and other interested parties.

Taking the path of mutually beneficial cooperation by looking at the big picture

Advocating the concept that industrial interests outmatch corporate interests, we actively cut overcapacity with a 'large enterprise's hands', and take the lead in carrying out mergers and restructuring by means of mixed ownership. By virtue of such an approach, the concentration ratio of China's cement industry has risen from 12% to 58%. In addition, to cut overcapacity and deepen supply-side structural reform, we take the lead in carrying out off-peak production and combine 'output reduction' with 'overcapacity cutting'.

Observing the logic of green and sustainable development with a focus on climate issues

We adhere to the '3 principles for manufacturing': use industrial waste and construction waste as raw materials whenever possible; minimize waste gas and dust emissions generated during production; and manufacture products favorable to environmental protection and human health.

Going out to become a global citizen with the aim of co-development

We go out under the principles of 'amity, sincerity, mutual benefit and inclusiveness': first, we commit ourselves to making contributions to the local economy; second, we work closely with local enterprises; and third, we make efforts to get on well with local people.

System Building

We have included social responsibility management in the strategy and overall plan of the Group, and clarified the objectives, measures and priorities of improvement, so as to continuously improve our performance level and raise it to the internationally advanced level by the end of 2018.



74,000 employees participated in training related to social responsibility in 2016

Organizations

We take the leading organization of social responsibility as the core through the 'CNBM Leading Group for Promoting Social Responsibility' headed by the Chairman. The highest leading organization to promote social responsibility endeavors, the Leading Group is in charge of guiding and promoting social responsibility initiatives.

We take the functional social responsibility management organization of the Headquarters as the connection through which to direct and advance member companies in strengthening their social responsibility management and actively performing their responsibilities. According to the division of businesses, the functional departments of the Headquarters work in coordination to advance special tasks.

With member companies at all levels as the nodes, and according to the unified requirements of the Headquarters, we define the functional departments and assign management personnel to formulate the social responsibility plans and schemes of the Group, satisfy work requirements and actively perform responsibilities.

Competency Improvement

We have issued and are implementing the *CNBM Guiding Opinions on Social Responsibility Fulfillment*, *CNBM Administrative Social Responsibility Fulfillment Measures* and *CNBM Social Responsibility Management Information Collection Measures* in order to systemize, institutionalize and standardize our social responsibility management.

The 'CNBM Social Responsibility Management Information System' is run for the online management of information concerning social responsibility fulfillment and social responsibility administrators. The system covers more than 1,000 member enterprises.

We have established a CNBM-style social responsibility indicator system which is divided into 4 classes and consists of 352 indicators. The system contains the core indicators of non-metal mineral products, thereby assuring the completeness of our social responsibility report.

The social responsibility teams of member enterprises are improved in terms of quality and professional proficiency by means of publicity and training. The practice of social responsibility fulfillment is promoted by cultivating and selecting highlighted cases.

Performance Evaluation

We prepare and issue an annual social responsibility report in order to continuously improve our social responsibility fulfillment capability and improve our management through the procedures of preparation, benchmarking and assessment. The report is published regularly and information concerning our social responsibility fulfillment development is released irregularly in a special column of our website, constituting an information disclosure system and establishing an effective communication platform.

We selectively take part in external performance evaluations; rely on advanced, applicable, objective and fair evaluation systems and agencies; implement comprehensive evaluation and benchmarking in such special aspects as report quality, responsibility performance, responsibility management, etc.; pay attention to the progress and effect of the social responsibilities of international and domestic enterprises, industries in which we operate, enterprises in the supply chain and other related enterprises; learn from the strong points of others to offset our own weaknesses; and carry out continuous improvement.

Continuous Improvement

We give full play to the talent resources of the management experts within the Group and take their suggestions and advice in terms of adjustments to our social responsibility concepts and strategies, the preparation and revision of management systems, and the establishment and quantification of the social responsibility indicator system, thereby ensuring the feasibility and operability of social our responsibility management mechanism.

We strive for social resources, actively seek help from professional consulting agencies, learn new trends in social responsibility theories, grasp the latest international development tendencies of social responsibility, deeply study new standards and requirements of social responsibility management, and guarantee the professionalism and compliance of the Group's social responsibility management system.

We are gradually extending from endogenous responsibility management to outward-facing responsibility management (e.g. responsibility-themed branding activities, responsibility-themed in-depth communication and responsibility-themed publicity) so as to enable the responsibility system to generate inside-out effects and drive more interested parties to fulfill their social responsibilities.

By exploring evaluation mechanisms, we continuously improve the frequency and quality of our member enterprises' annual social responsibility reports in order to make the fulfillment of responsibilities a systemic and regular activity in these enterprises.

CNBM's Social Responsibility Indicator System

Class 1 Indicator	Class 2 Indicator	Class 3 Indicator		
1. Company Profile and Governance	1.1 Company profile	1.1.1 Company profile	1.1.2 Member enterprises	
	1.2 Company governance	1.2.1 Governance structure	1.2.3 Legal system building	
		1.2.2 Risk management and internal control	1.2.4 Fighting against corruption	
1.3 Responsibility management	1.3.1 Responsibility-themed communication	1.3.3 Responsibility assessment		
	1.3.2 Responsibility system construction			
2. Market Performance	2.1 Main performance indicators	2.1.1 Financial indicators	2.1.3 Capacity indicators	
		2.1.2 Production indicators	2.1.4 Business indicators	
	2.2 Quality, brand and customer service	2.2.1 Quality management	2.2.3 Customer service	
2.2.2 Branding				
2.3 Management in good faith and supply chain responsibility	2.3.1 Management in good faith		2.3.2 Supply chain responsibility	
	3.1 Main consumption and emission indicators	3.1.1 Utilization of energy	3.1.5 Pollutant discharge	
3.1.2 Recycling of energy		3.1.6 Response to climate change		
3.1.3 Utilization of raw materials		3.1.7 Environmental protection		
3.1.4 Utilization of water resources		3.1.8 Green office		
3. Energy Conservation and Environmental Protection	3.2 Management of energy conservation and environmental protection	3.2.1 Investment in energy conservation and environmental protection	3.2.4 Management system and mechanism	
		3.2.2 Overcapacity cutting	3.2.5 Environmental emergency management	
	3.2.3 Organization and team development	3.2.6 Advocacy and publicity of environmental protection		
3.3 Advocacy of green development	3.3.1 Green manufacturing	3.3.3 Green building materials		
	3.3.2 Green packaging		3.3.4 Clean energy	
3.4 Negative information	3.4.1 Penalties for environmental problems			
4. Employee Care	4.1 Staff profile	4.1.1 Staff diversification	4.1.2 Equal employment	
		4.2.1 Basic rights and interests	4.2.4 Staff training	
	4.2 Staff management	4.2.2 Democratic management	4.2.5 Occupational safety and health	
4.2.3 Compensation and benefits				
4.3 Employee care	4.3.1 Economic support and reward		4.3.2 Work-life balance	
	4.4.1 Staff evaluation		4.4.2 External evaluation	
5. Corporate citizenship	5.1 Support for community development	5.1.1 Domestic	5.1.2 Overseas	
	5.2 Enthusiasm for public benefit	5.2.1 Public-interest donations	5.2.2 Support for science and education	
		5.3.1 Voluntary activities		
6. Technological Innovation	6.1 Research resources	6.1.1 Research institutions	6.1.2 Research personnel	
	6.2 Technological investment and output	6.2.1 Technological investment		
		6.3.1 Technological achievements	6.3.2 Awards	
	6.4 Research services	6.4.1 Social services	6.4.2 Academic services	

Communication

Communication is the best way to enhance mutual understanding and trust. Open to supervision, we acquaint stakeholders with how responsibilities are fulfilled in CNBM through active and effective communication, thereby improving operational transparency. We also continuously improve our social responsibility management by promptly engaging with opinions and suggestions from internal and external interested parties.

Communication with Stakeholders

We take the demands of our stakeholders as the core focus. We analyze and streamline our objects of responsibility according to the principle of 'Triple Bottom Lines', and categorize them according to influence, dependency, representativeness and so on. Through this process, we finally identified 8 core stakeholders. With the concerns of the stakeholders as the basis, we resolve and identify the core topics of responsibility performance, and respond to the demands of our stakeholders through responsibility performance. We regard communication with the stakeholders as a core part of social responsibility management, and have established a timely, transparent and systematic communication system.

Multi-dimensional communication system. Multiple fields: We integrate the concept of social responsibility into our daily work and communication, while combining and unifying our business communication and responsibility communication. Multiple forms: We keep in touch with stakeholders through such operable unblocked means as questionnaires, special visits and online

communication. Multiple objects: In addition to communication with external stakeholders, we identify international management experts and grass-roots staff as important stakeholders of internal interest, and facilitate timely feedback by offering democratic and convenient information channels. Multiple angles: The positive and negative evaluations of the stakeholders are regularly collected and arranged by means of public opinion collection and media information mining, so as to analyze our shortcomings more comprehensively and objectively for the purpose of continuous improvement.

The senior management of CNBM continuously participate and we constantly communicate with our stakeholders. As the main force of responsibility communication, the top management personnel pay close attention to responsibility communication and personally take part in responsibility communication activities of different levels and dimensions. Significant communication results are achieved through regular/irregular symposia, the leaders' mailbox and employee assemblies.



Nearly 55,000 person-times of employees participating in communication with external stakeholders in 2016



7,277 person-times of corporate senior management participating in communication with external stakeholders in 2016



Centered on the core concept of 'making efficient use of resources to serve construction', the *CNBM Social Responsibility Report (2015)* discloses CNBM's progress and performance of fulfilling social responsibilities to interested parties surrounding such topics as Market Performance, Technological Innovation, Energy Conservation and Environmental Protection, Employee Care and Corporate Citizenship. It is an excellent corporate social responsibility report.



—Golden Bee's comments

Responsibility Communication System of CNBM

Stakeholders	Communication Modes	Focus	Response Measures
Investors	Regular reports Corporate reports Marketing activities Dialogue with and feedback from shareholders Interaction on new media and Internet platforms	Protecting interests of shareholders and creditors Ensuring truthfulness, accuracy, timeliness and integrity of information disclosure	Improving information disclosure mechanism Enhancing corporate values Regulating corporate governance Improving relations with investors
Government	Releasing laws and regulations Special reports and visits Information submission Evaluation of work targets	Requirements for safety, environmental protection and compliance Security of supply Offering employment opportunities Boosting regional economic development	Lawful operation and implementation of government policies Sustainable quality operation Paying tax Offering employment opportunities
Clients	Meetings and consultation with clients Daily contacts Client feedback mechanism Telephone service Interaction on new media and Internet platforms	Speed of response Quality of services Special requirements Complaint handling	Offering quality products and services Advocating green consumption Improving quality management Protecting client privacy
Partners	Contract negotiation Bidding sessions Management meetings Correspondence exchange Daily business communication Interaction on new media and Internet platforms	Price and timely payment Long-term partnership Profit distribution Information and resource sharing Integrity and mutual benefits Risk reduction	Honest operation Promoting supplier responsibility Building effective partnerships Building an effective communication mechanism
Employees	Employee representative meetings Publicity of factory affairs Employment contracts Rational proposals Regular communication Petitions Interaction on new media and Internet platforms	Employee representative meetings Publicity of factory affairs Employment contracts Rational proposals Regular communication Petitions Interaction on new media and Internet platforms	Protecting employee rights Offering competitive remuneration Improving employee benefits Enhancing employee training Offering a safe working environment and health protection Building an effective communication mechanism Improving democratic management
Communities and media	Signing public welfare agreements Taking part in voluntary services Daily contact Interaction on new media and Internet platforms	Environmental protection Jointly building a harmonious community	Timely information disclosure Increasing participation in public welfare Participating in community activities
Social organizations	Taking part in regular meetings and activities Daily contact Interaction on new media and Internet platforms	Environmental protection Jointly advocating sustainable development	Playing role of a member Offering economic and technical support Building cooperation relationships

Sharing



39.6% of suppliers engaged in long-term cooperation with member companies of the Group passed environmental management system certification in 2016



64,000 person-times of training in such aspects as safety, energy, and law, were carried out by suppliers in 2016



In 2016, the rate of responsibility-based procurement reached 94.8%



We have joined 3 international organizations related to social responsibility and sustainable development



We participated in 2 external social responsibility research projects in 2016

Leadership

As a permanent member of the UN Global Compact, World Business Council for Sustainable Development and Cement Sustainability Initiative (CSI), CNBM promotes the popularization and implementation of global responsibility concepts through an expanding range of diversified and international platforms. On December 12th, 2016, CNBM President Song Zhiping attended CSI's CEO meeting in Madrid, Spain, and shared viewpoints on the sustainable development of the cement industry. At this meeting centered on the health and safety of the cement industry, a consensus was reached on the influences of environmental, social and biological diversity, and CSI's action plan for 2017.

Research

The project of preparing the Guidelines for the Preparation of Corporate Social Responsibility Reports in China 3.0 - Non-metallic Mineral Products Industry with the CSR Research Center of the Chinese Academy of Social Sciences has been launched in order to contribute management and practice resources, and serve the study, publication and promotion of social responsibility standards.

Promotion

Performing social responsibilities is included in our supplier evaluation system. Our suppliers are dynamically evaluated in terms of legal compliance, environmental protection and the protection of the rights and interests of laborers. Any form of commercial bribe is prohibited. We urge our suppliers to continuously improve their product quality and supervise and encourage them to pay attention to the physical and psychological health of their staff. In each bidding for production line construction, safety, energy conservation and environmental protection are essentially included in the bidding documents. During construction, we pay sustained attention to occupational health, safe production and the protection of the basic rights of the staff. By deeply integrating the concept of responsibility into supplier evaluation, product design and strategic cooperation, we guide our suppliers, customers and partners to carry out responsibility management concerning value chain activities, and serve as a leader of sustainable development on the value chain.

We take part in social responsibility sharing and advocacy activities in different fields, participate in the initiation of the 'China Social Responsibilities 100-person Forum' and disseminate concepts, share experience and sponsor initiatives through 'Golden Bee', the China Federation of Industrial Economics, China Building Materials Federation, China Building Materials News, etc. Through continuous sharing, study and discussion, we make efforts to be a disseminator and advocator of social responsibility, and seek better ways of sustainable development based on cooperation.

In active response to the government's requirements for combating climate change, we jointly prepared the CNBM Report on Combating Climate Change with CASS's Research Center for Corporate Social Responsibility so as to share low-carbon development practices and guide the building material industry to create a new green development outlook.

We have integrated the concept of social responsibility into our procurement management. We stick to 'sunshine procurement' and spare no efforts to eradicate commercial bribes in procurement by promoting regional procurement bidding integration, bidding process normalization, bidding performance transparency and information-based bidding management. Under the principle of green procurement, we implement the local purchasing of bulk raw materials and fuel in order to reduce transportation costs, and we advocate green consumption by selecting green and clean energy and low-carbon products.

By deeply integrating the concept of responsibility into our regionalized operation and internationalization process, we extend the social responsibility management system to the overseas fields and regions in which we invest, operate and offer services. Based on cultural respect and legal compliance, we disseminate advanced technologies, help local economies to prosper, establish service areas, cultivate a responsible image and play a leading role in the development of responsibility culture.

Milestones of sustainable development in 2016

We became involved in establishing the China Green Building Materials Industry Development Alliance, which is China's first inter-industrial alliance oriented to promoting the development of green buildings. Its establishment is favorable for promoting collaborative development between the upstream and downstream of the green building material sector, accelerating supply-side structural reform and boosting the transformation and upgrading of the building material industry.

Song Zhiping attended the 3rd Golden Bee CSR Leaders Forum and expounded the responsibility concept of 'operating on the moral high ground'.

CNBM became involved in issuing the *Declaration on Corporate Green Development 2016* to make a commitment to achieving the sustainable development of the economy, society and environment through clean production, the closing of outdated production facilities and the development of the circular economy.

CNBM was honored among the 'Honored Companies' for the 4th consecutive year; Cao Jianglin was rated as 'Best CEO' for the 5th consecutive year, and topped the 'Best CEO' list of the Asia-Pacific region's basic material industry for the 4th consecutive year.

At the Sino-European Building Industrialization Forum, CNBM became involved in issuing the Beijing Declaration of Building Enterprises and Building Material Enterprises on Green and Sustainable Development.

CNBM was named 'Five-star Social Responsibility Fulfiler of China's Industries (2016)' by the China Federation of Industrial Economics, and awarded the prize 'Corporate Social Responsibility Reports - Best Report Manager' by the Chinese Academy of Social Sciences.

April 8th

April 20th

June 7th

June 26th

July 22nd

August 22nd

August 27th

October 30th

November 21st

December 1st

January 2017

Song Zhiping attended the '12th Conference on Latest Trends in Sustainable Development' sponsored by the China Business Council for Sustainable Development, and made a keynote speech entitled 'The Sustainable Development Path of China's Building Material Industry'.

CNBM published the *CNBM Social Responsibility Report (2015)*. The report was once again rated 'five-star' (the highest rating of domestic social responsibility reports) by CASS's Research Center for Corporate Social Responsibility.

CNBM was named 'Pioneering Chinese Enterprise in Achieving Sustainable Development Goals (SDGs)'.

As the initiator, Song Zhiping, attended the 1st China Social Responsibility 100 Forum, and made a keynote speech entitled 'Corporate Social Responsibility: Treated from the Perspective of Green Development'. On the same day, CASS's Research Center for Corporate Social Responsibility published the *Blue Book of Corporate Social Responsibility (2016)*. According to the book, CNBM was ranked 12th in the 'Social Responsibility Development Indicator: China Top 300 Enterprises (2016)' with a comprehensive score of 86.8, and rated as 'five-star' in social responsibility development indicators, ranking among the 'Excellent Chinese Enterprises in Fulfilling Corporate Social Responsibilities' for the 4th consecutive year.

CNBM won the 'Golden Bee Excellent Corporate Social Responsibility Reports 2016 - Leading Enterprise Award'. This is the 4th time that CNBM has received an award from Golden Bee.

Merger of CNBM and SINOMA

Glorious Years

The China National Building Materials Group Corporation (CNBM) and China National Materials Group Corporation (SINOMA) have the same source and root, as they are both enterprises governed by the former National Building Materials Bureau. They have gone through direct planning by the state (1987), the first group of national pilot enterprises (1991), direct supervision by the Central Work Committee for Enterprises (1999) and direct management by the State-owned Assets Supervision and Administration Commission (SASAC) (2003). They successfully went public in Hong Kong in succession, became pilot enterprises of the board of directors, changed their names to 'limited company' in the same year (2009), and finally merged into CNBM in August 2016.

In their respective development courses, both Groups achieved brilliant results. For more than a decade, as China's largest comprehensive group in the building materials industry, as well as a leading enterprise in the global building materials manufacturing industry, integrating scientific

research, manufacturing and circulation, CNBM has adhered to the development road of combining capital operation, mergers and restructuring, management integration and integrated innovation, realized rapid development with an annual compound growth rate of more than 40% and been listed in the Fortune Global 500 for six consecutive years.

SINOMA is the only innovative, value-oriented and international enterprise group in China in the field of non-metallic materials that possesses a series of core technologies and a complete innovation system. Since 2000, by virtue of its complete cement engineering designs with completely independent IPRs, as well as its technical equipment manufacturing capacity, it has achieved a surge from a zero to 45% share of the international cement engineering market and ranked first worldwide for nine consecutive years, while simultaneously occupying more than 80% of the domestic market share of non-metal ore exploration.



The merger of CNBM and SINOMA in 2016 was a great event for China's building materials industry, as well as a milestone event in its development history, exerting a positive influence on the building materials industry of the whole of society and even the world.

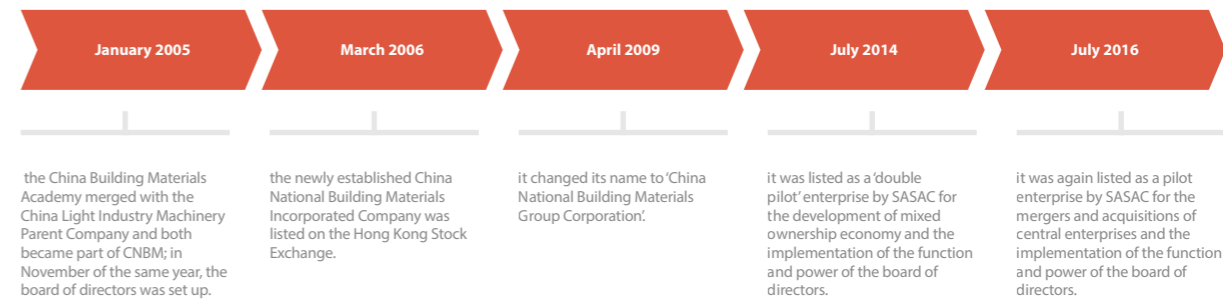
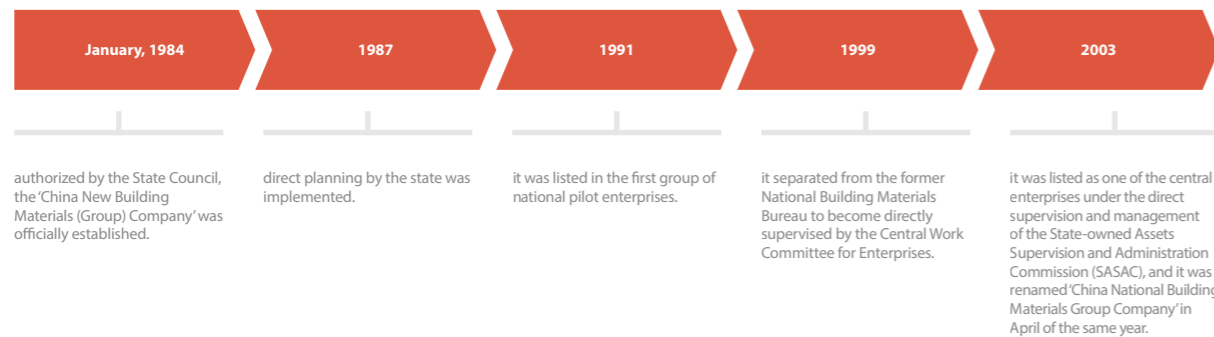


— Qiao Longde, China Building Materials Federation (CBMF) Chairman

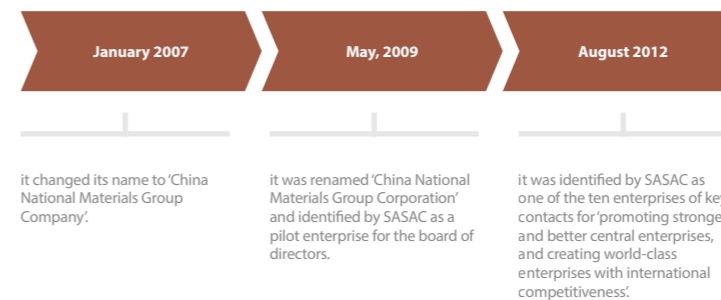
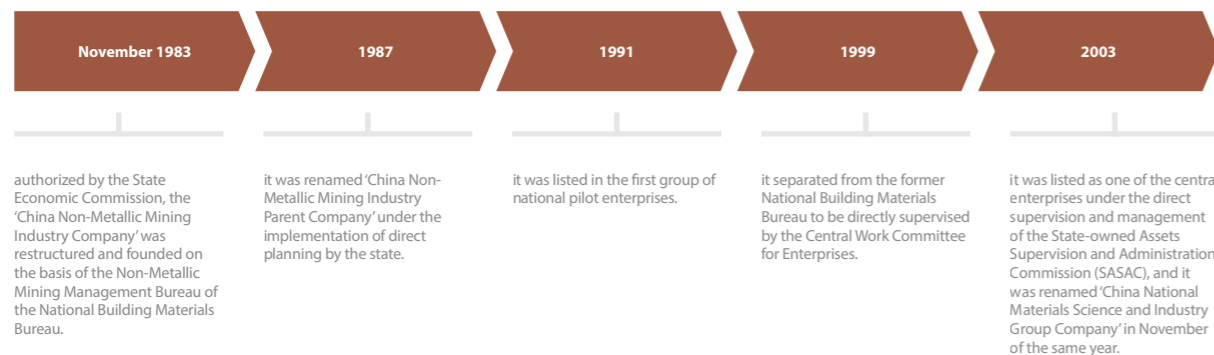


Historical Development of CNBM and SINOMA

Historical Development of the China National Building Materials Group Corporation



Historical Development of China National Materials Group Corporation



Rapid Integration

On August 26th, 2016, the China National Building Materials Group Corporation and China National Materials Group Corporation held a merger conference in Beijing, and the China National Building Material Group Co., Ltd. (CNBM) was officially established, marking that the building materials industry of China had entered a new stage of starting

the merger mode of large enterprises and promoting supply-side structural reform. Following this conference, the newly-born CNBM has rapidly realized merging and integration with its comprehensive enterprise spirit and cultural force, thus achieving a good start for the merger.



The merger of CNBM and SINOMA has made a good start, and there is still a long way to go. Primary attention should be paid to giving full play to the advantages of this alliance between giants.

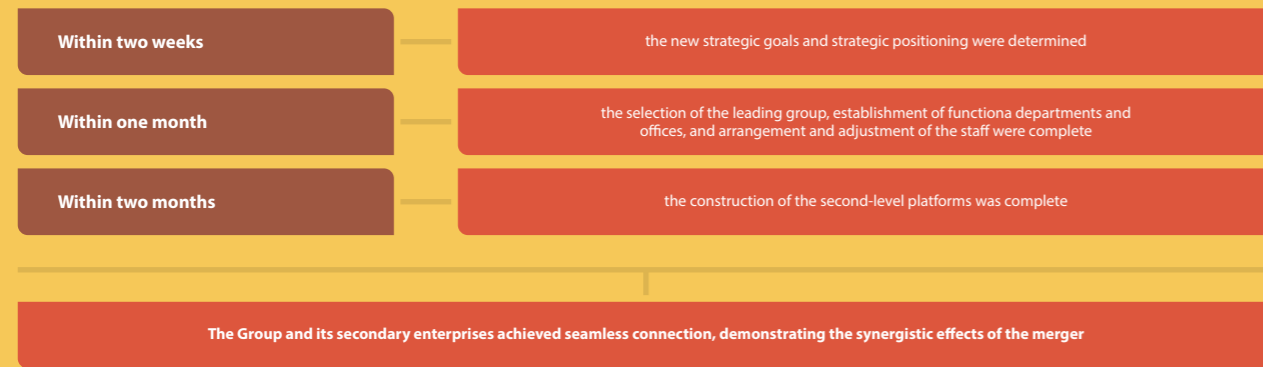


— Jiang Minglin, Counselor of the State Council

A Good Start for the Merger in 2016



Seamless Merger



Pushing Reform Forward



Powerful Enterprise Culture

During their long-term practice, CNBM and SINOMA have formed an excellent people-oriented, united, comprehensive and harmonious culture, and trained a group of outstanding cadres and staff with strong cohesion, high-efficiency execution and super strong combat effectiveness, who have proven to be the source of power for CNBM and SINOMA to realize a rapid alliance and merger, as well as the inexhaustible impetus of the Group to accelerate its ascension to the rank of world-class enterprises.

CNBM has conscientiously fulfilled the social and economic responsibilities that an enterprise should take on, upheld such core values as 'innovation, performance, harmony and responsibility', advocated the 'humility, reverence, gratitude and decency' code of conduct, based itself on the principle of 'enterprises being people, by the people and for the people', actively created a cultural environment of 'San Kuan San Li' that refers to leniency, tolerance and ease, as well as unity, affinity and cohesion, regarded the realization of human happiness and value as a significant goal and the fundamental pursuit of the Group, and made efforts to ensure the 'mutual growth of the staff and the Group'.



New Journey

Scale and Strength

With a gross asset value of more than RMB 560 billion, the new CNBM is worthy of its reputation as China's largest comprehensive building materials industry group, as well as an 'aircraft carrier' and leading enterprise in the field of building materials worldwide. The recent alliance between giants has further consolidated its world-leading position.

Scale and Strength of a Leading Enterprise

China's largest world-leading **comprehensive building materials industry group**



Gross asset value of **RMB 564.5 billion**



234,511 total staff members



Operation revenue of **RMB 261.2 billion**



15 listed companies including



3 overseas listed companies

Many World-firsts in the Industrial Field

CNBM ranks first worldwide in the international cement engineering market and international waste heat power generation market



Cement clinker capacity of **520 million tons**



Ready-mixed concrete capacity of **470 million m³**



Plasterboard capacity of **2 billion m²**



Glass fiber capacity of **1.85 million tons**



Wind turbine blade capacity of **16 GW**

Strong Scientific Research Support



26 state-level scientific research and design institutes



38,000 scientific and technological research and development staff members



33 quality testing institutions



12 state-level engineering research centers and key laboratories



18 standards committees



8,408 patents





Following the merger, the combined gross economic scale, strength to handle challenges from international competition and overseas market influence of CNBM and SINOMA have greatly improved. Along with the superposition of international and domestic markets, CNBM's competitiveness in the international market will be enormously enhanced, which will lay a significant material basis and organizational foundation for the acceleration of the 'Going Out' policy at the same time.

— Qiao Longde, China Building Materials Federation (CBMF) Chairman

Strategic Guidance

A winning strategy is invincible and a losing strategy is fatal. After the merger, CNBM has started from a global vision and the commanding height of an industry leader,

taken aim at the market demands, mapped out its future, clarified its new strategies and positioning, and put forward its aims and tasks, as well as its implementation approach for the future.

Strategic Objective	To be stronger and better, committed to becoming a world-class comprehensive group in the building materials industry based on the rapid development of new materials, and the creator of a new national business card for the Chinese building materials industry to 'Go Out'
Strategic Positioning	To be the leader of industrial consolidation, the innovator of industrial upgrading and the pioneer of production capacity cooperation among international communities
3 Strategies	innovation-based promotion, green development and international cooperation

Layout of the 3 Curves

The strategic adjustment of the structures of major industries will be conducted in accordance with the idea and approach of the '3 Curves', so as to promote the development and growth of new momentum and revitalize the traditional momentum. In this way, continuous improvement, successive cohesion and systematic advancement will be achieved, creating a constantly stable new pattern of profit growth.



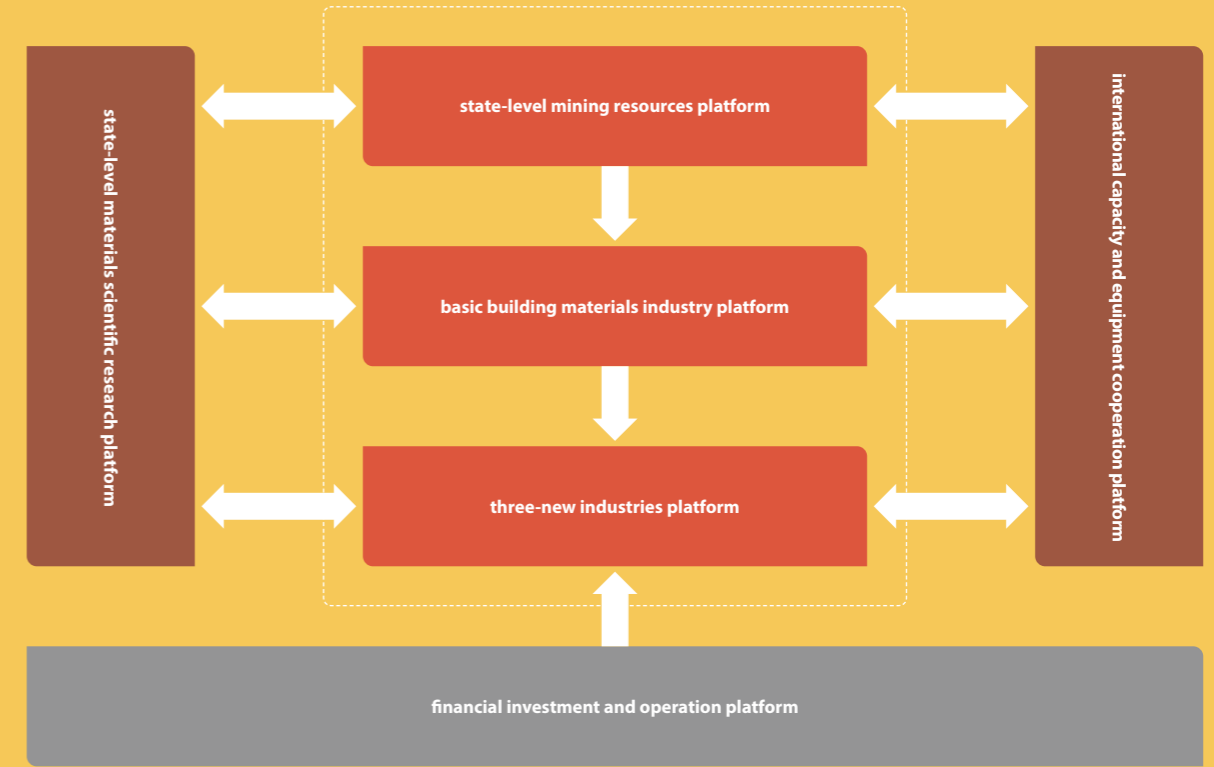
We will reconstruct and improve the traditional sectors (cement, glass, etc.), and thoroughly press forward with supply-side structural reform. In addition, to actively play the leading role of a large enterprise, we will make efforts to promote the structural adjustment of the cement and glass sectors through market competition and cooperation, outdated production facility close-down, production limiting, emission reduction, production optimization and product upgrading, and work on improving market health and achieving the goals of the improvement of quality and the increase of efficiency.

We will make great efforts to develop the three-new industries (new materials, new energy resources and new housing) and continuously improve profitability. In order to meet the industrial demands and requirements for structural adjustment emerging in the new normal, we will expand and strengthen the emerging sectors (new materials, new energy resources and new housing) through technical innovation and layout optimization, and extend the business layout to the key links and high end of the industry chain in order to turn them into new profit-making points in integrated and innovative modes.

Meanwhile, we will actively explore new business areas, carry out cross-border operation, develop new growth points outside the building materials industry, follow the principle of conservatism, give equal consideration to the balance between the growth and stability of the enterprise, as well as profits and cash flow, aim to enter industrial fields with great market potential or with a conversion period or less obvious periodicity in which enterprises have unique resources and operation capacity, and establish a risk hedging mechanism to form business portfolio advantages.

We will actively develop such new commercial activities as research and development, engineering and technical services, foster new economic growth points, explore service-oriented manufacturing and industrialization-oriented R&D, integrate existing products and sectors by making use of such technologies as the Internet, big data and intelligence, greatly promote R&D, Internet+, inspection and certification, carbon trading, EPC and manufacturing services, and build new growth points with new economic forms, new modes and new types of operation.

Creating 6 Operation Platforms



Realizing 4 Transformations

high-end orientation

We will enhance technological innovation, innovate and optimize product structures, extend the industry chain and value chain, realize the development of the industry chain from low end to high end, and push the technological level to advance from mid-to-high end to high end.

intelligence

We will accelerate the integration of industrialization and informatization, actively carry out exploration and practice in the aspects of 'Internet+' and 'Made in China 2025', strengthen the construction of intelligent mills and intelligent industrial platforms, promote intelligent manufacturing, e-commerce oriented trade and platform-based scientific research, and endeavor to seize opportunities and make breakthroughs in key fields.

greenization

We will center on the 'green, circular and low carbon' principle, apply energy conservation and emissions reduction measures throughout the whole process, including raw material selection, production process and product application, vigorously develop renewable energy sources, improve the recycling capacity of resources and guide energy conservation, production limitation and self-disciplined emissions reduction in the whole industry.

internationalization

We will closely incorporate the 'Belt and Road' strategy, promote international capacity and equipment cooperation, optimize the global market layout, strive to occupy a favorable position in the international division of labor, and create a new business card of the national 'Going Out' policy.

Responsibility Performance

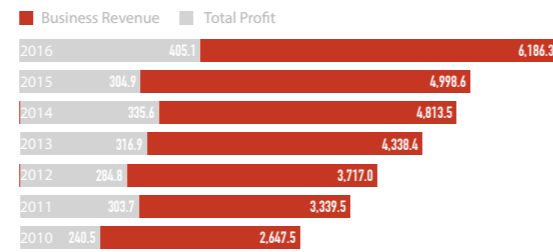
Market Performance

2016 Fortune Global Top 500 Building Materials Enterprises

2016 Ranking	Company	Operating revenue in 2015 (US\$ million)	Country
196	Saint-Gobain	46,169.2	France
327	CNBM	31,705.5	China
411	CRH	26,217.8	Ireland
438	LafargeHolcim	24,513.7	Switzerland

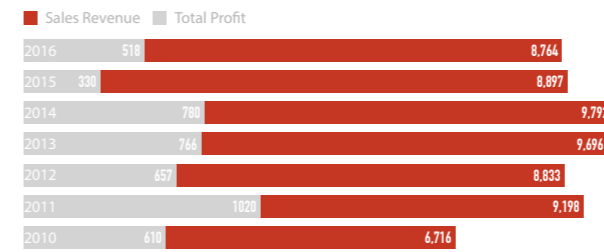
Source: Fortunechina.com

2010-2016 Business Revenue and Total Profit of Scale Companies in Chinese Building Materials Industry Unit: RMB billion



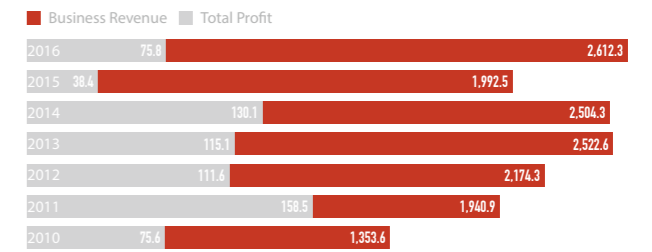
Source: China Building Materials Quantitative Economics Supervision Society

2010-2016 Sales Revenue and Total Profit of Chinese Cement Industry Unit: RMB 00' million

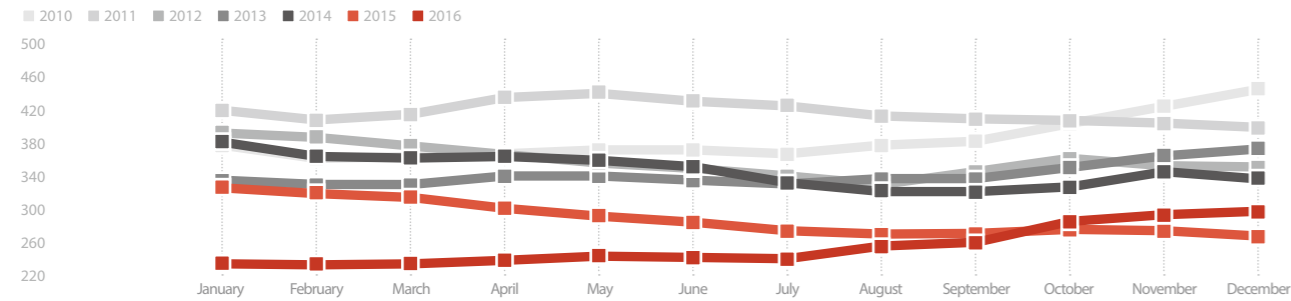


Source: Digital Cement

2010-2016 Business Revenue and Total Profit Unit: RMB 00' million

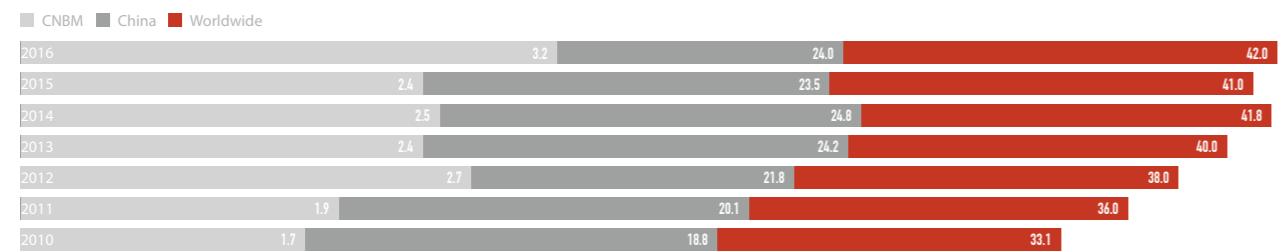


2010-2016 P.O.42.5 Price of Bulk Cement in China Unit: RMB / ton



Source: Digital Cement

2010-2016 Cement Yield Unit: 00' million tons

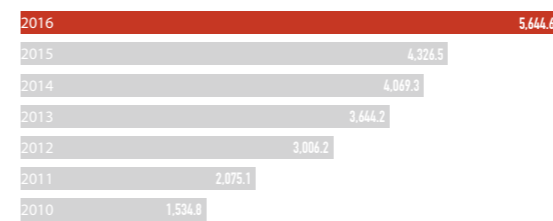


Source: United States Geological Survey

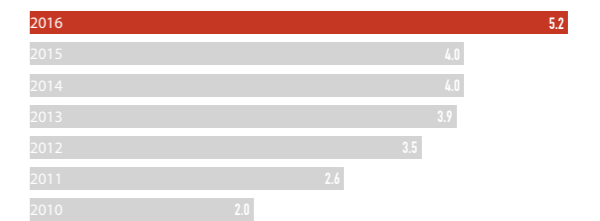
2016 Performance of Holding Listed Companies

Stock Name	Stock Exchange	Stock Code	Dividend per Share (RMB)	Earnings per Share (RMB)
CNBM	Hong Kong Exchanges and Clearing	3323.HK	0.0430	0.2000
BNBM	Shenzhen Stock Exchange	000786.SZ	0.1800	0.7930
Jushi Group	Shanghai Stock Exchange	600176.SH	0.2500	0.6254
Sinoma	Hong Kong Exchanges and Clearing	01893.HK	0.0300	0.1600
Sinoma International	Shanghai Stock Exchange	600970.SH	0.0880	0.2900
Tianshan Joint-stock	Shenzhen Stock Exchange	000877.SZ	—	0.1134
Ningxia Building Materials	Shanghai Stock Exchange	600449.SH	0.0400	0.1200
Qilianshan	Shanghai Stock Exchange	600720.SH	0.0650	0.2146
Sinoma Science & Technology	Shenzhen Stock Exchange	002080.SZ	0.1000	0.2699
Triumph Science & Technology	Shanghai Stock Exchange	600552.SH	—	0.1970
Sinoma Energy Saving	Shanghai Stock Exchange	603126.SH	0.0700	0.2134
Luoyang Glass	Shanghai Stock Exchange	600876.SH	—	0.0219
Luoyang Glass Company Limited	Hong Kong Exchanges and Clearing	1108.HK	—	0.0219
Ruitai Technology	Shenzhen Stock Exchange	002066.SZ	—	0.1093
CTC	Shanghai Stock Exchange	603060.SH	0.1600	0.6827
Xinjiang Guotong	Shenzhen Stock Exchange	002205.SZ	—	0.1148

2010-2016 Total Assets Unit: RMB 00' million

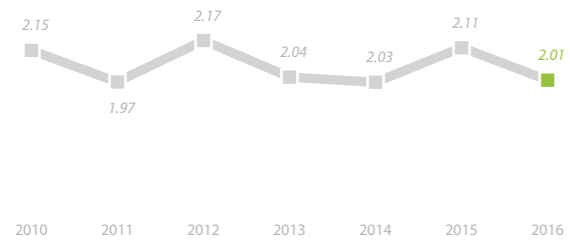


2010-2016 Cement Production Capacity Unit: 00' million tons

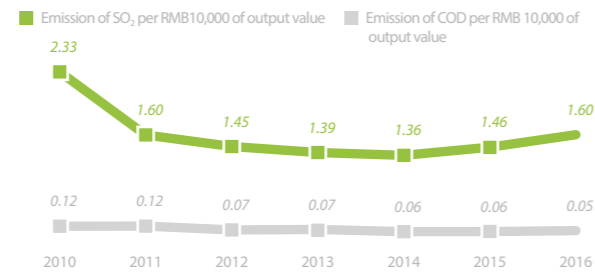


Energy Conservation and Environmental Protection

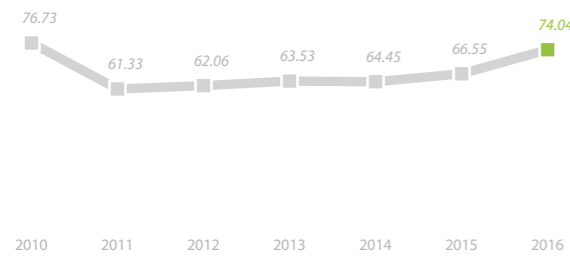
2010-2016 Comprehensive Energy Consumption per RMB 10,000 of Output Value Unit: tons of standard coal equivalent per RMB 10,000 of output value



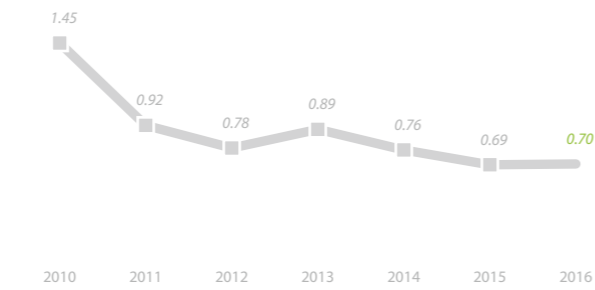
2010-2016 Emission of SO₂ and COD per RMB 10,000 of Output Value Unit: kg / RMB 10,000 of Output Value



2010-2016 Comprehensive Energy Consumption of Cement Unit: kg of standard coal equivalent / ton

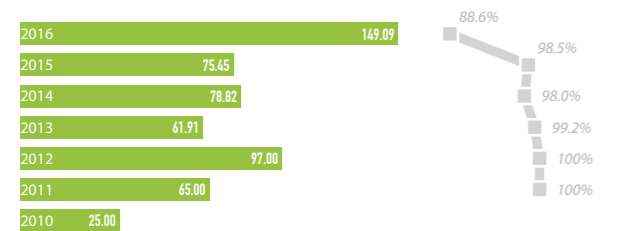


2010-2016 Emission of NO_x per Cement Clinker Unit Unit: kg / ton

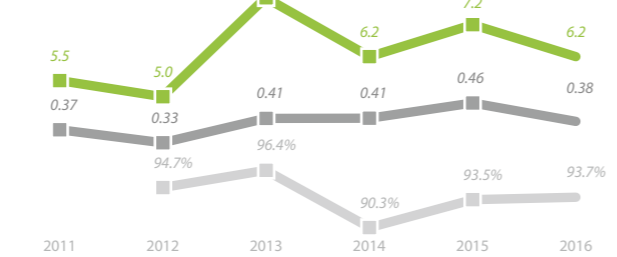


Note: By implementing the policy of 'capacity elimination', CNBM proactively advocates and carries out 'off-peak production' and 'production limitation during haze weather', the utilization rate of production capacity decreased, and unit emission and consumption increased accordingly, which are reasonable fluctuation.

2010-2016 Treatment and Cyclic Utilization of Solid Waste



2011-2016 Performance of Water and Residual Heat Resource Utilization



Employee Care

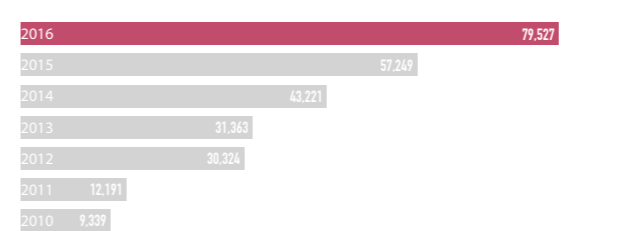
2010-2016 Employee Profile Unit: Person

	2010	2011	2012	2013	2014	2015	2016
Total number of employees	112,676	126,385	165,652	179,421	176,854	176,610	234,511
Employees from foreign countries, Hong Kong, Macau and Taiwan	397	594	1,190	1,234	892	841	1,126
Employees of ethnic minorities	1,566	3,516	2,706	3,031	3,120	3,521	5,964
Employees with disabilities	599	1,023	1,620	1,685	2,263	1,449	1,875
Proportion of female employees in management	24.0%	11.6%	13.5%	18.1%	18.4%	17.2%	18.3%

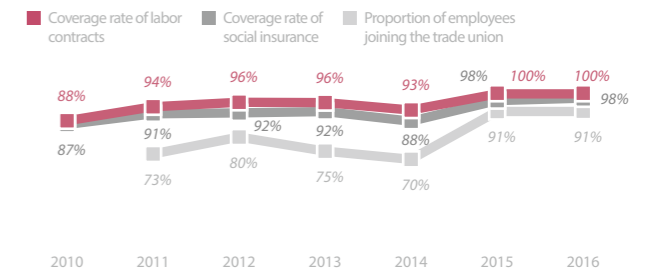
2010-2016 Progress of Enterprise Annuity

	2010	2011	2012	2013	2014	2015	2016
Number of member enterprises participating in enterprise annuity	38	53	66	67	67	68	71
Number of employees participating in enterprise annuity	12,811	13,368	20,392	21,131	21,750	22,165	22,871

2010-2016 Investment in Occupational Health and Safety Unit: RMB 0' thousand



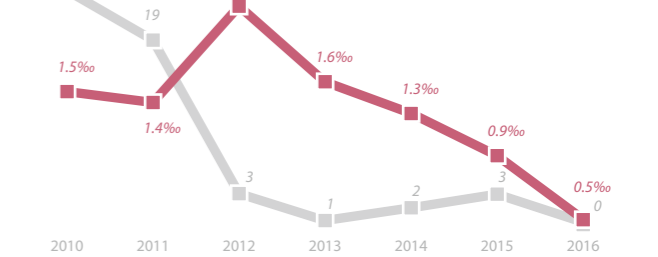
2010-2016 Coverage Rates of Labor Contracts, Social Insurance and Employees Joining Trade Union



2011-2016 Performance in Staff Training

	2011	2012	2013	2014	2015	2016
Number of employee training programs	11,975	21,028	37,491	43,352	32,672	47,554
Training time (Unit: 0' thousand hours)	108	126	164	91	133	331
Number of diplomas or degrees obtained by in-service employees with our assistance	1,580	1,138	2,387	3,520	2,882	3,028

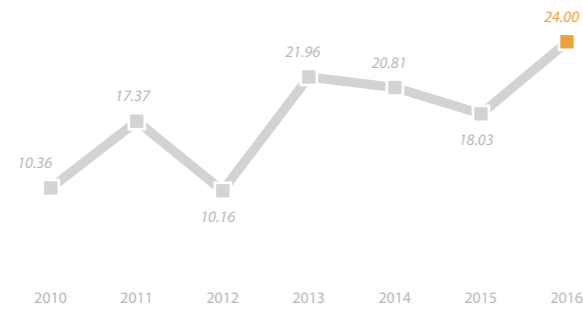
2010-2016 Performance in Production Safety



Corporate Citizenship

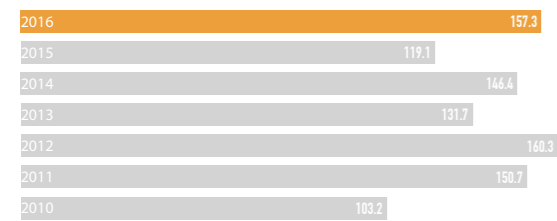
2010-2016 Expenditure on Social Welfare Activities

Unit: RMB Million



2010-2016 Tax Paid

Unit: RMB 00' million

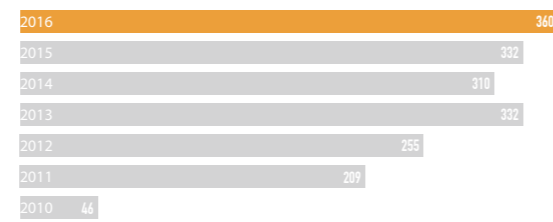


2011-2016 Incentives for Students

	2011	2012	2013	2014	2015	2016
Special scholarships (Number)	27	20	18	31	8	8
Total scholarships (RMB 0'thousand)	-	136	112	53	36	37
Students awarded or subsidized (Number)	727	466	506	227	159	266
Probation bases established (Number)	-	98	119	97	47	134
Intern posts provided to school students (Number)	-	17,815	36,530	28,619	26,586	34,030

2010-2016 Number of Supported Social Welfare Projects

Unit: Item



2011-2016 Performance in Creating Employment Opportunities

Unit: Person

	2011	2012	2013	2014	2015	2016
New jobs created	21,182	15,901	16,081	23,617	16,929	22,342
Of which: Graduating students recruited	4,276	3,743	4,383	3,848	2,473	3,129
Of which: Demobilized soldiers recruited	241	521	158	46	10	23

2011-2016 Volunteering Activities

	2011	2012	2013	2014	2015	2016
Volunteer teams (Number)	-	67	109	65	56	112
Investment in supporting volunteering activities (RMB 0' thousand)	-	91	145	145	191	344
Number of employee volunteers	-	3,337	4,864	3,400	2,187	5,646
Voluntary service time (Hours)	10,618	39,778	10,681	9,418	14,840	28,157

Technological Innovation

2010-2016 Technology Awards at Provincial and Ministerial Levels

Unit: Number of Awards

	2010	2011	2012	2013	2014	2015	2016
Scientific and technological awards at Provincial or Ministerial level or above	63	132	152	145	117	123	173
Of which: National-level scientific and technological awards	0	2	0	1	1	0	2
Of which: Technical innovation awards	17	46	89	54	48	48	82

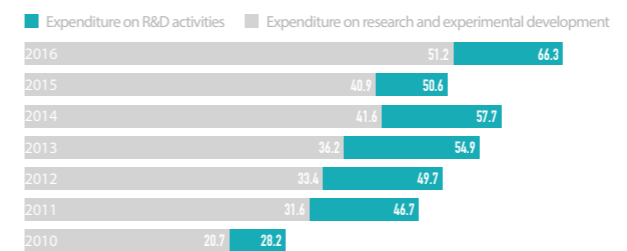
2010-2016 Application and Granting of Patents

Unit: Number of applications and patents

	2010	2011	2012	2013	2014	2015	2016
New patent applications	514	630	766	1262	1571	1568	2156
Of which: invention patents	173	170	228	373	531	566	880
Newly granted patents	420	487	729	848	1318	1492	1793
Of which: granted invention patents	54	80	143	128	106	193	455

2010-2016 Expenditure on R&D Activities

Unit: RMB 00' million



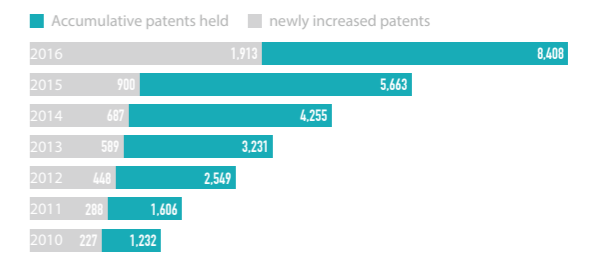
Technical Innovation Awards

Unit: Number of Standards

	2010	2011	2012	2013	2014	2015	2016
Number of Standards	79	28	22	59	104	62	91
Of which: International	0	1	1	1	3	2	2
National	30	15	5	8	35	36	57
Industrial	49	12	16	50	66	24	32

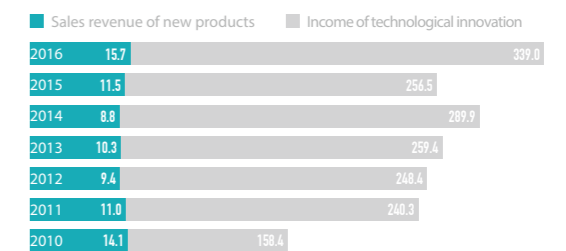
2010-2016 Accumulative Patents Held

Unit: Number of patents



2010-2016 Income of Technological Innovation

Unit: RMB 00' million



Our Actions
 – Sustainable Development Goals (SDGs) of the United Nations

On September 25th, 2015, the United Nations officially approved 17 sustainable development goals aiming to completely solve social, economic and environmental development problems through a comprehensive approach from 2015 to 2030 by taking the path of sustainable development. As a member of the Chinese network of the UN Global Compact, CNBM operates with the UN SDGs as its guidelines and actively explores the sustainable development path in the building materials industry. In 2016, we responded to all 17 of the goals with excellent performance.

<p>To end poverty in all its forms everywhere</p> <p>RMB 14.7 million was spent to help and reward special groups of employees</p> <p>11,608 person-times of special groups of employees received help and rewards</p> <p>The donation amount hit RMB 24.0 million</p> <p>We targeted 5 districts and counties for poverty alleviation</p>	<p>1 No Poverty</p>	<p>10 Reduce Inequality</p>	<p>The employment rate of ethnic minorities reached 2.5%</p> <p>The proportion of employees with disabilities reached 8.0%</p> <p>To reduce inequality within and among countries</p>
<p>To end hunger, achieve food security and improved nutrition, and promote sustainable agriculture</p> <p>RMB 11.5 million was invested in poverty alleviation</p> <p>The input of voluntary activities reached about RMB 3.4 million</p> <p>28,000 hours of voluntary services were provided by our employees</p>	<p>2 Zero Hunger</p>	<p>11 Sustainable Cities and Communities</p>	<p>We have built 54 new building materials bases</p> <p>Our energy-saving and environmental protection new housing businesses cover 39 countries</p> <p>To make cities and human settlements inclusive, safe, resilient and sustainable</p>
<p>To ensure healthy lives and promote well-being for all at all ages</p> <p>342,000 person-times of employees received training in occupational health and safety</p> <p>About RMB 800 million was invested in occupational health and safety</p> <p>The completion rate of physical examinations of employees reached 96.0%</p> <p>0 production safety accidents occurred</p> <p>The recordable injury rate per 1,000 employees was decreased by 44.4% on a year-on-year basis</p> <p>0 new cases of occupational diseases</p> <p>We organized 228,000 person-times of employees to participate in various cultural and sports events</p>	<p>3 Good Health & Well-being</p>	<p>12 Responsible Consumption and Production</p>	<p>The treatment rate of solid waste reached 88.6%</p> <p>The rate of responsibility-based procurement hit 94.8%</p> <p>Expenditure on R&D activities amounted to about RMB 6.6 billion</p> <p>RMB 33.9 billion was recorded from the sales of new products</p> <p>The income from technological innovation reached RMB 1.6 billion</p> <p>To ensure sustainable consumption and production patterns</p>
<p>To ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p> <p>Our employees attended training for 3.3 million hours</p> <p>We supported our employees in gaining 3,028 academic degrees</p> <p>We provided 8 special scholarships</p> <p>We provided scholarships amounting to about RMB 370,000 in total</p> <p>We rewarded and supported 266 students</p> <p>We created 134 probation bases</p> <p>We offered 34,030 learning posts to students</p>	<p>4 Quality Education</p>	<p>13 Climate Action</p>	<p>The comprehensive energy consumption of cement reached 74.0 kg of standard coal equivalent per ton</p> <p>Emissions of NOx per cement clinker unit reached 0.7 kg/ton</p> <p>Emissions of SO₂ per RMB 10,000 of output value reached 1.6 kg</p> <p>Comprehensive energy consumption per RMB 10,000 of output value decreased by 4.7%</p> <p>Emissions of COD per RMB 10,000 of output value decreased by 16.7%</p> <p>To take urgent action to combat climate change and its impacts</p>
<p>To achieve gender equality and empower all women and girls</p> <p>The ratio of the average salary of male employees to that of female employees was 3.3:1</p> <p>The number of female employees reached 46,000</p> <p>In management, females take up a proportion of 18.3%</p>	<p>5 Gender Equality</p>	<p>14 Life Below Water</p>	<p>The recycling rate of water hit 93.7%</p> <p>To conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>
<p>To ensure availability and sustainable management of water and sanitation for all</p> <p>Consumption of fresh water per RMB 10,000 of output value was reduced by 13.9%</p> <p>Consumption of fresh water per ton of cement clinker was reduced by 17.4%</p>	<p>6 Green Water and Sanitation</p>	<p>15 Life on Land</p>	<p>We had 9 state-level green mines</p> <p>The average greening rate of plants was 16.1%</p> <p>About 150 million tons of solid waste was treated</p> <p>To protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and , halt and reverse land degradation, and halt biodiversity loss</p>
<p>To ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>The installed capacity of cogeneration reached about 2,025.3 MW</p> <p>The annual generating capacity of cement cogeneration reached about 8.7 billion kWh</p>	<p>7 Affordable and Clean Energy</p>	<p>16 Peace, Justice and Strong Institutions</p>	<p>156,000 person-times of employees participated in legal publicity and education activities</p> <p>The rate of the legal review of rules, regulations, management decisions and contracts hit 100%</p> <p>The performance rate of business contracts reached 98.9%</p> <p>To promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>
<p>To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> <p>The total number of employees reached 234,511</p> <p>The number of new employees hit 22,000</p> <p>The coverage rate of labor contracts hit 100%</p> <p>The coverage rate of social insurance hit 98%</p> <p>The proportion of employees joining the Trade Union reached 91%</p> <p>22,871 employees were covered by corporate pensions</p> <p>602 member companies carried out employee satisfaction surveys</p>	<p>8 Decent Work and Economic Growth</p>	<p>17 Partnerships for Goals</p>	<p>91.7% of the proposals of the Workers' Congress were handled and settled</p> <p>Our coverage rate of collective bargaining and contracts was 27.4%</p> <p>To strengthen the means of implementation and revitalize global partnerships for sustainable development</p>
<p>To build resilient infrastructure, promote inclusive sustainable industrialization and foster innovation</p> <p>12 energy-saving and environmental protection service institutions</p> <p>1 national carbon market capacity development building materials industry training base</p> <p>9 cement production lines with the collaborative treatment of solid waste</p>	<p>9 Industry, Infrastructure and Innovation</p>		<p>The hiring rate of local employees reached 64.8%</p> <p>We joined 3 international organizations related to social responsibilities and sustainable development</p> <p>We have established 166 overseas enterprises and institutions</p> <p>Nearly 55,000 person-times of employees participating in communication with external stakeholders</p> <p>To strengthen the means of implementation and revitalize global partnerships for sustainable development</p>

Indicator Index (CASS-CSR3.0)

Part 1 Preface of Report (P series)				
Indicator Classification	No.	Content of Indicator	Page	Nature of Indicator
Scope of report	P1.1	Process of report quality assurance	Cover 2	Extended
	P1.2	Interpretation of data in report	Cover 2	Core
	P1.3	Boundaries of report	Cover 2	Core
	P1.4	Report system	Cover 2	Core
	P1.5	Contact Information	Cover	Core
Report process	P2.1	Preparation process of report	P1	Extended
	P2.2	Selection process of essential topics in report	P68	Core
	P2.3	Process and means of stakeholders participating in preparation of report	P68-69	Extended
Executives' Address	P3.1	Opportunities and challenges of enterprises in performing social responsibilities	P4-5	Core
	P3.2	Summary of achievements and deficiencies of annual corporate social responsibility	P4-5	Core
Corporate profile	P4.1	Company name, nature of ownership and location of headquarters	P6	Core
	P4.2	Major brands, products and services of enterprise	P9-11	Core
	P4.3	Region of enterprise's operation, including operational enterprises, subsidiaries and jointly-owned organizations	P6, P9-11	Core
	P4.4	Service markets divided by industries, customer types and regions	P9-11	Core
	P4.5	Number of employees reported according to contracts (official and unofficial employees) and genders	P38,83	Core
	P4.6	List of memberships or other qualifications in associations, national organizations and international organizations	P70-71	Extended
	P4.7	Major changes in organizational scale, structure, ownership or supply chains within term of report	Cover 2	Extended
Annual progress	P5.1	Annual major social responsibility work	P71	Core
	P5.2	Annual responsibility performance	P80-85	Core
	P5.3	Annual responsibility honors	P71	Core
Part 2 Responsibility Management (G Series)				
Responsibility strategy	G1.1	Philosophy, vision and values of social responsibility	P64-65	Core
	G1.2	External social responsibility proposals signed by the enterprise	P70-71	Extended
	G1.3	Identifying core social responsibility topics of the enterprise	P64,68	Core
	G1.4	CSR planning	P66	Extended
Responsibility governance	G2.1	Leadership organization of social responsibility	P66	Extended
	G2.2	Channel and process of communication between stakeholders and the highest governance organization of the enterprise	P68-69	Extended
	G2.3	Organizational system of social responsibility	P66	Core
	G2.4	Internal responsibility and division of social responsibility work of enterprise	P66	Core
	G2.5	Management system of social responsibility	P66	Extended
Responsibility fusion	G3.1	Promoting social responsibility work of subsidiaries	P66	Extended
	G3.2	Promoting social responsibility performance of supply chain partners	P70	Extended
Responsibility performance	G4.1	Constructing CSR indicator system	P66-67	Extended
	G4.2	Conducting performance assessment based on CSR indicators	P66	Extended
	G4.3	Excellence selection of CSR	P66	Extended
	G4.4	Major accidents of enterprise in economy, society and environment, impact and penalty incurred, and corresponding countermeasures of enterprise	N/A	Core
Responsibility communication	G5.1	List of enterprise stakeholders	P69	Core
	G5.2	Process of identifying and choosing stakeholders	P68	Extended
	G5.3	Concerns of stakeholders and response measures of enterprise	P69	Core
	G5.4	Communication mechanism of corporate internal social responsibility	P68	Core
	G5.5	Communication mechanism of corporate external social responsibility	P68	Core
	G5.6	Participation of corporate senior management in communication and exchange of social responsibility	P68	Core
Responsibility capabilities	G6.1	Conducting CSR subject research	P70	Extended
	G6.2	Participation in social responsibility studies and exchanges	P70-71	Extended
	G6.3	Participation in formulation of domestic and foreign social responsibility standards	P70	Extended
	G6.4	Cultivating corporate responsibility culture through training and other measures	P66	Core
Part 3 Market Performance (M Series)				
Responsibilities with regard to shareholders	M1.1	Policy and mechanism of shareholders' participation in enterprise management	P19	Core
	M1.2	Protecting interests of mid-to-small investors	P19	Core
	M1.3	Normalizing information disclosure	P19	Core
	M1.4	Growth	P80-81	Core
	M1.5	Profitability	P80-81	Core
	M1.6	Safety	P80-81	Core

Part 3 Market Performance (M Series)					
Indicator Classification	No.	Content of Indicator	Page	Nature of Indicator	
Responsibilities in respect of customers	M2.1	Customer relations management system	P20	Core	
	M2.2	Popularization of product knowledge and customer training	P20	Core	
	M2.3	Protection of customer information	P20	Core	
	M2.4	Stopping losses and compensation	P20	Core	
	M2.5	Product quality management system	P20	Core	
	M2.6	Product pass rate	N/A	Core	
	M2.7	Product support and service innovation system	P57	Core	
	M2.8	Investment in technology or R&D	P54,85	Extended	
	M2.9	Number and proportion of technical personnel	P54	Extended	
	M2.10	Number of new patents	P85	Extended	
	M2.11	Sales revenue of new products	P85	Extended	
	M2.12	Significant innovation awards	P85	Extended	
	M2.13	Customer satisfaction surveys and customer satisfaction	N/A	Core	
	M2.14	Actively dealing with customer complaints and resolution rate of customer complaints	P20	Core	
Responsibilities with regard to partners	M3.1	Strategic sharing mechanism and platform	P21	Core	
	M3.2	Honest operation philosophy and system guarantee	P18	Core	
	M3.3	Fair competition philosophy and system guarantee	P18	Core	
	M3.4	Economic contract performance rate	P18	Core	
	M3.5	Identifying and describing value chain and responsibility influence of enterprise	P70	Extended	
	M3.6	Initiative and policies of enterprise in promoting social responsibility performance of value chain	P70	Extended	
	M3.7	Social responsibility education and training received by value chain members from enterprise	P70	Extended	
	M3.8	Responsible procurement system and/or policy of enterprise	P70	Extended	
	M3.9	Process and frequency of assessment and survey of social responsibility of suppliers	P70	Extended	
	M3.10	Ratio of suppliers passing quality, environment and occupational health and safety management system certifications	P70	Core	
	M3.11	Number of penalties in such aspects as economy, society and environment against suppliers	Not included in the statistics system	Extended	
	M3.12	Ratio of responsible procurement	P70	Extended	
Part 4 Social Performance (S Series)					
Responsibilities with regard to government	S1.1	Legal compliance system of enterprise	P18	Core	
	S1.2	Training in legal compliance	P18	Core	
	S1.3	Prohibition of commercial bribery and corruption	P18	Core	
	S1.4	Legal compliance assessment performance of enterprise	P18	Extended	
	S1.5	Total taxes paid	P12	Core	
	S1.6	Responding to national policies	P21	Core	
	S1.7	Policies or measures to guarantee and/or promote employment	P21	Core	
	S1.8	New employment during term of report	P42	Core	
	S2.1	Signing rate of labor contracts	P83	Core	
	S2.2	Coverage rate of collective negotiation and contracts	P39	Extended	
	S2.3	Democratic management	P39	Core	
	S2.4	Proportion of employees joining the trade union	P83	Extended	
	S2.5	Number of applied, treated and solved appeals of employees through appeals mechanism	P39	Extended	
	S2.6	Management of employee privacy	P38	Extended	
	S2.7	Rights and interests protection for part-timers, temporary workers and employees of subcontractors	P38	Extended	
	S2.8	Minimum wage of employees according to operation region and minimum wage in region	P40	Core	
	Responsibilities in respect of employees	S2.9	Coverage rate of social insurance	P83	Core
		S2.10	Salary for overtime work	P38	Extended
S2.11		Amount of annual per capita paid vacation time	P38	Extended	
S2.12		Welfare systems according to nature of employment (official, unofficial)	P50-51	Core	
S2.13		Proportion of female managers	P83	Core	
S2.14		Proportion of employees of minorities or other races	P83	Extended	
S2.15		Ratio or number of disabled employees	P83	Extended	
S2.16		Proportion of employees in occupational health and safety committee	P37	Extended	
S2.17		Occupational disease prevention and treatment system	P36	Core	

Part 4 Social Performance (S Series)				
Indicator Classification	No.	Content of Indicator	Page	Nature of Indicator
	S2.18	Training of occupational safety and health	P36	Core
	S2.19	New occupational diseases during term of report	P83	Core
	S2.20	System and measures of prevention against occupational injuries	P34-35	Extended
	S2.21	Mental health system/measures for employees	P37	Extended
	S2.22	Coverage rate of physical examination and health records	P36	Core
	S2.23	Providing equal health and safety protection to part-timers, temporary workers and employees of subcontractors	P36	Extended
	S2.24	Career development channel for employees	P40	Core
	S2.25	Employee training system	P40	Core
	S2.26	Employee training performance	P83	Core
	S2.27	Investment in aiding and supporting employees in difficulties	P41	Core
	S2.28	Providing special protection for special populations (pregnant women, nursing women, etc.)	P41	Extended
	S2.29	Respect for employees' family responsibilities and spare time lives, and maintaining work/life balance	P41	Extended
	S2.30	Employee satisfaction	P32	Extended
	S2.31	Employee turnover rate	P32	Extended
Safety production	S3.1	Safety production management system	P34-35	Core
	S3.2	Safety emergency management mechanism	P34	Core
	S3.3	Safety education and training	P35	Core
	S3.4	Safety training performance	P36	Core
	S3.5	Investment in safety production	P36	Core
	S3.6	Number of production accidents	P34	Core
	S3.7	Number of employee casualties	P34	Core
Responsibilities with regard to community	S4.1	Assessment of impact of enterprise entering or exiting communities on environment and society of communities	P24-25	Extended
	S4.2	Rate of assessment of implementation environment and social influence of new projects	P24	Extended
	S4.3	Participation of community representatives in project construction and development	P24-25	Extended
	S4.4	Enterprise developed or supported social benefit project in community of operation	P44	Extended
	S4.5	Employee localization policy	P44-45	Core
	S4.6	Proportion of local employment	P45	Extended
	S4.7	Proportion of local employees in senior executives according to main operation regions	P45	Extended
	S4.8	Local procurement policy	P44	Extended
	S4.9	Corporate public welfare policy or main public welfare fields	P48-49	Core
	S4.10	Corporate public welfare fund/foundation	N/A	Extended
	S4.11	Overseas public welfare	P48	Extended
	S4.12	Total amount of donation	P48	Core
	S4.13	Policy and measures supporting voluntary service	P49	Core
	S4.14	Voluntary service performance of employees	P49	Core
Part 5 Environmental Performance (E Series)				
	E1.1	Establishing environmental management organizational system and mechanism system	P25	Core
	E1.2	Environment warning and response system	P24	Extended
	E1.3	Participation in environmental organizations or proposals	P25	Extended
	E1.4	Assessment on impact of enterprise on environment	P24	Core
	E1.5	Total investment in environmental protection	P22	Core
	E1.6	Training and publicity of environmental protection	P25	Core
Green operation	E1.7	Environmental protection training performance	P25	Core
	E1.8	Disclosure of environment-related information	P25	Extended
	E1.9	Process and frequency of communication with communities on environment	P25	Extended
	E1.10	Green office measures	P25	Core
	E1.11	Green office performance	P25	Extended
	E1.12	Saving energy by reducing business trips	P25	Extended
	E1.13	Green buildings and sales network	N/A	Extended
Green factories	E2.1	Establishment of energy management system	P24-27	Extended
	E2.2	Energy conservation policy and measures	P24-27	Core
	E2.3	Total annual energy consumption	P27	Core

Part 5 Environmental Performance (E Series)				
Indicator Classification	No.	Content of Indicator	Page	Nature of Indicator
	E2.4	Comprehensive energy consumption per unit output value of enterprise	P82	Core
	E2.5	Policy and measures for utilization of new, renewable or clean energy	P26	Extended
	E2.6	Utilization amount of new, renewable and clean energy	P82	Extended
	E2.7	Policy, measures or technologies for reducing waste gas emission	P26	Core
	E2.8	Emission and emission reduction of waste gas	P82	Core
	E2.9	Systems, measures or technologies for reducing waste water discharge	P26	Core
	E2.10	Emission and emission reduction of waste water	P82	Core
	E2.11	Systems, measures or technologies for reducing waste emissions	P26	Core
	E2.12	Emission and emission reduction of waste	P82	Core
	E2.13	Policies and measures for development of circular economy	P26	Core
	E2.14	Cyclical utilization rate of renewable resources	P82	Core
	E2.15	Construction of water-saving enterprise	P26	Core
	E2.16	Annual consumption of fresh water/fresh water consumption of unit industrial added value	P82	Core
	E2.17	Volume of neutral water reuse	P27	Core
	E2.18	Plan and action for reduction of greenhouse gas emissions	P26	Core
	E2.19	Emission and emission reduction of greenhouse gases	Not included in the statistics system	Extended
Green products	E3.1	Proportion of suppliers passing ISO 14000	P70	Core
	E3.2	Measures to improve environmental protection awareness and capability of suppliers	P30	Extended
	E3.3	Number of suppliers receiving penalties related to environmental protection, and number of penalties	Not included in the statistics system	Extended
	E3.4	Support for R&D and sales of green low-carbon products	P28-29	Extended
	E3.5	Measures and performance in waste product recycling	P26	Core
	E3.6	Policies and performance in minimization and recycling of packaging	P30	Core
Green ecology	E4.1	Protection of biological diversity	P24	Core
	E4.2	Protection of natural habitats, wetlands, forests, wildlife corridors and agricultural land during construction	P24,26	Extended
	E4.3	Ecological restoration and governance	P24,26	Extended
	E4.4	Rate of ecological restoration and governance	Not included in the statistics system	Extended
	E4.5	Public welfare activities for environmental protection	P25	Core
Part 6 Report Postscript (A Series)				
	(A1)	Future plan: Corporate planning on social responsibility work	P5, 66	Core
	(A2)	Report Evaluation: Evaluation of report by social responsibility or industry experts, relevant interested parties or professional organizations	P92	Core
	(A3)	Reference Index: Application of indicators required to be disclosed by the Guidelines	P88-91	Extended
	(A4)	Feedback: questionnaire of readers' opinions and feedback channel for readers' opinions	P93	Core

Rating Report

Rating Report of CNBM Corporate Social Responsibility Report 2016

Upon the request of CNBM, the Chinese Expert Committee on CSR Report Rating selected experts to form the CNBM CSR Report 2016 (hereinafter referred to as the 'Report') Rating Team.



I. Basis of rating

Guidelines for the Preparation of Corporate Social Responsibility Reports in China (CASS-CSR 3.0) and Rating Standards of Corporate Social Responsibility Reporting in China (2014).

II. Rating process

1. The Process Assessment Team interviewed the main members of the Report Preparation Group and reviewed the materials related to the preparation process;
2. The Rating Team evaluated the preparation process and disclosure of the Report, and drew up the Rating Report;
3. The Rating Report was submitted to the Vice Chairman of the Chinese Expert Committee on CSR Report Rating and the head of the Rating Team for their signatures.

III. Conclusions

Process (★★★★★)

The Enterprise Management Department of the Group took the lead in establishing the Report Preparation Group. The Chairman of the Group controlled the topics and structure of the Report, and was responsible for the approval of the final draft. The Preparation Group identified the stakeholders and collected their suggestions via questionnaire surveys and emails. Substantial topics were defined according to the company's development strategy, related state policies, industrial benchmarking analyses, results of stakeholders' survey and so on. The company plans to release the Report at the '2017 Press Conference of Chinese Industrial Corporate Social Responsibility Reports' on 'Low-carbon Day', and the Report will be presented in a print edition, electronic edition, Chinese-English version, and a weChat edition, reflecting a leading process.

Substance (★★★★★)

The Report gives detailed and sufficient disclosure on the substantive issues of the non-metallic mineral products industry including 'Implementation of Macro Policies', 'Product Quality Management', 'Technological Innovation', 'Occupational Health Management', 'Ensuring Production Safety', 'R&D and Application of Environmentally Friendly Technologies and Equipment', 'Conservation of Energy and Resources', 'Reduction of Waste Emissions' and 'Governance of Environment around Factories' in a substantial manner.

Completeness (★★★★★)

The Report discloses the key indicators of 'Responsibility Management', 'Market Performance', 'Technological Innovation', 'Energy Conservation and Environmental Protection', 'Employee Care' and 'Corporate Citizenship', covering 94.1% of the core indicators of the non-metallic mineral products industry, which can be regarded as fairly complete.

Balance (★★★★☆)

The Report discloses negative data and information on the 'employee turnover rate', 'recordable injury rate per 1,000 employees', 'number of major accidents in production', 'new cases of occupational diseases', etc., which shows a good balance.

Comparability (★★★★★)

The Report discloses 65 key performance indicators including 'Operating Revenue', 'Total Profits', 'Cement Yield', 'Expenditure on R&D Activities', 'Comprehensive Energy Consumption per Ton of Cement', 'Utilization Rate of Recycled Water' and 'Expenditure on Social Welfare Activities' for at least 3 consecutive years, and compares such indicators as 'Annual Output of Cement', 'Annual Output of Ready-mixed Concrete' and 'Share of Cement Production Line in the Global Market' with those of international and domestic competitors in the industry, showing excellent comparability.

Readability (★★★★★)

The Report has a clear framework and logic, and many cases. The descriptions of the Report are systematic, accurate, simple, integral and full of rhythm. The designs of the covers and the first page of each chapter are integrated with elements of the main businesses of the Group, which shows the characteristics of the industry and increases the identity of the Report. There are many QR codes in the Report to help readers learn more about the performance of the Group and improve its extendability. The design of the Report is simple and natural, and the pictures are harmonious and generous, which complements the descriptions well; as such, it significantly improves the readability of the Report to an excellent level.

Creativity (★★★★☆)

The 'Merger of CNBM and SINOMA' Chapter of the Report presents the development of the Group in a simple way, which helps stakeholders to learn about it. The Report responds to the UN SDGs, which shows that it keeps pace with the times and highlights the leadership of the Group in responsibility. It also releases Special Report on CNBM's Response to Climate Change, deeply expounding the special performance of the Group. There are many comments by stakeholders in the Report, increasing its objectivity and persuasion. All of these features show its excellent creativity.

Overall rating (★★★★★)

Based on its evaluation, the Rating Team considered the CNBM CSR Report 2016 to be an outstanding CSR report and gave it a five-star rating.

IV. Recommendations for improvement

Provide further disclosure of negative events to further improve the balance of the Report.

Rating Team

Team leader: Zhong Hongwu, Director of the Research Center for Corporate Social Responsibility of the Economics Division of the Chinese Academy of Social Sciences

Members: Liu Weihua, Vice Chairman of the China Committee of Corporate Citizenship
Wang Zhimin, Process Evaluator

Wei Zichuan, Vice Chairman of the Expert Rating Committee

Zhong Hongwu, Team Leader of the Rating Team

Feedback

Thank you very much for caring about and supporting the social responsibility work of CNBM. Please fill in the questionnaire below and send it back to us through fax or mail. If the blank space is insufficient for your response, please attach an additional page; if you wish to reply by electronic means, please log onto our website at www.cnbm.com.cn, click on 'Social Responsibility' and then click on 'Social Responsibility Communications - Feedback'. You can also scan the QR code on the left to fill in your feedback via mobile terminal. We will make continuous improvements in our work in the future according to your suggestions and advice.



Your overall evaluation of the CNBM CSR Report 2016:

Overall evaluation	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Ordinary	<input type="checkbox"/> Not good	<input type="checkbox"/> Very poor
Contents	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Ordinary	<input type="checkbox"/> Not good	<input type="checkbox"/> Very poor
Number of pages	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Ordinary	<input type="checkbox"/> Not good	<input type="checkbox"/> Very poor
Design	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Ordinary	<input type="checkbox"/> Not good	<input type="checkbox"/> Very poor
Language	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Ordinary	<input type="checkbox"/> Not good	<input type="checkbox"/> Very poor

In your opinion, what's the core of responsibility performance of CNBM?

- Responsibility Governance Operation Performance Technological Innovation Energy Saving & Environmental Protection Employee Care
 Corporate Citizen

Which aspect do you think we need to improve?

- Information collection Development of organizational structure Talent development Performance evaluation External publicity
 Management of stakeholders Public welfare planning Preparation of annual report Study on social responsibilities
 Others _____

In which means do you wish to learn information about our responsibility performance?

- Printed report "Social responsibility" special column on the official website WeChat official account
 Professional media of social responsibility Others _____

What do you expect to see in the annual CSR Report of CNBM?

Which aspect of CNBM's performance do you pay more attention to?

Other suggestions and advice?

What's your standpoint when participating in our collection of suggestions?

- Governments Institutional investors Middle or small shareholder Financing institutions Industrial associations Supplier Client
 Enterprise in the same industry Partner Professional CSR institution Public welfare organization Media
 Senior executive of the Group Employee of the Group Others _____

In order to reply to your suggestions and advice in time, please provide your contact information. We will keep your personal information in confidence.

Name _____ Age _____ Occupation / employer _____
Gender Male Female Department / position _____ Address _____
Telephone _____ Postal Code _____ E-mail: _____



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