



中国中铁股份有限公司  
CHINA RAILWAY GROUP LIMITED



永远的开路先锋

**2021** Environmental, Social  
and Governance Report  
and Social Responsibility  
Report of CREC

环境、社会与管治报告  
暨社会责任报告

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## 报告编制说明

### Preparation of this Report

#### 报告范围

本报告为公司第14份社会责任报告，披露范围涵盖了中国中铁股份有限公司及全级次控股实体子公司在履行经济、环境、社会和公司治理方面责任的信息。典型案例均来自所属企业。报告时间跨度为2021年1月1日至12月31日，适当关注了2021年以前公司履行社会责任的情况。

#### 发布周期

年度报告。

#### 参考依据

- 报告编写参照联合国全球契约颁布的“十大原则”
- 全球报告倡议组织《可持续发展报告标准》
- 中国国家标准GB/T36000-2015《社会责任指南》
- GB/T36001-2015《社会责任报告编写指南》
- GB/T36002-2015《社会责任绩效分类指引》
- 国务院国资委《关于中央企业履行社会责任的指导意见》
- 上海证券交易所《上市公司环境信息披露指引》
- 香港联合交易所《环境、社会及管治报告指引》

#### 数据说明

报告披露的财务数据来自公司财务报告，如与公司年度报告有出入，以年度报告为准，其他数据来自公司内部统计。

#### Reporting scope

This is CREC's 14th social responsibility report with the disclosure scope covering information on performance of responsibilities in economy, environment, society and corporate governance by China Railway Group Limited and its holding entities at all levels. All cases are from enterprises under CREC. With the time span of 1st January to 31st December of 2021, this report pays due attention to how the CREC fulfilled its social responsibility before 2021.

#### Reporting frequency

yearly report

#### References

The Ten Principles promulgated by the UN Global Compact  
GRI (Global Reporting Initiative) Standards  
Chinese National Standard GB/T 36000-2015: Guidance on Social Responsibility  
GB/T36001-2015: Guidance on Social Responsibility Reporting  
GB/T36002-2015: Guidance on Social Responsibility Performance Classification  
SASAC of the State Council's Guiding Opinions on Performance of Social Responsibilities by Central Enterprises  
Guidelines on Environmental Information Disclosure by Companies Listed on the Shanghai Stock Exchange  
The Environmental, Social and Governance Reporting Guide of the Stock Exchange of Hong Kong Limited

#### Explanation of the information

The financial information disclosed in this report is derived from the Company's financial statements. In case of discrepancy between this report and the Company's annual report, the latter shall prevail. Other information is derived from the Company's internal statistics.



## 称谓说明

为便于您的阅读，中国中铁股份有限公司在本报告中以“中国中铁”“公司”“我们”等方式进行表述。

## 改进说明

本报告依据香港联合交易所发布的《香港联合交易所有限公司证券上市规则》附录二十七《环境、社会及管治报告指引》编制，并以其载列的四项汇报原则——重要性、量化、平衡及一致性，作为本报告的撰写基础。

本报告根据利益相关方的反馈和当前国内外ESG领域热点议题，根据公司发展实际，分“管治篇”“环境篇”“社会篇”对公司履行企业社会责任及ESG各主要议题的绩效进行汇报。

本报告增设了“践行‘三个转变’重要指示”“巩固拓展脱贫攻坚成果，开启乡村振兴新篇章”“高质量共建‘一带一路’”3个专题，充分展示公司积极担当央企责任，在国家可持续发展和构建人类命运共同体中发挥的作用。

## 报告承诺

本公司董事会及全体董事保证本报告内容不存在任何虚假记载、误导性陈述或重大遗漏，并对其内容的真实性、准确性和完整性承担个别及连带责任。

## Title description

To facilitate your reading, China Railway Group Limited is described as “CREC”, “the Company” and “We/us” in this report.

## Explanation of improvement

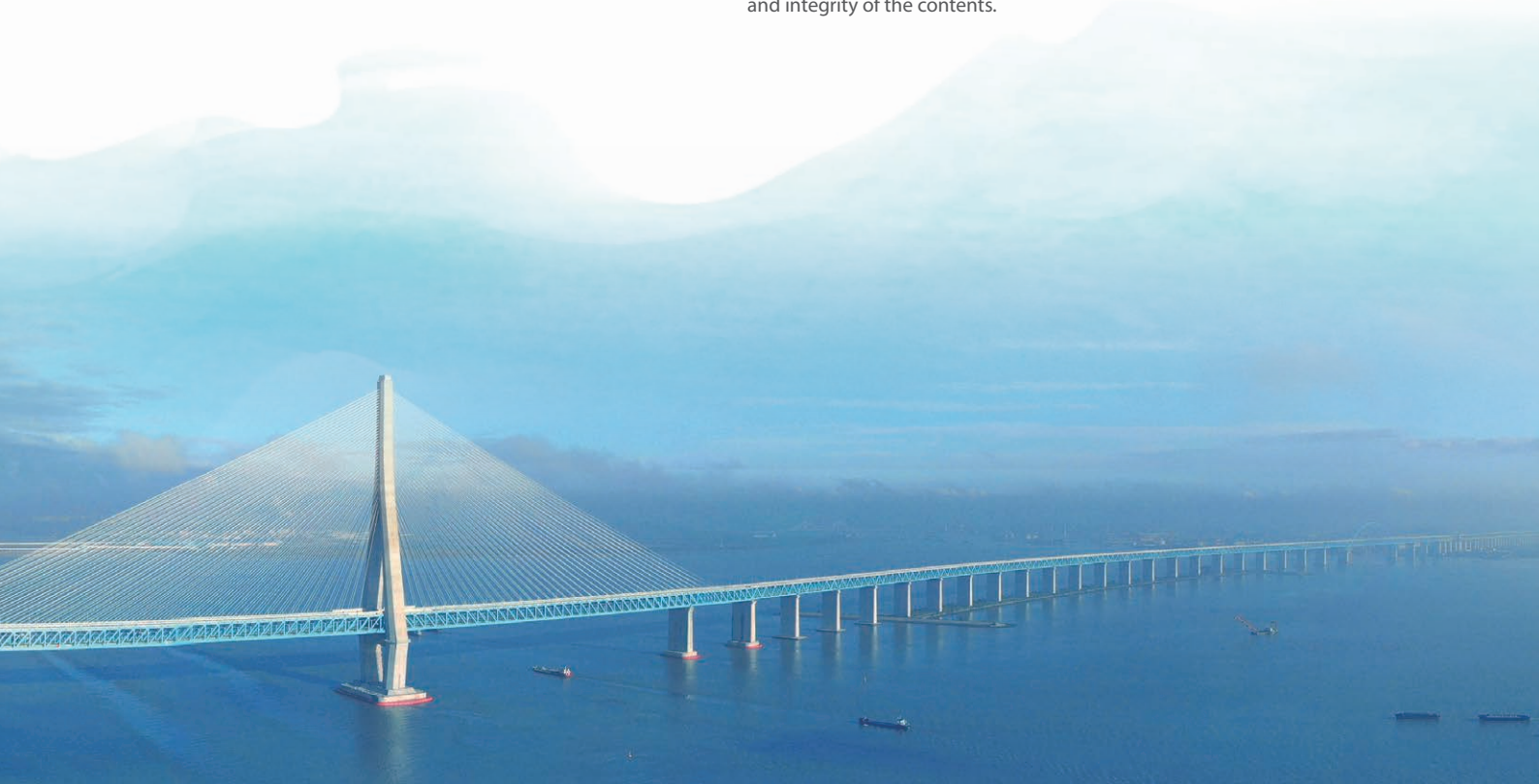
This report is compiled in accordance with Appendix 27 the Environmental, Social and Governance Reporting Guidelines of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited issued by Hong Kong Stock Exchange, and is based on the four reporting principles thereof—Materiality, quantification, balance and consistency.

Based on the feedback from our stakeholders and the hot topics of different ESG areas in China and abroad, and in line with the status of development of the Company, we prepared this report in three chapters, the “governance section”, “environment section” and “society section” to illustrate the Company’s corporate social responsibility performance and major ESG topics.

Three special sections are added in this report, i.e., “Implementing the important instructions of ‘Three Transformations’”, “Consolidating and expanding the results of poverty alleviation and charting a new chapter for rural revitalization”, “Joint construction of the ‘Belt and Road’ with high quality”, and, fully demonstrating that the Company has fulfilled its responsibilities as a central enterprise and the role it has played in the sustainable development of China and the construction of community of shared future for mankind.

## Undertakings in this report

The Board of Directors and all directors of the Company ensure that there is no false record, misleading statement or major omission in this report and they will bear individual and joint liabilities for the authenticity, accuracy and integrity of the contents.



## 董事长致辞

### Chairman's Statement

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2021年是中国共产党成立100周年，是“十四五”规划和第二个百年奋斗目标的开局之年，也是中国中铁发展史上极不平凡的一年。面对百年变局、世纪疫情的重大考验，全公司坚持以习近平新时代中国特色社会主义思想为指引，认真贯彻落实中央、国务院和国资委的各项决策部署，在投身国家经济建设中攻坚克难，在市场竞争的大潮中激流勇进，各项经济指标均创历史最好水平。

这一年，我们高举中国中铁“开路先锋”大旗，积极投身高铁网络建设，建成京哈、张吉怀、牡佳、赣深等多条高铁线路；全面对接交通强国等国家战略，圆满完成拉林铁路、北京冬奥会场馆、青山长江大桥等一批重点工程建设；“一带一路”标志性工程老铁路，在两国领导人见证下建成通车；实

2021, as the year marking the 100th anniversary of the founding of the Communist Party of China and also the opening of the 14th Five-Year Plan and the Second Centenary Goal, is an extremely unusual year in the history of CREC. Facing the major test of a world going through profound changes and a global pandemic, both of a scale unseen in a century, the Company, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, strictly implemented the decisions and arrangements of the Central Committee, the State Council and the State-owned Assets Supervision and Administration Commission, overcame difficulties in the course of national economic development, and braved the tide of market competition, with all economic indicators scoring the best ever records.

Over the past year, holding high the banner of “industry pioneer” of CREC, we actively engaged in the construction of the high-speed railway network and delivered various lines, such as Beijing-Harbin, Zhangjiajie-Jishou-Huaihua, Mudanjiang-Jiamusi and Ganzhou-Shenzhen. Aligning fully with such national strategies as building a country with strong transportation network, we completed the construction of a number of key projects, namely, Lhasa-Nyingchi railway, venues for the Beijing Winter Olympics and Qingshan Yangtze River Bridge. The China-Laos railway, a landmark project

现高铁电气在科创板上市，混合所有制改革更加稳健；奋力打造原创技术“策源地”，推进企业数字化转型，攻克大批工程建造关键核心技术；致力建设美丽中国，积极参与长江大保护、黄河流域生态保护、长三角生态绿色一体化发展示范区建设；深度参与乡村振兴，捐建的系列项目惠及当地50余万人；调动优势资源投身各地疫情防控和抗震抗汛救灾，广泛参与社会公益，充分体现企业担当；健全完善关爱职工服务体系，职工获得感、幸福感、安全感不断增强。

2021年，中国中铁在世界500强排名第35位，获国家科技进步和发明奖7项、中国专利奖9项（金奖1项）、专利4,830项，新增中国工程院院士1人，全国勘察设计大师2人、百千万人才工程国家级人选1人。

2022年，中国中铁将一如既往地忠实履行企业使命，在全面建设社会主义现代化国家和构建人类命运共同体的实践中作出新的更大贡献！

**董事长：陈云**  
2022年3月

of the Belt and Road Initiative, was opened to traffic in the presence of the leaders of the two countries. We managed to have China Railway High-Speed Electrification Equipment Corporation Limited listed on the Science and Technology Innovation Board, making the mixed ownership reform more robust. We endeavored to build a “hotbed” for original technologies, promote the digital transformation of enterprises, and made breakthroughs in core and key technologies for a large number of projects. We devoted ourselves to building a beautiful China and took an active part in the protection of the Yangtze River, the conservation of the ecology of the Yellow River Basin, and the construction of the demonstration zone of green and integrated ecological development of the Yangtze River Delta. We were deeply involved in rural revitalization, donating a series of projects benefiting more than 500,000 local people. We mobilized advantageous resources to participate in pandemic prevention and control and earthquake and flood relief in various places, and widely engaged in social welfare activities, fully embodying our corporate role. We improved the service system for employee care, and employees’ sense of access, happiness and security was constantly enhanced.

In 2021, CREC ranked 35th among the Fortune Global 500, and brought home 7 National Science and Technology Progress and Invention Awards, 9 China Patent Awards (including 1 gold award), and 4,830 patents. Besides, 1 academician of the Chinese Academy of Engineering, 2 national survey and design masters and 1 national candidate for the “National Hundred, Thousand and Ten Thousand Talent Project” were added to the talent pool of CREC.

In 2022, CREC will continue to faithfully fulfill its corporate missions, making new and greater contributions in building a modernized socialist country in all aspects and the construction of community of shared future for mankind!

**Chairman: Chen Yun**  
March 2022

## 关于我们

### About Us

#### 公司简介

#### Company profile

中国中铁拥有120多年的历史渊源。以1894年山海关机器厂的成立为标志，中国中铁成为中国民族工业的先行者和铁路建设的开拓者。1909年参与建成了京张铁路，开启了中国铁路建设事业的先河。1950年6月，在新中国第一条铁路成渝铁路的开工典礼上，邓小平、贺龙等授予中国中铁建设者“开路先锋”旗帜。此后，中国中铁勇做“开路先锋”，逢山开路、遇水架桥，累积参建的工程占中国铁路总里程的2/3，占中国电气化铁路总里程的90%，占高铁总里程的55%，占中国城市轨道交通总里程的3/5，建造跨江跨海大桥1万多座，建造长大隧道2万多公里，18次赴南极承担建设维护任务。

中国中铁于2007年分别在上海、香港两地上市。目前已发展成为集勘察设计、施工安装、房地产开发、工业制造、科研咨询、工程监理、资本经营、金融信托、资源开发和外经外贸于一体的多功能、特大型企业集团，全球最大的建筑工程承包商之一。公司总资产13,617.26亿元，净资产3,583.43亿元。

公司经营范围覆盖到基础设施建设的全产业链，工程项目遍布中国除台湾省以外的各省市自治区以及全球90多个国家和地区，科技水平在诸多领域达到世界先进水平。

CREC has over 120 years of historical origin. With the establishment of the Shanhaiguan Machinery Plant in 1894 as a milestone, CREC has since become the forerunner of national industry and the pioneer of railway construction in China. We participated in and completed construction of the Beijing-Zhangjiakou Railway in 1909, setting the precedent for China's railway construction. In June 1950, Deng Xiaoping and He Long conferred the construction workers of CREC the flag of "Trailblazer" at the commissioning ceremony of Chengdu-Chongqing Railway, the first railway in New China. Since then, to live up to that title, CREC has been committed to cutting a way through when confronted by mountains and building a bridge when blocked by a river. The projects it has participated in cumulatively account for 2/3 of the total mileage of Chinese railways, 90% of the total mileage of Chinese electrified railways, 55% of the total mileage of high-speed railways, and 3/5 of the total mileage of Chinese urban rail projects. We also built more than 10,000 river- and sea-crossing bridges, over 20,000 kilometers of tunnels, and made 18 trips to Antarctica for construction and maintenance tasks.

CREC went listing respectively in Shanghai and Hong Kong in 2007. Currently it has developed into an extremely large multi-functional enterprise group engaged in survey and design, construction and installation, real estate development, industrial manufacturing, scientific research and consulting, engineering supervision, capital management, financial trust, resource development and foreign economy and trade. It is one of the largest construction contractors in the world with total assets of RMB1,361.726 billion and net assets of RMB358.343 billion.

CREC's business scope covers the whole industrial chain of infrastructure construction, with projects spreading all over China's provinces and autonomous regions except for Taiwan and more than 90 countries and regions in the world. The technological level in many areas has reached the world's advanced level.



## 企业价值观

## Corporate values



使命  
Corporate Mission

中国建造 铁肩担当  
China Build and Iron Shouldering

愿景  
Corporate Vision

具有全球竞争力的世界一流综合型建筑产业集团  
A world-class comprehensive construction industry group with global competitiveness

核心价值观  
Corporate Core Value

守正创新 行稳致远 向上向善 勇争一流  
Building upon core businesses while continuing to innovate Maintaining steady growth in a far reaching way Upward for good and improvement and Bravely striving for first-class

企业精神  
Corporate Spirit

勇于跨越 追求卓越  
Brave to Overcome Difficulties and Pursuit for Excellence

经营理念  
Business philosophy

合和共赢  
诚信为本

Honesty-based and win-win situation

管理理念  
Management philosophy

效益优先  
协同高效

Synergism and priority to efficiency

安全理念  
Safety philosophy

安全第一  
生命至上

Supremacy of life and safety first

质量理念  
Quality philosophy

匠心品质  
精建建造

Elaborate construction with the spirit of originality

环保理念  
Environmental philosophy

绿色发展  
勤俭节约

Industry and economy Green development

人才理念  
Talent philosophy

以人为本  
奋斗圆梦

Be people-oriented Struggle to realize dreams

廉洁理念  
Integrity philosophy

风清气正  
业兴人和

Be clean and upright Prosperity and harmony

品牌理念  
Brand philosophy

创造价值  
基业长青

Create value Solid foundation

## 社会评价

### Assessment by the society

连续**16**年进入《财富》  
**世界500强**排名，列第**35**位

Being named in "Fortune" for **16** consecutive years,  
ranked **35th** among the **Fortune Global 500**

**“中国企业500强”** 排名  
列第**10**位

Ranked No.**10** among **Top 500 Enterprises Of China**

《工程新闻记录》(ENR)

**“全球承包商250强”** 排名，列第**2**位

Ranked No.**2** among ENR's "**Top 250**"

中国上市公司信用**500强**

Be on the Credit List of **Top 500** Listed Companies in China

连续**8**年

被国务院国资委评定为业绩考核**A**类企业

Accredited class **A** enterprises for performance appraisal by  
the SASAC of the State Council for **8** consecutive years

连续**8**年获上交所信息披露工作评价**A**级

Accredited class **A** enterprises for evaluation of information  
disclosure by SSE for **8** consecutive years

《新财富》

**“最佳IR港股公司”**

Won the "New Fortune –  
**The Best IR Hong Kong Listed Company**" Award

天马奖“中国主板上市公司投资者关系  
**最佳董事会奖”**

Won the "Tianma Award – **the Best Board of Directors** for  
Investor Relations of China's Main Board Listed Companies"

证券时报

**“A股公司ESG百强”**

Won the "Securities Times –  
**Top 100 A-share Companies in ESG**"

金紫荆——

**“十四五最具投资价值上市公司”**

Won the Golden Bauhinia Award as the "**Most Valuable Listed  
Company for Investment during the 14th Five-Year Plan**"

入选国务院国资委

**“央企ESG·先锋50指数”**

Selected in the "**State-owned Enterprises ESG Pioneer 50 Index**"  
by the SASAC of the State Council

中国上市公司协会以及北京上市公司协会

**“业绩说明会优秀实践案例”**

Won the "**Excellent Practice Cases of Performance Presentation**,"  
"**ESG Excellent Practice Cases of Listed Companies**" and "**Excellent  
Practice Cases of 'Belt and Road'**" of the China Association for  
Public Companies (CAPCO) and the Listed Companies Association  
of Beijing (LCAB)

**“上市公司ESG优秀实践案例”**

**“‘一带一路’优秀实践案例”**

## 社会责任规划

### Planning of social responsibilities

作为建筑行业的领军企业，中国中铁始终以成为企业社会责任的实践者、推动者和引领者为己任。自2008年起，开始着手建立科学、规范、系统、有效的企业社会责任管理体系，从公司总部到各子公司全面开展了一系列社会责任管理实践活动，以实现全面覆盖、充分履行、日臻完善、行业领先的社会责任目标，为社会持续提供不可替代的杰出贡献。

As a leader in the construction industry, CREC never forgets its mission of becoming a practitioner, promoter and pioneer of corporate social responsibility. CREC started to construct a scientific, standardized, systematic and effective management system of corporate social responsibilities in 2008, rolling out a series of social responsibility management activities covering its headquarters and subsidiaries in order to achieve the goals of comprehensive coverage, down-to-earth implementation, steady perfection and industrial leading, and make continuous and irreplaceable contributions to the society.



## 利益相关方沟通和关键议题重要性评估

## Communication with stakeholders and materiality evaluation

中国中铁通过与各利益相关方多渠道的沟通，积极了解其对公司履行企业社会责任的期望和要求，力求在提升自身ESG表现的同时，切实回应和满足利益相关方需求。

Through multi-channel communications with its stakeholders, CREC carefully listens to their expectations and requirements on its fulfillment of corporate social responsibilities, aiming to quickly respond to and meet their needs while actively improving our performance.

	利益相关方说明 Description of Stakeholders	沟通方式或渠道 Communication Channels
政府及监管机构 Government and regulatory authorities	税务、环保、安全等部门、地方政府、证监会等监管机构 Tax, environmental and security authorities, local government, CSRC	政策执行、公文往来、信息报送、机构考察、参加相关会议、专题会议、日常工作会议、信息披露等 Implementation of policies, official documents, reporting, inspection, participating in relevant meetings, dedicated meetings, routine meetings, information disclosure
股东及投资者 Shareholders and investors	对中国中铁进行合法股权、债券投资的投资人 Investors with legal investments in the equity interests and securities of CREC	股东大会、企业年报、业绩发布、公司网站、信息披露、日常接待、电话答疑等 Shareholders' meeting, annual reports, results announcement, corporate website, information disclosure, visit reception, telephone inquiry
客户 Customers	通过购买中国中铁的产品或服务，与中国中铁有直接的经济关系的企业或个人 Enterprises and individuals with direct economic connections with CREC through buying its products or services	服务热线、售后服务、座谈与走访等 Service hotline, after-sales services, meetings and visits
供应商 Suppliers	向中国中铁合法提供产品或服务的企业或个人 Enterprises and individuals legally providing products or services to CREC	公开招投标程序、合同谈判、日常业务交流等 Public tenders, contract negotiation, daily business exchanges
合作伙伴 Partners	与中国中铁达成合作共识的企业或机构 Enterprises and individuals entering into cooperation with CREC	合作谈判、日常工作会议等 Cooperation negotiations, regular meetings
员工 Employees	与中国中铁签订正式劳动合同及常年服务于中国中铁业务的人员 Individuals entering into formal labor contracts with CREC and serving it full-time	工会、职工代表大会、员工手册、员工活动、员工培训等 Trade union, employee representatives' meeting, staff manual, staff activities, staff training
社区及公众 Community and public	运营所在地社区、社会公众、非营利组织等 Communities in which CREC operates, social public and non-profit organizations	社区活动、员工志愿者活动、公益活动、社会事业支持等 Community activities, voluntary activities, public welfare activities, social cause support
高校及科研机构 Colleges and R&D institutes	与中国中铁建立合作关系的大学、学院、科研机构等 Colleges and R&D institutes in cooperation with CREC	公司招聘宣讲、员工进修、研讨会、学术交流等 Recruitment sessions, staff training, seminars, academic exchanges



在与利益相关方沟通的基础上，中国中铁对ESG实质性议题及行业热点议题进行了识别和重要性评估，将评估结果以关键议题重要性评估矩阵的方式呈现，并据此结果在本报告中对各项重要议题予以回应。

During the communication with its stakeholders, CREC has identified material issues of ESG and hot topics in the industry and evaluated their materiality, with the results presented in a matrix of materiality assessment and responded to all issues in this report based on the results.



## 董事会声明

### Statement of the Board of Directors

中国中铁全面落实中共中央、国务院印发的《关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》，国务院印发的《2030年前碳达峰行动方案》（国发〔2021〕23号），以及国务院国资委印发的《关于推进中央企业高质量发展做好碳达峰碳中和工作的指导意见》（国资发科创〔2021〕93号）等低碳发展有关文件精神，将绿色低碳高质量可持续发展放在企业发展战略目标的重要位置，从中长期发展战略高度谋划碳达峰、碳中和目标路径，并将环境、社会 and 管治元素纳入可持续发展、治理水平提升、业务发展策略的中长期规划当中。

董事会作为公司重要的领导角色，全面地负责督导、直接管理及监管公司的环境、社会 and 管治议题、风险及机会，并于批准ESG报告前了解及遵守最新监管要求。董事会认为，管理环境、社会 and 管治相关风险及机会对公司高质量可持续发展至关重要，董事会战略委员会及安全健康环保委员会亦定期审查相关制度体系运行成效，及是否涵盖重大环

CREC has fully implemented the Opinions on Completely, Accurately and Comprehensively Implementing the New development Concept and Doing a Good Job in Carbon Peak and Carbon Neutralization (《关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》) issued by the Central Committee of the CPC and the State Council, and the Carbon Peaking Action Plan before 2030 issued by the State Council (《2030年前碳达峰行动方案》)(Guofa [2021] No. 23), and the Guiding Opinions on Promoting the High-quality Development of Central Enterprises and Doing a Good Job in Carbon Peak and Carbon Neutralization (《关于推进中央企业高质量发展做好碳达峰碳中和工作的指导意见》) (SASAC faKechuang [2021] No. 93) issued by the SASAC of the State Council and other documents related to low-carbon development. The Company puts green, low-carbon, high-quality sustainable development at an important position in the corporate development strategy, plans the path to carbon peaking and carbon neutrality from a medium and long-term development strategy, and incorporates environmental, social and governance elements into sustainable development in the medium and long-term planning for the improvement of governance level and business development strategy.

As an important leading role of the Company, the Board of Directors is fully responsible for supervising, directly managing and supervising the Company's environmental, social and governance issues, risks and opportunities, and understands and complies with the latest regulatory requirements before approving the ESG report. The Board of Directors believes that managing ESG-related risks and opportunities is critical to the Company's high quality and sustainable development. The Strategy



境、社会和管治问题的主要控制措施。同时，有效的环境、社会和管治政策实施有赖于不同部门的充分合作，依据《相关职能部门服务董事会专门委员会工作制度》，公司建立跨部门合作机制，并深入开展风险内控法律合规一体化建设，确保了所呈列数据及可持续发展措施的准确性、可靠性和及时性。此外，公司十分重视与投资者的沟通，定期检视与投资者间的沟通渠道和平台，并通过《市值管理情况报告》《资本市场观点汇总及管理建议》等，将收集到的主要投资者所关注的对公司业务有重大影响的议题向董事会反馈，确保公司能够实现合乎市场各主体所期望的表现。

展望未来，董事会将持续检讨及监督公司在环境、社会和管治方面的表现，继续为投资者提供可靠、一致、可作比较的重要环境、社会和管治资料，共同为实现绿色低碳高质量可持续发展的环境不断努力。

Committee and Safety, Health and Environmental Committee of the Board of Directors also review the effectiveness of the systems in place on a regular basis to see whether they cover the key controls for significant ESG issues. At the same time, the effective implementation of environmental, social and governance policies depends on the full cooperation of different departments. According to the Working System of Relevant Functional Departments Serving the Special Committee of the Board of Directors (《相关职能部门服务董事会专门委员会工作制度》), the Company has established a cross departmental cooperation mechanism and deeply carried out the integration of risk internal control and legal compliance to ensure the accuracy, reliability and timeliness of the data and sustainability measures presented. In addition, the Company attaches great importance to the communication with investors, regularly examines the communication channels and platforms with investors, and feeds back the collected issues of major investors that have a significant impact on the Company's business to the Board of Directors through the Report on Market Value Management (《市值管理情况报告》), Summary of Capital Market Views and Management Suggestions (《资本市场观点汇总及管理建议》), so as to ensure that the Company can achieve the performance expected by all market subjects.

Looking ahead, the Board of Directors will continue to review and supervise the Company's performance in environmental, social and governance, continue to provide investors with reliable, consistent and comparable important environmental, social and governance information, and work together to achieve a green, low-carbon, high-quality and sustainable development environment.



# 管治篇

## Governance

公司治理

Corporate Governance

合规管理

Compliance Management

反腐倡廉

Anti-corruption

审计监督

Audit Supervision

规范关联方交易

Regulating Related Party Transactions



## 公司治理

### Corporate Governance

公司依据法律法规和国资监管、证券监管要求，构建并不断完善权责法定、权责透明、协调运转、有效制衡的公司治理机制。

#### 治理架构

##### Governance structure

股东大会是公司的权力机构，是出资人行使股东权利的重要手段。公司董事会按照证券监管要求，全面、及时、准确公告股东大会通知、议案和决议，并报监管部门备案。公司股东大会会议的召集、提案、召开、表决和决议均由律师现场见证，并出具合法合规的法律意见。报告期内，公司召开股东大会会议3次，审议通过了与定期报告、利润分配等相关的24项议案。

董事会是公司的决策机构，对股东大会负责。截至报告期末，公司董事会由7名董事组成，其中执行董事3名，分别为董事长、执行董事、党委书记陈云，执行董事、党委副书记、总裁陈文健，执行董事、党委副书记、工会主席王士奇；非执行董事4名，分别为文利民、钟瑞明、张诚、修龙。董事会下设战略、审计与风险管理、薪酬与考核、提名、安全健康环保5个专门委员会，其中提名委员会和安全健康环保委员会委员外部董事占多数、审计与风险管理委员会和薪酬与考核委员会委员全部由外部董事担任。报告期内，董事会围绕“定战略、作决策、防风险”职能，召开董事会会议14次，审议通过议案及报告事项166项，作出决议131项。董事会各专门委员会通过认真研究审议专业性议题，为董事会决策提供智力支持和决策参谋。其中董事会战略委员会召开会议2次，审议9项议案，重点在“十四五”发展规划编制方面，为促进提升公司环境、社会和管理水平，科学制定公司战略发挥了积极作用；董事会审计与风险管理委员会召开会议6次，审议39项议案，并重点对房地产业务风险、海外业务发展、权益类融资产品问题、资产负债率管控、两金压降等方面提出了意见建议，在强化公司财务管理和风险管理方面发挥了积极作用；董事会薪酬与考核委

According to laws and regulations and the requirements of state-owned asset and security supervision, the Company builds and makes constant improvements to a corporate governance mechanism characterized by statutory and transparent powers and responsibilities, coordinated operation, and effective checks and balances.

The general meeting is the organ of power of the Company and the important means for investors to exercise the rights of shareholders. Pursuant to the requirements of security supervision, the Board of Directors of the Company announces the notices, proposals and resolutions to the general meeting comprehensively, promptly and accurately, and reports them to the regulatory authorities for the record. Lawyers witness the proposal, convening, voting, and resolution of the general meeting of the Company on the spot and put forward legal and compliant opinions. During the reporting period, the Company held 3 general meetings and considered and adopted 24 proposals relating to periodic reports, distribution of profits, etc.

The Board of Directors is the Company's decision-making body and is responsible for the general meeting. As of the end of the reporting period, the Board of Directors consists of 7 directors, including 3 executive directors, namely Chen Yun, Chairman, executive director and Party Secretary, Chen Wenjian, executive director, deputy Party Secretary and President and Wang Shiqi, executive director, deputy Party Secretary and Chairperson of the Labour Union, and 4 non-executive directors, namely Wen Limin, Chung Shui Ming, Zhang Cheng, Xiu Long. There are 5 special committees of strategy, audit and risk management, remuneration and assessment, nomination as well as safety, health and environment under the Board of Directors, among which the majority of members of the nomination committee and the safety, health and environment committee are external directors, and all the members of the audit and risk management committee and the remuneration and assessment committee are external directors. During the reporting period, centering on the functions of "developing strategies, making decisions, and forestalling risks", the Board of Directors held 14 Board meetings, considered and adopted 166 proposals and reports, and made 131 resolutions. The special committees provide intellectual support and decision-making counsel to the Board of Directors through deliberations on professional issues. The strategy committee held 2 meetings and considered 9 proposals, focusing on the preparation of the 14th Five-Year Plan, and playing an active role in promoting the improvement of the Company's environmental, social and governance standards and the scientific formulation of the Company's strategy. The audit and risk management committee held 6 meetings and considered 39 proposals, made suggestions mainly on real estate business risks, overseas business development, equity financing product issues, asset-liability ratio control and accounts receivable and inventory cutting, exerting an active role in strengthening the Company's finance and risk management. The remuneration and assessment committee held 6 meetings, considered 15 proposals, and made suggestions on the

员会召开会议6次，审议15项议案，并重点对公司在薪酬管理、市场化契约化管理、实施限制性股票激励等方面提出了意见建议，在加强公司薪酬管理与业绩考核工作方面发挥了积极作用；董事会提名委员会召开会议2次，审议6项议案，在公司依法合规履行董事选任与高管聘任方面发挥了积极作用；董事会安全健康环保委员会召开会议2次，听取2次专题汇报，指导、检查和评估2021年公司安全、健康与环保工作的实施，提出工作要求，并就有关公司安全、健康与环境领域的重大问题提出意见建议，在强化公司安全、质量、职业健康、环境保护工作方面发挥了积极作用。

Company's compensation management, market-based contractual management, and implementation of restricted stock incentives, playing an active role in strengthening the Company's compensation management and performance appraisal. The nomination committee held 2 meetings and considered 6 proposals, playing an active role in the Company's compliance with the law in the selection and appointment of directors and senior management. The safety, health and environment committee held 2 meetings and listened to 2 special reports to guide, inspect and evaluate the implementation of the Company's safety, health and environmental protection work in 2021, put forward work requirements as well as opinions and proposals on major issues of the Company in this respect, playing an active role in strengthening the Company's performance in safety, quality, occupational health and environmental protection.



中国中铁召开临时股东大会选举产生新一届法人治理结构  
CREC held an extraordinary general meeting to elect a new session of management for corporate governance



中国中铁组织开展了2021年“绿色环保水务”主题反向路演活动，来自申万证券、光大证券、中金公司、招商证券、中银资产、瑞银证券、证券日报等近20家境内外机构的分析师、投资者和媒体代表参加了本次活动  
CREC organized a reverse road show on the theme of "Green and Environmentally-friendly Water Affairs" in 2021, with analysts, investors and media representatives from nearly 20 domestic and foreign institutions and companies including Shenwan Securities (申万证券), Everbright Securities, CICC, China Merchants Securities, Bank of China Investment (中银资产), UBS Securities, and Securities Daily attending the event

监事会是公司的监督机构，本着对股东负责的态度，认真对公司财务和公司董事、高级管理人员履行职责的合法合规性进行监督。截至报告期末，公司监事会由5名监事组成，其中股东代表监事1名，为监事会主席贾惠平，职工代表监事4名，分别为苑宝印、李晓声、王新华、万明。报告期内，监事会根据《公司法》《证券法》《上市公司监事会工作指引》以及《公司章程》赋予的职责勤勉履职，召开监事会会议10次，审议通过了与定期报告、内部控制、利润分配等相关的67项议案。

公司经理层是公司的执行机构，组织生产经营日常工作，执行董事会决议和行使董事会授权事项决策权，定期向董事会报告生产经营情况、反馈决议执行情况。截至报告期末，公司经理层由9人组成，其中总裁1人、副总裁7人、总会计师1人、总工程师1人（由公司副总裁兼任），总法律顾问1人（由公司副总裁兼任）、安全生产总监1人。报告期内，公司经理层围绕“谋经营、抓落实、强管理”职能，构建大经营格局，推动经营工作高质量发展，积极应对挑战，不断抢抓机遇，纵深推进改革创新，持续加强风险防范，不断推动企业高质量发展迈上新台阶。

公司始终注重实现董事会成员多元化，以提升董事会决策效率和企业管治水平。根据沪港两地上市规则和监管规定，公司制定了《董事会成员多元化政策》并遵照执行。公司董事会现任7名董事中，3名执行董事具有丰富的建筑行业从业及管理经验，4名非执行董事分别在财务、建筑工程、设计等领域有着丰富的从业及管理经验，董事会成员的设置与组成符合多元化政策要求，也满足企业发展需要。在董事会成员多元化背景下，公司董事会积极构建民主议事氛围，严格落实议案票决制，充分发挥董事会成员结构多元化的优势，保障每位董事能够积极利用各自丰富的专业知识和管理经验参与公司治理，并对重大事项独立发表意见、进行决策。董事会成员多元化为提高公司治理水平，提高董事会决策科学性和有效性，维护公司整体利益和全体股东的合法权益，特别是保护中小股东利益发挥了重要作用。

The Supervisory Committee is the Company's supervisory body, and in a responsible manner to shareholders, carefully monitors the Company's finance and the legal compliance of the Company's directors and senior management in performing their duties. As of the end of the reporting period, the Company's Supervisory Committee is composed of 5 supervisors, including 1 shareholder representative supervisor, namely Jia Huiping, Chairman of the Supervisory Committee, and 4 employees' representative supervisors, including Yuan Baoyin, Li Xiaosheng, Wang Xinhua, and Wan Ming. During the reporting period, within the scope of the responsibilities conferred by the Company Law (《公司法》), the Securities Law (《证券法》), Work Guidelines for Supervisory Committees of Listed Companies (《上市公司监事会工作指引》), and the Articles of Association, the Supervisory Committee diligently fulfilled its duties, held 10 meetings, and considered and adopted 67 proposals relating to periodic reports, internal control, profit distribution, etc.

As the Company's executive body, the Management organizes the daily work of production and operation, implements the resolutions of the Board of Directors, exercises the decision-making power authorized by the Board of Directors, regularly reports the production and operation to the Board of Directors, and feeds back the implementation of resolutions. As of the end of the reporting period, the Company's Management consists of 9 members, including 1 president, 7 vice presidents, 1 general accountant, 1 chief engineer (concurrently serving as the Company's vice president), 1 general counsel (concurrently serving as the Company's vice president), and 1 safe production director. During the reporting period, focusing on "seeking to operate, ensuring implementation and strengthening management", the Company's Management promoted high-quality development of operation with a big picture in mind, addressed challenges and seized opportunities, promoted reform and innovation in depth, continuously strengthened risk prevention, and pushed high-quality development of the enterprise to a new level.

The Company always pays attention to the diversity of Board members to improve Board decision-making efficiency and corporate governance. According to the listing rules and regulatory requirements of Shanghai and Hong Kong, the Company has formulated and implemented a "Board Diversity Policy". The Company's Board of Directors currently has 7 directors, of which 3 executive directors have extensive experience in the construction industry and management, and 4 non-executive directors have extensive experience in practice and management in finance, construction engineering, design, and other fields. The establishment and composition of Board members meet the requirements of the Board Diversity Policy as well as the needs for corporate development. Under the background of the diversification of Board members, the Company's Board of Directors actively builds a democratic deliberative atmosphere, strictly implements the voting system, and fully utilizes the advantages of the diversified Board members' structure. This aims to ensure that each director can actively make use of his or her rich professional knowledge and management experience to participate in corporate governance, and express opinions and make decisions on major issues independently. The diversification of Board members plays an important role in improving the level of corporate governance, enhancing the scientific and effective decision-making of the Board of Directors, and safeguarding the overall interests of the Company, the legitimate rights and interests of shareholders as a whole, and particularly protecting the interests of minority shareholders.

## 决策程序

### Decision-making process

公司各治理主体谨遵法度、勤勉尽责，权责法定、权责透明、协调运转、有效制衡的公司治理机制不断完善，被国务院国资委评为国有企业公司治理示范企业。为保障各治理主体决策程序依法合规有效开展，公司在充分发挥《公司章程》在企业治理中基础作用的同时，制定了《股东大会议事规则》《董事会议事规则》《董事会战略委员会议事规则》《董事会审计与风险管理委员会议事规则》《董事会薪酬与考核委员会议事规则》《董事会提名委员会议事规则》《董事会安全健康环保委员会议事规则》以及《监事会议事规则》《党委会议事规则》《总裁办公会议规则》等制度，为明确股东大会、董事会、监事会、经理层权责和保障各治理主体科学决策提供了有效的制度依据。公司始终尊重决策程序严肃性，规范会议安排、规范议案征集、规范议案格式、规范前置程序、规范审议与表决程序、规范信息保密和信息披露，做到各治理主体对重大事项应议尽议，确保决策程序规范有序。

报告期内，公司结合法律法规、监管要求和公司实际情况，制定了《重大事项决策权责清单》《董事会向经理层授权管理制度》《董事会向经理层授权权限清单》，进一步厘清党委会、董事会、经理层权责边界，提升决策效率；修订了《董事会决议执行跟踪检查与评价办法》，强化董事会对经理层行权履职的监督和指导；制定了《委派的外部董事监事履职管理与支持服务工作规定》，进一步完善了外部董事监事履职支撑体系；制定了《进一步加强二级子公司董事会建设的指导意见》，进一步促进了各级治理结构的规范有效运作。

## 效果评估

### Effective evaluation

公司制定有《董事会决议执行跟踪检查与评价办法》，对董事会决议执行跟踪检查与评价工作的组织机构和职责、信息反馈、检查、评价及结果运用进行了明确，同时建立了董事会决议执行情况报告机制，为董事会充分了解决议执行情况、及时发现决策难点重点，提供了重要保障。

All corporate governance organs of the Company conscientiously abide by laws and diligently fulfill their duties. Constant improvements have been made to the corporate governance mechanism characterized by division of functions and duties, coordinated operation, and effective checks and balances, which enables the Company to be awarded as a model enterprise of corporate governance for state-owned enterprises by the SASAC of the State Council. In order to ensure the effective implementation of the decision-making procedures of various governance entities in accordance with laws and regulations, the Company, while giving full play to the fundamental role of the Articles of Association in corporate governance, has formulated the Rules of Procedure for Shareholders' General Meetings (《股东大会议事规则》), Rules of Procedure for the Board of Directors (《董事会议事规则》), Rules of Procedure for Strategic Management Committee of the Board (《董事会战略委员会议事规则》), Rules of Procedure for the Audit and Risk Management Committee of the Board (《董事会审计与风险管理委员会议事规则》), Rules of Procedure for the Remuneration and Assessment Committee of the Board (《董事会薪酬与考核委员会议事规则》), Rules of Procedure for the Nomination Committee of the Board (《董事会提名委员会议事规则》), Rules of Procedure for the Safety, Health and Environment Committee of the Board (《董事会安全健康环保委员会议事规则》), Rules of Procedure for the Supervisory Committee (《监事会议事规则》), Rules of Procedure for Party Committee (《党委会议事规则》), and Rules for President Office Meetings (《总裁办公会议规则》). These rules provide an effective institutional basis for clarifying power and responsibilities of general meetings, the Board of Directors, the Supervisory Committee, and senior management, and ensure scientific decision-making of the corporate governance organs. The Company always attaches importance to the seriousness of decision-making procedures, and regulates meeting arrangements, proposal collection, proposal formats, prepositive procedures, deliberation and voting procedures, and confidentiality and disclosure of information. This aims to ensure that all governance organs discuss the major issues that should be discussed and that the decision-making process is standardized and orderly.

During the reporting period, the Company formulated the List of Authority and Responsibility for Decision-Making on Major Issues (《重大事项决策权责清单》), the Management System of Delegation of Authority from the Board of Directors to the Management (《董事会向经理层授权管理制度》), and the List of Authority Delegated by the Board of Directors to the Management (《董事会向经理层授权权限清单》), to further clarify the boundary of power and responsibilities of the Party Committee, the Board of Directors and the management, and to enhance the efficiency of decision-making. The Company revised the Measures for Follow-up Inspection and Evaluation of the Implementation of Resolutions of the Board Meeting (《董事会决议执行跟踪检查与评价办法》) to strengthen the supervision and guidance of the Board of Directors on the exercise of power and performance of duties by the management. With a view to further improving the support system for external directors and supervisors in performing their duties, the Company formulated the Regulations on the Management and Support Services for the Performance of Assigned Outside Directors and Supervisors (《委派的外部董事监事履职管理与支持服务工作规定》). Moreover, the Guidance on Further Strengthening the Construction of the Board of Directors of Secondary Subsidiaries (《进一步加强二级子公司董事会建设的指导意见》) was formulated to promote the standardized and effective operation of the governance structure at all levels.

The Company has formulated the Measures for Follow-up Inspection and Evaluation of the Implementation of Resolutions of the Board Meeting (《董事会决议执行跟踪检查与评价办法》), clarifying the organizational structure and responsibilities, information feedback, inspection, evaluation, and application of results of the follow-up inspection and evaluation of the implementation of the Board of Directors' resolutions. Meanwhile, the Company has established a mechanism of reporting on the implementation of resolutions of Board meetings, which provides an important guarantee for the Board of Directors to fully understand the implementation of the resolutions and discover the important and difficult points of decision-making in time.

## 合规管理 Compliance Management

公司秉承“人人合规、时时合规、事事合规”理念，扎实推进企业合规管理体系建设，聚焦重大合规风险防控，全面开展合规管理各项工作，为公司合规经营、高质量发展保驾护航。2021年公司进一步深化风险、内控、法律、合规管理体系融合，制定了《开展内控风险法律合规一体化体系建设指导意见》，以“崇法治、强内控、防风险、促合规”为目标，把风险、内控、法律、合规的管理要求嵌入企业各项业务流程并通过信息化手段实现有效运行，探索建立以风险管理为主线、内控管理为抓手、法律和合规管理为重点，严格、规范、全面、有效的内控体系和覆盖全员、全过程、全体系的风险防控机制。

2021年，公司持续完善合规管理制度体系。按照相关法律法规要求和公司实际，制定《全面风险管理办法（试行）》，建立公司全面风险管理的长效机制，落实风险管理责任，提升风险管理水平；制定《境外机构派出财务人员管理规定》《境外财务资金监管规定》等制度，强化公司境外财务、资金合规管理；制定《商标字号管理规定》，建立健全商标字号使用和监管机制，加大商标字号保护力度，维护公司声誉和商誉；制定《经营开发管理办法》，规范经营开发工作中的投标评审、合同评审、经营要素建设、经营体系建设管理等要求；制定《财务共享业务稽核管理规定》《财务共享中心数据管理规定》，从制度层面对各级共享中心的业务稽核，数据管理及职责边界进行了明确，完善财务共享中心的业务稽核和数据合规管理。

2021年，公司重点加强境外合规管理工作，组织召开两次境外合规经营工作会暨合规培训会，部署境外合规重点工作，开展重点合规领域专项培训。期间，特邀请知名律师就当前热点问题开展专题培训，内容涵盖多边开发银行、境外项目代理及佣金合规政策等，累计培训6,800余人。

Upholding the concept that “No matter persons, time and things, compliance is a must”, the Company pushed forward the construction of corporate compliance management system, highlighted the prevention and control of major compliance risks, and carried out compliance management comprehensively to safeguard its compliance operation and high-quality development. In 2021, the Company further deepened the integration of risk, internal control, legal and compliance management systems and formulated the Guidance on the Construction of An Integrated System for Internal Control, Risk, Legal and Compliance Management (《开展内控风险法律合规一体化体系建设指导意见》). With the goal of “advocating the rule of law, strengthening internal control, preventing risks and promoting compliance”, the Guidance aimed at embedding the requirements of risk, internal control, legal and compliance management into various business processes and realizing effective operation by means of information technology. The Guidance explored the establishment of a strict, standardized, comprehensive and effective internal control system and a risk prevention and control mechanism covering the whole staff, the whole process and the whole system, with risk management as the main line, internal control management as the starting point and legal and compliance management as the focus.

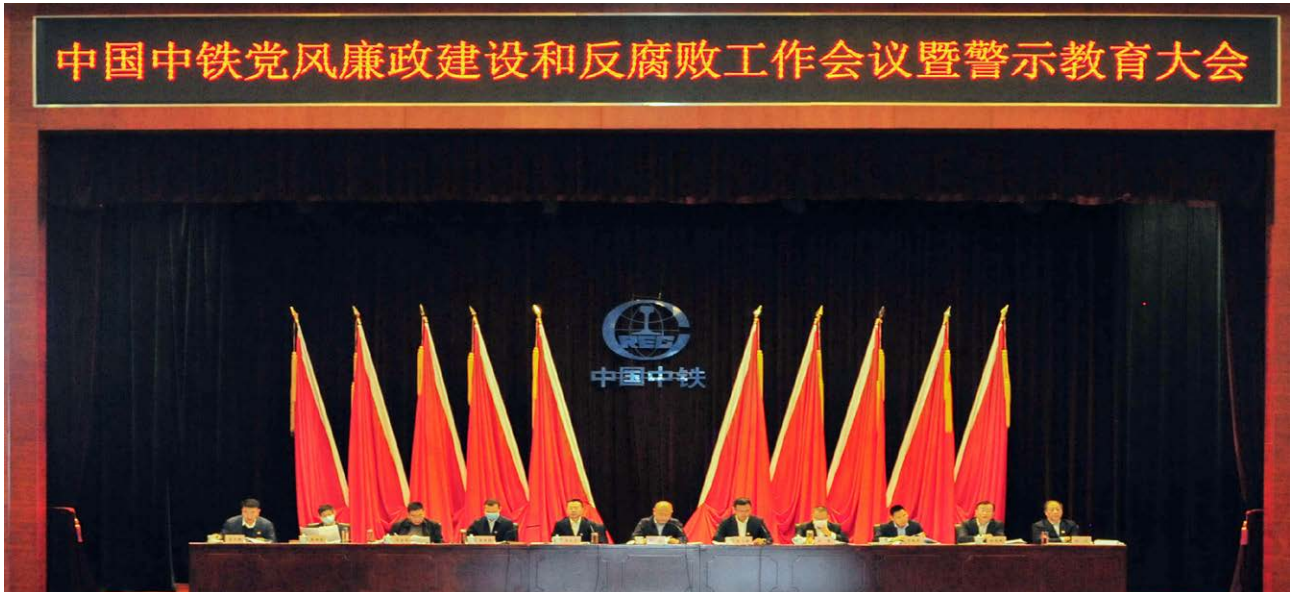
In 2021, the Company made continuous improvements to the compliance management system. In accordance with the provisions of relevant laws and regulations and the actual situation of the Company, it formulated the Comprehensive Risk Management Measures (Trial) (《全面风险管理办法（试行）》), establishing a long-term mechanism for comprehensive risk management, implementing risk management responsibilities, and improving risk management. The Regulations on the Management of Financial Personnel Dispatched by Overseas Institutions (《境外机构派出财务人员管理规定》) and Regulations on the Supervision of Overseas Financial Funds (《境外财务资金监管规定》) were formulated to strengthen the Company's overseas financial and fund compliance management. To establish a sound mechanism for the use and supervision of and secure trademark names, as well as maintain the Company's reputation and goodwill, it formulated the Regulations on the Management of Trademark Names (《商标字号管理规定》). The Company formulated the Management Measures for Business Development (《经营开发管理办法》) to regulate bid evaluation, contract evaluation, construction of business elements and management of business system construction in business development. The Regulations on the Management of Financial Shared Service Audit (《财务共享业务稽核管理规定》) and Regulations on Data Management of Financial Shared Service Centers (《财务共享中心数据管理规定》) were formulated to audit the business of financial shared service centers at all levels, clarify data management responsibility boundaries, and improve business audit and data compliance management of financial shared service centers from the institutional dimension.

In 2021, the Company emphasized overseas compliance management, organized two overseas compliance management and training sessions, deployed key overseas compliance tasks and conducted special training in key compliance areas. During this period, the Company also invited renowned lawyers to conduct special training on current hot issues, covering multilateral development banks, overseas project agency and commission compliance policies, etc. for a total of over 6,800 people.

### 奖项 Awards



## 反腐倡廉 Anti-corruption



中国中铁召开2021年党风廉政建设和反腐败工作会议暨警示教育大会  
CREC held the 2021 Work Conference on Constructing an Honest Party and a Clean Government and Anti-Corruption and Warning and Education Conference

公司严格遵守《中华人民共和国刑法》《中华人民共和国反不正当竞争法》《中华人民共和国反洗钱法》《中央纪委关于严格禁止利用职务上的便利谋取不正当利益的若干规定》《中国共产党领导干部廉洁从政若干准则》和《中国共产党廉洁自律准则》等中国及海外业务所在国家或地区的法律法规，坚决禁止贿赂、勒索、欺诈及洗黑钱等行为。公司从总部到所属各级企业都设有纪检组织，负责反腐败方面的信访举报工作。各级纪检组织设有信访举报问题线索处置台账，对每一条问题线索都严格按照相关规定进行办理。严格坚持信访举报处置审批程序，要求相关工作人员严格遵守保密制度，坚决保护举报人隐私和安全，对于隐瞒问题线索或失密泄密的，将追究相关人员责任。

The Company strictly abides by the laws and regulations of countries and regions where Chinese and overseas businesses are located such as the Criminal Law of the People's Republic of China (《中华人民共和国刑法》), Anti-Unfair Competition Law of the People's Republic of China (《中华人民共和国反不正当竞争法》), Anti-Money Laundering Law of the People's Republic of China (《中华人民共和国反洗钱法》), Several Provisions of the CPC Central Committee for Discipline Inspection on Strictly Forbidding Seeking of Illegal Benefits by Taking Advantage of Duty (《中央纪委关于严格禁止利用职务上的便利谋取不正当利益的若干规定》), Rules for Clean Governance of CPC Officials (《中国共产党领导干部廉洁从政若干准则》), and CPC's Code of Integrity and Self-discipline (《中国共产党廉洁自律准则》), and resolutely prohibits bribery, extortion, fraud and money laundering. The Company has discipline inspection organizations from its headquarters to its subordinate enterprises at all levels, which are responsible for the reporting through letters and visits in the field of anti-corruption. Discipline inspection organizations at all levels set up accounts for the handling of cases and clues reported through letters and visits, and handle each case and clue in strict accordance with relevant regulations. The Company strictly adheres to the approval procedures for reporting through letters and visits, and the relevant staff are required to strictly abide by the confidentiality system to protect the privacy and safety of whistleblowers. For those who conceal any case and clues or lose secrets, the relevant personnel will be held accountable.

## 完善廉洁制度

### Integrity system improvement

公司不断加强廉洁制度建设。2021年，修订了《反腐败工作协调小组工作规则》，坚持每季度召开一次反腐败协调小组工作例会，加强定期会商。制定了《党委纪委落实全面从严治党“两个责任”沟通会商实施办法》；制定了《加强对“一把手”和领导班子监督的实施办法》，突出对“一把手”和领导班子的监督；修订了《领导人员廉洁从业若干规定实施细则》，进一步规范领导干部的廉洁从业行为，划出红线；制定了《纪检组织处理信访举报和案件监督管理工作实施办法》，依规依纪依法处理信访举报和开展案件监督管理工作；印发了《反腐败追逃追赃与防逃实施办法（暂行）》，不断加强境外腐败治理；积极探索研究对混改企业的监督，制定了《纪检组织关于加强企业混合所有制改革监督的实施意见》；不断整合内部监督资源，制定了《构建党风廉政建设和反腐败大监督工作格局实施办法》。

## 加强廉洁督导

### Enhancing integrity supervision

公司纪检组织在监督执纪问责过程中，既严肃追究有关责任人责任，更注重实施“再监督”，强化廉洁督导。2021年，根据监督发现问题，向有关企业、职能部门及时印发了监督建议书，提出监督建议。修订印发《关于进一步规范领导人员以及关键岗位人员配偶、子女及其配偶经商办企业行为的规定》，督促落实责任。进一步完善项目物资采购、招标投标、验工计价、废旧物资处理等关键环节的监管措施，督促严格执行“三重一大”决策制度，切实加强收尾项目管理。严肃查处违规招投标、违规选人用人、违规选用劳务队伍（供应商）、超合同结算等突出问题，对违规超结、超付费用进行清理，对违纪所得进行收缴，有力推动各级领导干部转变工作作风、扎实履职尽责、堵塞管理漏洞。2021年，地方纪委监委终结所属企业相关人员受贿案件1件，相关人员被依法追究刑事责任。

The Company has continuously strengthened the construction of the integrity system. In 2021, the Company revised the Rules for the Work of the Anti-Corruption Coordination Group (《反腐败工作协调小组工作规则》), holding meetings of the anti-corruption coordination group once a quarter to facilitate regular consultations. The Implementation Measures for the Communication and Consultation of the “Two Responsibilities” of the Party Committee and Discipline Inspection Committee to Exercise Full and Rigorous Governance (《党委纪委落实全面从严治党“两个责任”沟通会商实施办法》) and the Implementation Measures for Strengthening Oversight of ‘Number Ones’ and Leadership Groups (《加强对“一把手”和领导班子监督的实施办法》) were formulated to highlight the supervision of “heads” and the leadership team. The Company revised the Implementation Rules for Certain Provisions on the Integrity of Leading Personnel (《领导人员廉洁从业若干规定实施细则》) to further regulate the integrity of the leadership team and draw a red line. To handle complaints and reports and supervise cases of violations in accordance with rules and regulations, the Company formulated the Implementation Measures for Discipline Inspection Organizations to Handle Complaints and Reports and Supervise Cases of Violations (《纪检组织处理信访举报和案件监督管理工作实施办法》). It also issued the Implementation Measures for Anti-corruption, Fugitive Repatriation, Asset Recovery and Fugitive Prevention (Provisional) (《反腐败追逃追赃与防逃实施办法（暂行）》) to continuously strengthen the governance of corruption abroad. The Company explored and studied the supervision of mixed reform enterprises, and formulated the Implementation Opinions of Discipline Inspection Organizations on Strengthening the Supervision of Mixed Ownership Reform of Enterprises (《纪检组织关于加强企业混合所有制改革监督的实施意见》). By continuously combining internal supervision resources, the Company formulated the Implementation Measures for Building the Grand Work Pattern of Party Integrity Construction and Anti-Corruption Supervision (《构建党风廉政建设和反腐败大监督工作格局实施办法》).

Throughout supervision and disciplinary accountability, the Company's discipline inspection organization not only held the responsible parties accountable, but also highlighted “re-supervision” to strengthen integrity supervision. In 2021, the Company issued timely supervision proposals to relevant enterprises and functional departments based on the problems found, and made supervision recommendations. The Regulations on Further Regulating the Business Conduct of Leading Personnel and Personnel in Key Positions and Their Spouses and Children (《关于进一步规范领导人员以及关键岗位人员配偶、子女及其配偶经商办企业行为的规定》) was revised and issued to supervise responsibility implementation. The Company further improved the supervisory measures of key links such as procurement of materials, bidding and tendering, work inspection and pricing, and disposal of waste materials, urged the strict implementation of the “Three Major and One Big” decision-making mechanism, and strengthened the management of project closing. The Company investigated and prosecuted such prominent problems as illegal bidding, illegal selection and employment of personnel and labor force (suppliers), and over contract price of completion settlement, cleaned up illegal over-settlement and over-payment, confiscated the income from violations of discipline, and procured leaders at all levels to change their work style, perform their duties in a down-to-earth manner, and plug management loopholes. In 2021, the local commission for Discipline Inspection and Supervision concluded one bribery case involving relevant personnel of our affiliated enterprises, and the relevant personnel were held accountable for criminal responsibility.

加大对中老铁路项目廉洁建设的监督指导，制定《中老铁路“廉洁之路”建设实施方案》，组织召开了中老铁路廉洁建设推进会，层层签订廉政责任书，构建廉洁风险防控体系，为中老铁路顺利开通提供保障。不断加大对协作队伍、分包商的监督管理，切实加强廉洁教育，督促依规依纪依法开展合作，大力营造风清气正的营商环境。

## 重视廉洁教育

### Emphasis on integrity education

为确保公司董事、监事、广大员工熟悉反贪腐制度和要求，公司坚持常态化开展分层级、分类别的反贪污反贿赂教育，在领导人员培训班、董事监事董秘培训班、新员工入职培训班等不同职务的培训中均设置了反贪腐培训课程，通过开展党纪国法教育、企业反腐倡廉制度培训、案例警示教育、廉洁文化教育等多种方式，增强董事、监事及广大员工不想腐的思想自觉。

2021年，公司认真梳理分析巡视、执纪审查、配合监察调查发现的典型案例，先后召开警示教育大会两次。公司各级纪检组织通过设置廉政教育室、举办廉洁书画展、编印廉政教育宣传册等多种方式开展廉洁从业教育，共组织各级企业董事、监事及广大员工等参观警示教育基地11余万人次，编印发放廉政教育读本11本，拍摄警示教育片11部，全公司廉洁文化氛围更加浓厚。

2021年，公司组织外部董事参加国资委、证券监管机构举办相关培训16次，内容涉及反贪污反贿赂等多个方面。

To step up supervision and guidance on the integrity construction of the China-Laos Railway project, the Company formulated the Implementation Plan for the “Road of Integrity” Construction of China-Laos Railway (《中老铁路“廉洁之路”建设实施方案》), held a meeting to promote integrity construction of the railway, signed the responsibility letter of integrity at all levels, and built an integrity risk prevention and control system to ensure the smooth opening of the China-Laos Railway. By enhancing the supervision and management of collaborating teams and subcontractors, and strengthening integrity education, the Company promoted cooperation in accordance with rules and regulations, and vigorously created a clean and upright business environment.

In order to ensure that directors, supervisors and employees are familiar with the anti-corruption system and requirements, the Company insists on carrying out regular anti-corruption and anti-bribery education at different levels and categories. Anti-corruption training courses are set up in the training courses for different positions such as training courses for leading personnel, training courses for directors, supervisors, secretaries of the board, and training courses for new employees, etc. By carrying out education on Party discipline and national law, training on the anti-corruption system of enterprises, case warning education, and education on integrity culture, the Company enhances the ideological consciousness of directors, supervisors and employees not wanting to be corrupted.

In 2021, the Company sorted out and analyzed typical cases found in inspections, disciplinary reviews, and cooperation with supervision and investigation, and held two warning education meetings. Discipline inspection organizations at all levels of the Company carried out integrity education by setting up integrity education rooms, holding integrity painting and calligraphy exhibitions and printing integrity education brochures, organized directors, supervisors and employees at various levels for more than 110,000 visits to warning education bases, printed and dispatched 11 integrity education books, and filmed 11 warning education videos. All these efforts contributed to a more profound integrity culture in the Company.

In 2021, the company organized external directors to participate in 16 relevant trainings held by SASAC and securities regulatory authorities, covering anti-corruption, anti-bribery and other aspects.

## 审计监督 Audit Supervision

### 建立审计制度

#### Audit system establishment

公司现行有关审计的有效制度共计33项，包括《审计工作管理办法》等审计制度23项，《违规经营投资责任追究实施办法》等追责制度7项，《监事会议事规则》等监事会工作制度3项，建立了较为完善的审计制度体系。

2021年，公司结合实际新制定了《审计约谈规定》《审计工作考核评比规定》《关于建立健全审计查出问题整改长效机制的实施意见》等3项规章制度，进一步规范和强化了审计查出问题整改工作，促进提升审计成果运用成效。

### 完善审计工作机制

#### Audit mechanism improvement

2021年，公司以强化集中统一管控能力为重点，推动审计管理改革，积极构建集中统一、全面覆盖、权威高效的审计管理体系。加强对审计工作的集中统一领导，所属企业成立了审计工作领导小组；严格执行审计工作向董事会负责的工作机制，接受董事会审计与风险管理委员会的监督和评估；坚持审计工作统一协调制度，所属企业审计计划均由上级审计机构审定、审计工作负责人任用均报上级审计机构批准；推进审计管理改革创新，建立审计部门主“管”、审计中心主“审”的一体化审计管理机制。

### 持续提升审计信息化水平

#### Continuous improvement to audit informatization

公司全面推广使用审计信息系统（一期），同时加快审计信息化二期项目建设，推动审计信息系统与财务、物资、成本等信息系统的互联互通和数据交互，强化审计信息系统在线审计功能，拓展审计信息系统的智能审计功效。

The Company has a total of 33 effective systems related to auditing, including 23 auditing systems such as the Administrative Measures for Auditing (《审计工作管理办法》), 7 accountability systems such as the Implementation Measures for the Accountability for Illegal Operations and Investments (《违规经营投资责任追究实施办法》), and 3 working systems of the Supervisory Committee such as Rules of Procedure for Supervisory Committee (《监事会议事规则》), and established a relatively perfect audit system.

In 2021, the Company formulated 3 new regulations based on its realities, including the Regulations on Audit Interviews (《审计约谈规定》), the Regulations on Assessment and Evaluation of Audit Work (《审计工作考核评比规定》) and the Implementation Opinions on Establishing a Long-term Mechanism for Rectifying and Improving Problems Identified by Audits (《关于建立健全审计查出问题整改长效机制的实施意见》), to further standardize and strengthen the rectification and improvement of issues identified by audits and promote application effectiveness of audit results.

In 2021, the Company facilitated audit management reforms with a focus on strengthening its centralized and unified control capability, and built a centralized and unified audit management system with full coverage, authority and efficiency. To strengthen the centralized and unified leadership of audits, the affiliated enterprises set up a leading group of audit, strictly implemented the working mechanism of reporting to the Board of Directors and accepted the supervision and evaluation of the audit and risk management committee. Adhering to the unified coordination system of audits, the affiliated enterprises had all their audit plans reviewed and approved by higher audit organizations, and reported the appointment of the person in charge of audit to the higher audit organization for approval. To promote innovations in reforming audit management, an integrated audit management mechanism was established, with the audit department in charge of “management” and the audit center in charge of “auditing”.

The Company fully promoted the use of the (phase I) audit information system, while accelerating the construction of the (phase II) project of the audit information system. It also boosted the interconnection and data interaction between the audit information system and other information systems such as finance, material and cost, and strengthened the online and intelligent audit functions of the audit information system.

## 规范关联方交易

### Regulating Related Party Transactions

公司严格执行证券监管机构的关联交易管理规定，遵循《公司章程》《关联交易管理办法》以及有关议事规则要求，持续规范关联交易行为，对公司关联交易事项进行审议，并定期对公司关联人名单、半年度和全年度的关联交易情况进行审查，坚持从交易的必要性、定价的公允性、程序的合法性、是否符合股东利益等多角度进行考量。根据上海证券交易所和香港联交所关于关联交易管理要求，公司下设董事会审计与风险管理委员会，负责关联交易控制和日常管理，定期审查关联人名单和重大关联交易。同时，公司认真把握好证券监管机构关联交易与会计准则界定下的关联交易、香港联交所上市规则下的关联交易的差异，严格履行关联交易的决策程序和披露义务，确保公司关联交易事项规范公允，有效提高上市公司规范运作水平，保护上市公司和全体股东的合法权益。

In strict accordance with the regulations of the securities regulatory authorities on the management of related party transactions, the Articles of Association, the Measures for the Management of Related Party Transactions (《关联交易管理办法》), and relevant procedural rules, the Company continuously regulates the acts of related party transactions, considers the Company's related party transactions, and regularly reviews the list of related parties and the interim and annual related party transactions of the Company. In doing so, the Company considers the necessity for transactions, fairness of pricing, legality of procedures, and compliance with shareholders' interests. According to the requirements of the Shanghai Stock Exchange and the Hong Kong Stock Exchange on related party transaction management, the Company's audit and risk management committee under the Board of Directors is responsible for the control and daily management of related transactions, and reviews the list of related parties and major related transactions on a regular basis. At the same time, the Company carefully grasps the differences between connected transactions with securities regulatory authorities and connected transactions as defined by accounting standards plus those under the Hong Kong Stock Exchange Listing Rules, and strictly handles the decision-making procedures and fulfills the disclosure obligations of connected transactions. This aims to ensure that the Company's connected transactions are regulated and fair, effectively improve the standard operation of listed companies, and safeguard the legitimate rights and interests of listed companies and all shareholders.



# 环境篇

## Environment

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## 环境管理架构

### Environmental Management Structure

公司坚持绿水青山就是金山银山理念，落实“3060”双碳目标，助力推动碳达峰、碳中和进程，加强生态环境保护、提倡绿色低碳生活方式，加快企业绿色转型升级。持续完善环境管理体系，坚持“属地管理”“预防为主，防治结合”“谁污染谁治理”的原则，实行公司统一领导，各子、分公司逐级负责的管理模式，确保环境保护工作有序可控。

Holding that lucid waters and lush mountains are invaluable assets, the Company works to boost the realization of the “3060” targets of carbon peaking and neutrality. In strengthening ecological environmental protection, the Company advocates the green and low-carbon lifestyle and accelerates the green transformation and upgrading of enterprises. The Company makes continuous improvements to the environmental management system. With regards to environmental management, the Company upholds the principles of “Territorial Management”, “Prevention First, Combined with Prevention and Control” and “Who Pollutes, Who Controls”. As for the management mode, the Company implements unified leadership while subsidiaries and branches at each level are responsible, to ensure the orderly and controllable environmental protection.

## 环境风险管控

### Environmental Risk Management

节约资源和保护环境是我国的基本国策。《中华人民共和国环境保护法》规定，一切单位和个人都有保护环境的义务，企业应当防止、减少环境污染和生态破坏；《中华人民共和国节约能源法》规定，任何单位和个人都应当依法履行节能义务；《建设项目环境保护管理条例》规定工业建设项目应当采用能耗物耗小、污染物产生量少的清洁生产工艺，合理利用自然资源，防止环境污染和生态破坏。上述法律法规对公司的环境风险管控方面提出要求，也明确了我们的工作重点和努力方向。

It is the fundamental policy of our country to conserve resources and protect the environment. According to the Environmental Protection Law of the People's Republic of China 《中华人民共和国环境保护法》, all units and individuals shall have the obligation to protect the environment, and enterprises shall prevent and reduce pollution and damage to the environment; according to the Energy Conservation Law of the People's Republic of China 《中华人民共和国节约能源法》, all organizations and individuals shall fulfill their obligation to conserve energy; and according to the Regulations on the Administration of Construction Project Environmental Protection 《建设项目环境保护管理条例》, industrial construction projects should adopt clean production techniques with low energy consumption, low materials consumption and low pollutants generation, and rationally exploit natural resources to prevent environmental pollution and ecological damage. The above-mentioned laws and regulations put forward requirements for the Company in environmental risk control and clarify our work priorities and directions.

2021年，公司严格遵守《中华人民共和国环境保护法》《中华人民共和国节约能源法》《建设项目环境保护管理条例》等对公司运营有重大影响的法律法规，扎实推进生态文明建设，努力克服碳达峰、碳中和带来的挑战，把绿色发展理念融入公司发展的各方面和全过程，以节能技术创新为支撑，以节能管理、能源资源利用为中心，提升风险防范和污染应急响应能力，坚定不移走生态优先、绿色低碳的高质量发展道路。

In 2021, the Company strictly abode by laws and regulations that have significant impact on its operation, such as the Environmental Protection Law of the People's Republic of China 《中华人民共和国环境保护法》, the Energy Conservation Law of the People's Republic of China 《中华人民共和国节约能源法》, and the Regulations on the Administration of Construction Project Environmental Protection 《建设项目环境保护管理条例》. The Company steadily advanced the construction of ecological civilization and strove to overcome the challenges brought by carbon peaking and neutrality, by integrating the concept of green development into all aspects its work and the whole process. With the support of energy-saving technological innovation and focusing on energy-saving management and energy resource utilization, the Company improved its emergency response capabilities in risk prevention and pollution, to unswervingly embark on the path of green, low-carbon, and high-quality development that prioritized ecology.

在考核目标上，制定了中国中铁“十四五”节能环保规划，确定总体目标为：到2025年，适应生态文明建设要求的绿色中铁体系建设取得显著进展；能源利用效率不断提高，能源消费结构得到明显改善；万元产值CO<sub>2</sub>排放量与万元营业收入综合能耗实现同步下降，万元营业收入综合能耗在2020年的基础上下降15%，万元产值二氧化碳排放放在2020年的基础上下降18%。基于系统化的环境管理，公司获得华夏认证中心有限公司颁发的ISO14001环境管理体系认证。

In terms of assessment targets, CREC has formulated the 14th Five-Year Plan for Energy Conservation and Emission Reduction, setting the overall targets: by 2025, significant progress shall be made in the construction of a green CREC system that aligns with ecological civilization; improvements shall be made to energy utilization efficiency and the energy consumption structure; CO<sub>2</sub> emissions per RMB ten-thousand output value and comprehensive energy consumption per RMB ten-thousand operating income shall be reduced. The comprehensive energy consumption per RMB ten-thousand of operating income reduced by 15% on the basis of 2020, and the carbon dioxide emissions per RMB ten-thousand of output value reduced by 18% on the basis of 2020. In terms of systematic environmental management, the Company has obtained the ISO14001 environmental management system certification from China Certification Center Inc.

## 排放物管理 Emission Management

公司制定并落实《生态环境保护与能源节约监督管理规定》《施工安装现场环保管理办法》《建筑施工环保管理办法》《锅炉房环保管理规定》《废旧物资回收利用管理办法》《金属焊接与气割作业环保管理规定》《机械设备环保管理办法》《库房环保管理规定》《危险废物管理规定》《生产现场定置环境卫生管理规定》等规章制度，形成规范化的工作模式，采取有效措施，对排放物进行控制。

### 废气管理 Exhaust gas management

公司废气排放主要来自于所属项目的锅炉燃烧以及钢结构加工过程中的冶炼、板材处理、喷砂、打磨及喷涂等工序，主要污染物为二氧化碳、氮氧化物、烟（粉）尘和挥发性有机物（VOCs），主要为工业类企业排放。公司为国资委关注类建筑企业，废气排放量较少。

2021年，公司订立了在企业规模不断扩大情况下万元营业收入二氧化碳排放放在2020年的基础上下降3.89%，万元营业收入氮氧化物、烟（粉）尘、挥发性有机物排放逐年下降的目标。为达到以上目标，公司通过调整产能结构，并通过低氮改造燃气锅炉等方式，减少二氧化碳、氮氧化物的排放。在治理烟（粉）尘方面，公司在运输、存储、施工、生产等方面采取控制措施，通过覆盖、洒水、增加除尘设备、封闭作业等方式有效减少烟（粉）尘。公司加大了用于污染治理的资金投入力度和工业改造力度，多个工业生产基地完成全封闭作业车间专项改造。为治理VOCs，公司在生产线加装活性炭和过滤棉漆雾过滤系统，并按照VOCs治理标准对车间整体进行改造。2021年，公司各主要废气污染物均实现许可证排污范围内，实现达标排放。

The Company formulates and implements the Regulations on Supervision and Management of Ecological Environmental Protection and Energy Conservation (《生态环境保护与能源节约监督管理规定》), Administrative Measures for Environmental Protection on Construction and Installation Sites (《施工安装现场环保管理办法》), Administrative Measures for Environmental Protection on Construction (《建筑施工环保管理办法》), Regulations on Environmental Management for Boiler Houses (《锅炉房环保管理规定》), Administrative Measures for Recovery and Utilization of Waste Materials (《废旧物资回收利用管理办法》), Regulations on Environmental Management of Metal Welding and Gas Cutting Operations (《金属焊接与气割作业环保管理规定》), Administrative Measures for Environmental Management for Machinery and Equipment (《机械设备环保管理办法》), Regulations on Environmental Management of Warehouses (《库房环保管理规定》), Regulations on Management of Hazardous Wastes (《危险废物管理规定》), Regulations on Environmental Sanitation Management on Production Sites (《生产现场定置环境卫生管理规定》) and other rules and regulations to form a standardized working mode combined with measures for controlling emissions.

The Company's exhaust emissions mainly come from the boiler gas combustion, smelting in the processing of steel structures, sheet processing, abrasive blasting, polishing and spraying and other processes. The main pollutants are sulfur dioxide, nitrogen oxides, smoke (powder) and volatile organic compounds (VOCs), which are emissions from industrial enterprises. The Company is a construction enterprise of concern to the SASAC, with low emissions of exhaust gas.

In 2021, the Company set a goal that, with the continuous expansion of the enterprise scale, reducing carbon dioxide emissions per RMB ten-thousand of operating income by 3.89% on the basis of 2020 and the emissions per RMB ten-thousand of nitrogen oxides, smoke (powder) and volatile organic compounds decreased year by year. During the period, the Company reduces emissions of sulfur dioxide and nitrogen oxides by adjusting the structure of production capacity and renovating gas boilers with low nitrogen. In terms of controlling smoke (powder), the Company adopts control measures in transportation, storage, construction, production, etc., and reduces smoke (powder) by covering, watering, adding dust removal equipment, and shutting down operations. The Company increased the capital investment in pollution control and industrial transformation, and its industrial production bases completed the special renovation of the fully enclosed workshops. In order to control VOCs, the Company installed activated carbon and filter cotton paint mist filtration systems on the production line, and rebuilt the workshops in accordance with the VOCs treatment standard. In 2021, all major waste gas pollutants of the Company were discharged up to the standard within the discharge scope of the permit.

### 案例 Case

中铁高新工业将郑州基地焊接等产生污染环境有害因素较多的工艺，逐步转移至产业园，减少市区污染物排放。同时在产业园板材切割下料区域和焊接区域对金属烟尘和焊接烟尘进行整体收集治理。除尘设备均在室内布局，净化后的烟尘均通过排烟管道部分有组织排放。

China Railway Hi-Tech Industry Corporation Limited (CRHIC) gradually transfers the processes that involve more factors harmful to the environment, such as welding in Zhengzhou base, to the industrial park to reduce pollutant emissions in the urban area. CRHIC collects and treats the metal fume and welding fume as a whole in the plate cutting and blanking area and in the welding area of the industrial park. CRHIC lays out the dust removal equipment indoors, and partially discharges the purified fume through the fume exhaust pipe.

## 废弃物管理

### Waste management

公司高度重视废弃物的综合利用。2021年，公司订立了在企业规模不断扩大情况下万元单位无害废弃物和有害废弃物排放逐年下降，且处置率为100%的目标。为达到以上目标，公司对于无害废弃物，以优化施工组织方案为主要措施，推行“四节一环保”的标准化、规范化的项目建设要求，加大资金及环保设备投入力度，加强无害废弃物的循环使用，无害废弃物综合利用率达98.9%，处置率为100%。对于危险废弃物，公司严格按照《危险废弃物管理规定》，聘用有危废处置资质的机构对危险废弃物，如工程设备产生的废机油等，进行统一回收处理，有害废弃物处置率为100%。

公司作为建筑类企业，主营板块不包含物流及相关物料包装服务，不涉及包装物料。

## 废水管理

### Wastewater management

公司重视施工废水管理，设置三级沉淀池，对施工废水进行处理。公司不断加强施工现场的环保监管，定期对施工产生的废水生态环境污染源、风险点进行排查，每月对污染源和风险点进行台账更新，并对相关部门和人员进行全过程监控、常态化监督。

## 噪声管理

### Noise management

公司在工程项目噪声管理方面，要求所属工程项目现场必须配备噪声监控设备，对项目所产生的噪声进行实时监控，噪声控制情况符合国家有关标准。



The Company attaches great importance to the comprehensive recycling of hazardous waste. In 2021, the Company set a goal that, with the continuous expansion of the enterprise scale, reducing the emission per RMB ten-thousand of non-hazardous waste and hazardous waste year by year, and with a 100% disposal rate of non-hazardous waste and hazardous waste. To meet the above goal, in respect of non-hazardous waste, with optimizing the construction organization scheme as the main measure, the Company promotes the standardization of the “Four Conservations and One Environmental Protection” policy, increases investment in capital and environmental protection equipment, and strengthens the recycling of non-hazardous waste. Thanks to these efforts, a recycling rate of 98.9% with a disposal rate of 100% is achieved. In strict accordance with the Regulations on Management of Hazardous Waste 《危险废弃物管理规定》, the Company entrusts qualified agencies to conduct centralized recycling and treatment of hazardous waste, such as waste oil generated by engineering equipment, and achieves a disposal rate of 100% for hazardous waste.

As a construction company, the Company's major business segment does not include logistics and related material packaging services or involve packaging materials.

The Company takes the management of construction wastewater seriously, and sets up a three-stage sedimentation tank to treat the construction wastewater. The Company keeps strengthening environmental protection supervision at the construction site, regularly troubleshoots the ecological and environmental pollution sources and risk points of wastewater generated during construction, updates the ledger of pollution sources and risk points on a monthly basis, and designates relevant departments and personnel to carry out full-process monitoring and normalized supervision.

The Company requires that its own project site must be equipped with noise monitoring equipment to monitor the noise generated by projects in real time, and the noise control shall conform to relevant national standards.

● 中铁上海工程局在京雄城际铁路上打造了全球首个适用于350KM/h高铁的全封闭声屏障工程

Shanghai Civil Engineering Group Co., Ltd. of the CREC completed the world's first fully enclosed sound barrier project for high-speed trains up to 350km/h along a section of the intercity railway linking Beijing with Xiong'an New Area

## 生态环境管理

### Ecological environment management

公司对在建工程项目、作业场所进行环境因素识别和评估，建立生态环保监控监测体系，加强生产过程中生态环境污染风险源及污染物排放控制，并加强对项目部生态环保工作的过程管控，规避环境风险。

The Company identifies and evaluates environmental factors of projects under construction and in the workplace, establishes a system for monitoring environmental protection, strengthens the control over risk sources of ecological environmental pollution and pollutant emissions in the production process, and strengthens the process control over the ecological environmental protection work of the project department, to guard against environmental risks.

排放物及废弃物关键绩效指标  
Key performance indicators on emissions and waste

指标 Indicators	2021年数据 Data in 2021	同比增减 Year-on-year increase or decrease
二氧化碳总排放量(万吨) Total amount of CO <sub>2</sub> emission (ten-thousand tonnes)	1,588.2154	5.4%
二氧化碳排放密度(吨/万元) CO <sub>2</sub> emission density (ton/RMB ten-thousand)	0.1563	-13.6%
氮氧化物排放量(吨) NOx emission (ton)	2.94	-41.31
烟(粉)尘排放量(吨) Smoke (powder) emission (ton)	23.18	5.5%
挥发性有机物排放量(吨) VOC emission (ton)	1.254	-37.3
二氧化硫(吨) SO <sub>2</sub> (ton)	0	0
有害废弃物总量(吨) Total amount of hazardous waste (ton)	580	-1.5%
万元单位有害废弃物排放量(公斤/万元) Discharge of hazardous waste per RMB ten-thousand (kg/RMB ten-thousand)	0.0057	-6.5%
无害废弃物总量(万吨) Total amount of non-hazardous waste (ten-thousand tonnes)	497.13	4.0%
万元单位无害废弃物排放量(公斤/万元) Discharge of non-hazardous waste per RMB ten-thousand (kg/RMB ten-thousand)	0.05	-2%

注：1.公司为建筑类企业，所排放二氧化碳为能源间接温室气体排放。  
2.氮氧化物、二氧化硫、烟(粉)尘和挥发性有机物排放量均按排污许可证排放量计算。  
3.由于四舍五入关系，个别项目数字可能与总数略有出入。

Note: 1. The Company is a construction enterprise, and the carbon dioxide emissions are indirect greenhouse gas emissions from energy.  
2. Emissions of NOx, SO<sub>2</sub>, smoke (powder) and VOC are calculated based on the emissions permits.  
3. Due to rounding, individual item figures may differ slightly from the total.

## 自然资源使用及保护

### Use and Protection of Natural Resources

“绿水青山就是金山银山”，公司坚持节约资源和保护环境并重，努力建设“环境友好型、资源节约型”工程。公司制定了《节能减排监督管理办法》《环境保护管理办法》等一系列规章制度，开展节能减排与生态环境保护工作，提倡绿色办公理念，优化资源使用效率。

### 能源管理

#### Energy management

公司消耗的主要能源为施工及办公过程中的电力、汽油、柴油、天然气等。

2021年，公司订立了万元营业收入综合能耗在2020年的基础上下降3.2%的目标。期间，公司强化落实节能减排责任制，扎实推进节能增效工作，根据国资委对中央企业能源节约与生态环境保护工作的最新要求，从调整管理组织架构、升级监测体系、下达考核奖惩指标、开展技术研发等方面推动相关工作，制定并落实《生态环境保护与能源节约监督管理规定》。

2021年，公司万元营业收入综合能耗（可比价）0.0441吨标煤/万元，比去年同期下降4.3%，二氧化碳排放0.1563吨/万元，比去年同期下降13.6%，完成年度节能环保既定工作目标。

- **夯实节能环保管理体系，提升节能环保管理能力：**公司按照国资委要求和行业管理常态，优化管理资源配置，将生态环保、节能减排业务统一整合至安全质量环保监督部；动态修订完善节能环保管理办法，保障能源节约与生态环境保护工作全面开展。
- **不断升级统计监测体系：**根据中央企业能源节约与生态环境保护工作最新要求，公司启用并动态升级新版能源节约与生态环境保护统计系统，实现节能环保数据常态化线上填报。

Lucid waters and lush mountains are invaluable assets. The Company attaches equal importance to resource conservation and environment protection, striving to build “resource-conserving and environment-friendly” projects. The Company has formulated a series of rules and regulations, such as the Administrative Measures for Supervision and Management on Energy Conservation and Emission Reduction (《节能减排监督管理办法》) and Administrative Measures for Environmental Protection (《环境保护管理办法》), to carry out energy conservation, emission reduction and ecological environmental protection. The Company advocates the concept of green office and optimizes the efficiency of resource use.

The main energy consumed by the Company is electricity, gasoline, diesel fuel and natural gas in the construction and office process.

In 2021, the Company set a goal of reducing the comprehensive energy consumption per RMB ten-thousand of operating income by 3.2% on the basis of 2020. During the period, the Company strengthens the implementation of the responsibility system for energy conservation and emission reduction, and makes solid progress in energy conservation and efficiency improvement. According to the latest requirements of the SASAC on energy conservation and ecological environmental protection of central enterprises, the Company promotes relevant work by adjusting the management organizational structure, upgrading the monitoring system, issuing evaluation, reward and punishment indicators, and conducting technology research and development. Meanwhile, the Company formulates and implements the Supervision and Management Regulations on Ecological Environmental Protection and Energy Conservation.

In 2021, the comprehensive energy consumption (comparable price) per RMB ten-thousand operating income was 0.0441 tons of standard coal/RMB ten-thousand, down 4.3% from the same period of last year; the CO<sub>2</sub> emission was 0.1563 tons/RMB ten-thousand, down 13.6% from the same period of last year, accomplishing the annual target of energy conservation and environmental protection.

- **Consolidating the system for the management of energy conservation and environmental protection and enhancing its capability in this respect:** in accordance with the requirements of the SASAC and the industry management norm, the Company optimizes management resource allocation, and integrates and hands over the business of ecological environmental protection, energy conservation and emission reduction to the Safety, Quality and Environmental Protection Supervision Department; dynamically revises and improves measures for the management of energy conservation and environmental protection for the work to be conducted on all fronts.
- **Constantly upgrading the statistical monitoring system:** according to the latest requirements of energy conservation and ecological environmental protection of central enterprises, the Company launches and upgrades the new statistical system of energy conservation and ecological environmental protection, to realize the regular online filling of energy conservation and environmental protection data.

- **严格落实节能减排考核奖惩机制：**于2021年初下达节能减排工作指标，要求所属二级企业对指标进行分解并下达至各所属三级企业、项目部，以考核促管理，并采取奖惩措施，提升节能减排工作积极性。
- **强化节能环保管理目标考核奖惩：**公司依据2021年初下达的量化考核指标，对所属各企业实行严格的业绩考核，圆满完成了年度能源节约考核目标。
- **重视生态环保问题过程监督：**公司定期对所属企业因生态环保问题，受属地政府、行业主管部门处罚事项进行统计分析，并在公司安全环保季度视频会议上进行通报问责。

- **Strictly implementing the evaluation, reward and punishment mechanism for energy conservation and emission reduction:** the Company issued the indicators of energy conservation and emission reduction in early 2021, requiring all second-tier units to decompose the indicators and release them to their third-tier companies and project departments to promote management through evaluation. The Company also adopted reward and punishment measures to promote energy conservation and emission reduction.
- **Strengthening the evaluation, reward and punishment of the energy conservation and environmental protection management targets:** the Company implements strict performance evaluation of the affiliated companies based on the quantitative assessment index issued at the beginning of 2021, and completed the annual energy saving assessment targets.
- **Emphasis on the process supervision over ecological environmental protection:** the Company makes a regular statistical analysis of the penalties imposed on the affiliated companies by the local government and the competent authority of industry for ecological environmental protection problems, and notifies them on the quarterly video conference on safety and environmental protection and holds them accountable.

## 水资源管理

### Water management

根据国务院国资委印发的《中央企业能源节约与生态环境保护统计报表》，公司不断完善统计监测体系，规范用耗水量统计核算口径，加强水资源循环使用。2021年，公司订立了单位用新水量在2020年的基础上下降15%的目标，实际用新水量46095万吨，较去年同期增长3%，单位用新水量4.5366吨/万元，较去年同期下降15.6%。

公司在求取适用水源方面不存在任何问题，水源供应方面主要由工程项目属地的自来水公司负责提供。

为达到年度订立的单位用新水量的下降目标，公司高度重视施工用水措施，收集使用天然降水或经回收处理的废水等措施已成为项目节水管理常态。普遍推广使用节水型自动喷淋系统、沉淀池等，用于混凝土养护、车辆冲洗以及抑制扬尘，从而加强对水资源的循环利用，提高废水回收利用率，有效节约水资源。

According to the Statistical Statement on Energy Conservation and Ecological Environment Protection of Central Enterprises (《中央企业能源节约与生态环境保护统计报表》) issued by the SASAC of the State Council, the Company has improved its statistical monitoring system, standardized the statistical calculation of water consumption, and strengthened the recycling of water resources. In 2021, the Company set a target to reduce the amount of new water used per unit by 15% on the basis of 2020, and actually used 460.95 million tons of new water per unit, up 3% from the same period of last year, and 4.5366 tons of new water per unit per RMB ten-thousand, down 15.6% from the same period of last year.

The Company does not have any problems in obtaining suitable water sources, and the water supply is mainly provided by the water supply company in the area where the project is located.

To meet the annual target for reduction of new water consumption per unit, the Company stresses measures to use construction water. As a part of water conservation and management, the Company collects and uses natural precipitation or wastewater treated by recycling. Automatic water-saving sprinkler systems and sedimentation ponds are promoted and used commonly for concrete maintenance, vehicle washing and dust suppression. They have strengthened the recycling of water resources and improved the recycling rate of wastewater, thereby effectively saving water resources.



## 绿色办公

### Green office

2021年，公司组织完成了总部无纸化会议系统的应用推广工作。总部无纸化系统支持计算机终端、手机及平板电脑等硬件设备的并行接入，以屏幕同屏、手写签批、资料分发共享等技术手段支撑无纸化会议的召开，实现了会前准备、会中管控、会后归档及统计分析等全流程数字化的建设目标。2021年，公司总部共召开无纸化会议222次，参会人数共计4,276人，会议用文件累计3,686份，共节省纸张123.961万张。

In 2021, the Company organized the application and promotion of the paperless conference system at the headquarters. The paperless system at the headquarters supports the parallel access of hardware devices such as computer terminals, mobile phones, and tablets. It supports the holding of paperless meetings with technical methods such as display on the same screen, handwritten signing and approval, and data distribution and sharing. With the paper system, the Company achieves the goal of full-process digitization that enables preparation before meetings, control during meetings, and filing and statistical analysis after meetings. In 2021, the Company's headquarters held a total of 222 paperless meetings, with a total of 4,276 attendees, and kept 3,686 meeting documents on file, with a total of 1.23961 million paper savings.

能源及资源消耗关键绩效指标  
Key performance indicators for energy and resource consumption

能源/资源类型 Energy/resource type	指标 Indicators	2021年数据 Data in 2021	同比增减 Year-on-year increase or decrease
直接能源消耗 Direct energy consumption	汽油(万吨) Gasoline (ten-thousand tonnes)	46.07	5.9%
	汽油(吨/万元) Gasoline (ton/RMB ten-thousand)	0.0045	-2.2%
	柴油(万吨) Diesel (ten-thousand tonnes)	155.8	4.4
	柴油(吨/万元) Diesel (ton/RMB ten-thousand)	0.015	-6.3%
	天然气(万标立方米) Natural gas (ten-thousand standard m <sup>3</sup> )	6,770.5	6.6%
	天然气(立方米/万元) Natural gas (m <sup>3</sup> /RMB ten-thousand)	0.67	-1.4%
间接能源消耗 Indirect energy consumption	电力(万千瓦时) Electricity (ten-thousand kwh)	1,045,300	6.5%
	电力(万千瓦时/万元) Electricity (ten-thousand kwh/RMB ten-thousand)	0.0103	-2%
综合能源消耗 Comprehensive energy consumption	综合能源消耗(万吨标准煤) Comprehensive energy consumption (ten-thousand tonnes of standard coal)	448,5213	5%
	综合能源消耗(吨标准煤/万元收入) Comprehensive energy consumption (ton of standard coal/RMB ten-thousand income)	0.0441	-4.3%
	综合能源消耗(万千瓦时) Comprehensive energy consumption (ten-thousand kwh)	3,649,481	5%
	综合能源消耗(千瓦时/万元收入) Comprehensive energy consumption (kwh/RMB ten-thousand income)	359	-3%
水 Water	消耗新水总量(万立方米) Total new water consumption (ten-thousand m <sup>3</sup> )	46,094.546	2.9%
	消耗新水总量(万立方米/万元收入) Total new water consumption (ten-thousand m <sup>3</sup> /RMB ten-thousand income)	4.54	-15.6%

注：基于本公司业务性质，不适用于以每产量单位或每项设施计算能耗密度，采用万元营业收入（可比价）综合能耗计算和披露能耗密度。

Note: Based on business characteristic of the Company, it is not applicable to calculate energy consumption density using unit of production (UOP) or per facility. Therefore, the Company adopts comprehensive energy consumption (comparable price) per RMB ten-thousand operating income to calculate and disclose energy consumption density.

## 生态保护

### Ecological protection

公司作为建筑类企业，业务活动不会对环境 and 天然资源产生重大影响，并高度重视对环境及天然资源的保护。在施工前期，公司组织专业机构开展环境影响评价，依据评估结果制定切实有效的保护方案，开展水土保持、生物多样性保护、植被保护等措施，做到生态环境保护与工程建设同步规划与同步实施。在施工过程中，公司注重生态保护的持续投入，使用环保设备，改进施工工艺和优化施工方案，减少对水、大气、植被和生物的影响。公司能源节约与生态环境保护信息系统定期采集生态环境监测数据，提升生态环保信息直观性和真实性。2021年，公司已竣工项目环评通过率达100%。

在土地利用方面，公司认真贯彻《土壤污染防治法》，在工程项目施工初期就将生态恢复纳入项目管理，做好科学选址、规范弃碴、事先防护、积极消纳。每一个工点施工完后，确保用合适的土料覆盖地表，清理便道两侧施工弃物，恢复地面天然状态。对于施工过程中涉及的临时用地，公司严格编制、实施用地及复垦规划，注意对居民稠密区、自然保护区等环境敏感区域的保护，并在工程竣工后按照规定对土地进行恢复，最大限度保护生态环境。

在生物多样性保护方面，公司持续监测生物多样性影响，并采取有效措施，努力降低施工生产对生物种群造成的影响。

As a construction enterprise, the Company's operations will not have a significant impact on the environment and natural resources, and it attaches great importance to the protection of the environment and natural resources in its business activities. In the early stage of construction, the Company organizes professional organizations to carry out environmental impact evaluation, and based on the evaluation results, to formulate feasible and effective protection programs, implement measures relating to soil and water conservation, biodiversity protection and vegetation protection, so as to achieve simultaneous planning and implementation of ecological environmental protection and engineering. During the construction, the Company continuously invests in ecological protection by using environmental protection equipment, improving the construction process and optimizing the construction plan, so as to reduce the impact on water, atmosphere, vegetation and organisms. The Company's information system for energy conservation and ecological protection regularly collects ecological monitoring data to improve the intuitiveness and authenticity of ecological protection information. In 2021, the rate of the Company's completed projects that passed the environmental impact evaluation was 100%.

In terms of land use, the Company seriously implements the Law on the Prevention and Control of Soil Pollution (《土壤污染防治法》). It incorporates ecological restoration into project management in the early stages of construction, by upholding the principles of scientific site selection, standardized abandonment, prior protection, and active consumption. We ensure that, after the construction at each construction site is completed, the earth's surface is covered with suitable soil, construction waste on both sides of the road is removed, and the ground is restored to its natural state. For the temporary land involved in the construction, the Company strictly prepares and implements land use and reclamation plans for protecting environmentally sensitive areas such as densely populated areas and nature reserves, and restores the land according to relevant regulations after project completion to maximize the protection of ecological environment.

In terms of biodiversity protection, the Company continuously monitors the biodiversity impact and manages to reduce the impact of construction and production on biological populations.

#### 案例 Case

作为中老友谊的标志性工程，由中铁二院全线勘察设计的中老铁路，将生态环境保护理念落实到设计的每个流程、每个专业中，从环保选线、工程优化设计到创新环境保护措施，形成了较为完善的绿色设计流程。

As a landmark project of the China-Laos friendship, the China-Laos railway, which is surveyed and designed by China Railway Eryuan, has implemented the concept of ecological environmental protection into every process and profession of design. The Company forms a more complete green design process that integrates environmentally-friendly route selection, engineering optimization design, and innovative environmental protection.

## 环境机遇 Environmental Opportunity

公司将绿色发展理念融入经营流程，对相关机遇时刻保持敏锐洞察，通过系统化的识别，在绿色规划与施工，清洁能源开发和环保产业建设方面不遗余力，为建设生态文明增砖添瓦。

The Company has integrated the concept of green development into its business, and remains keenly aware of relevant opportunities. Through systematic identification, the Company spares no effort in green planning and construction, clean energy development and construction of the environmental protection industry, contributing to the construction of ecological civilization.



● 中铁上海局承建的鹤山市沙坪河综合整治工程

Comprehensive regulation project of shaping River in Heshan City undertaken by China Railway Shanghai Group Co., Ltd

## 绿色规划与施工 Green planning and construction

- 绿色规划：**公司贯彻落实国家节能减排方针、政策，深入贯彻绿色发展理念，引入全生命周期绿色设计模式，组织编写《节能环保“十四五”规划》，在规划中明确提出坚持推进公司所属各板块绿色发展的主要任务，将绿色、低碳、生态设计理念融入到工程规划设计的全过程，从源头上控制能耗。
- Green planning:** The Company implements the national guidelines and policies regarding energy conservation and emission reduction, and thoroughly practices the concept of green development. In addition to introducing a full life cycle green design mode, the Company organizes the preparation of the 14th Five-Year Plan for Energy Conservation and Emission Reduction (《“十四五”节能减排规划》). In the Plan, the Company specifies the main task of promoting the green development of the various segments, and integrates the concept of green, low-carbon, and ecological design throughout engineering planning and design, to control energy consumption at the source.
- 绿色施工：**公司高度重视工程项目绿色施工科技攻关及示范引领，全面开展绿色施工技术、低碳评估技术、低碳能源运行管理系统等关键技术研究，推广节能低碳技术应用。全面开展绿色施工科技示范工程和节能低碳技术评比工作，以评促建，绿色低碳施工成效显著。
- Green construction:** The Company puts a high value on tackling hard-nut problems and playing a role of pilot in green science and technology of construction projects. It carries out research on key technologies such as green construction technology, low-carbon assessment technology and low-carbon energy operation management system, and promotes the application of energy-saving and low-carbon technology. The Company evaluates demonstration projects of green construction technology and energy-saving and low-carbon technology, and promotes construction through the evaluation. As a result, remarkable results are achieved in green and low-carbon construction.

## 清洁能源开发

### Clean energy development

公司一贯积极参与清洁能源开发项目，在各施工项目上积极研发推广使用地源热泵、光伏发电、热电冷三联供、空气能使用等清洁能源技术。在工程项目开发运营和房地产开发业务中，实现清洁能源技术和资源使用平台的优势互补，确保开发的工程项目在清洁能源开发利用、能源节约、生态环境保护、集中供暖供冷等领域达到先进水平。

The Company has participated in the development clean energy, and researched and promoted the use of clean energy technologies such as ground source heat pumps (GSHPs), photovoltaic power generation, combined cooling, heating and power (CCHP), and air energy in construction projects. In the development and operation of construction projects and real estate development, we enable clean energy technologies and resource use platforms to complement each other with their respective strengths. We work to see that the developed construction projects reach advanced levels in the fields of clean energy development and utilization, energy conservation, ecological environmental protection, central heating and cooling, etc.



● 中铁大桥局施工的粤电阳江风电项目  
Yuedian Yangjiang Wind Power Project (粤电阳江风电项目) constructed by China Railway Major Bridge Engineering Group Co., Ltd.

### 案例 Case

中国中铁在深圳地铁6号线设计中，充分利用日照条件充足、太阳能资源丰富的特点，在12个高架站钢结构屋面上均安装了光伏发电板，每年平均发电量约234万度，25年设计寿命期内预计可发电5,856万度，相当于替代了2.34万吨标准煤，减排二氧化碳22.59万吨，实现纯经济收益约5,047万元。该线成为国内首次分布式光伏发电规模化应用的地铁线。

In designing Shenzhen Metro Line 6, CREC, by making full use of the abundant solar energy resources, has installed photovoltaic power generation panels on the steel roofs of all 12 elevated stations, with an average annual power generation of about 2.34 million kilowatt hours. They are expected to generate 58.56 million kilowatt hours of power during the 25-year design life, equivalent to replacing 23,400 tons of standard coal and reducing carbon dioxide emissions by 225,900 tons, realizing a net economic gain of about RMB50.47 million. In China, this line is the first of its kind where distributed photovoltaic power generation is applied on a large scale.

## 参与环保产业

### Participation in environmental protection industry

公司认为在全球低碳经济转型的背景下，清洁技术和环保产业将具有十分良好的发展前景和商业机会。中国中铁为此成立的水务环保行业的综合企业——中国铁工投资建设集团有限公司，下设水务、市政环保建设、智慧城市、生态环境、绿色资源开发五个子专业公司。2021年，中国铁工投资建设集团有限公司承建了合肥王小郢污水处理厂、上海浦东新区白龙港污水处理厂等多项污水处理环保项目；主导总承包了北运河通州段综合治理、北京市凉水河水环境综合治理、湖北省当阳市城乡污水综合治理、内江沱江流域水环境综合治理PPP项目等综合治理项目；投资研发的针对我国农村垃圾处理的分布式固废碳化装备成功下线，将有效改善农村生态环境。未来，公司将继续扩大在该领域的投入，为生态环保治理和基础实施建设添砖加瓦。

## 应对气候变化

### Tackling climate change

公司密切关注全球气候变化趋势和对公司业务所带来的影响，积极采取节能减排措施，投资利用清洁能源，减少自身温室气体排放。

针对突发环境事件，如地震、台风、泥石流、洪水等已经或可能给公司施工造成影响的自然灾害或重大气候变化，公司制定有《安全质量、生态环境及灾害事故（事件）应急预案》，对危险性分析、预防与预警、应急响应、善后处置、应急保障、培训演练等有明确且规范的指引。

针对长期气候变化，公司大力拓展以“生态修复、城市修补”为主要内容的城市双修、海绵城市、海域岸线综合治理等业务领域，积极适应因气候变化可能带来的城市环境变化等问题。

The Company believes that in the context of the global low-carbon economic transformation, clean technology and environmental protection industries will have favorable development prospects and business opportunities. China Railway Construction Group Co., Ltd., CREC's conglomerate in the water and environmental protection industry, has five sub-professional companies in water, municipal environmental protection construction, smart cities, ecological environment, and green resource development. In 2021, China Railway Construction Group Co., Ltd. undertook the construction of the Wangxiaoying Sewage Treatment Plant in Hefei, the Bailonggang Sewage Treatment Plant in Pudong New District, Shanghai, and other sewage treatment and environmental protection projects; China Railway Construction Group Co., Ltd. also led the PPP projects relating to the comprehensive treatment of the Tongzhou section of the north canal, the comprehensive treatment of the water environment of the Liangshui River in Beijing, the comprehensive treatment of urban and rural sewage in Dangyang City, Hubei Province, the comprehensive treatment of the water environment in the Neijiang Reach of Tuojiang River, and other projects; the distributed solid waste carbonization equipment for China's rural waste treatment, the R&D of which was invested by China Railway Construction Group Co., Ltd., has been launched, which will improve the rural ecological environment. Going forward, we will continue to expand our investment in this sector, to contribute our share to ecological environmental protection and infrastructure construction.

Paying close attention to global climate change trends and the impact on business, the Company actively adopts measures relating to energy conservation and emission reduction and invests in the use of clean energy, to reduce its own greenhouse gas emissions.

For environmental emergencies, such as earthquakes, typhoons, mudslides, floods and other natural disasters or significant climate change that have affected or may affect the Company's construction, the Company has formulated the Emergency Plan for Safety, Quality, Ecological Environment and Disaster Accidents (Events) to analyze and prevent risks. There are clear and standardized guidelines for early warning, emergency response, aftercare, emergency support, training and drills, etc.

For long-term climate change, the Company vigorously expands business areas such as urban renovation with "ecological restoration and urban repair" as its main content, sponge cities and comprehensive management of seashore coastlines, and adapts to problems including urban environment changes possibly caused by climate change.





中国铁工投资集团投资的华北最大全域水网地表水灌溉PPP项目（效果图）

The largest surface water irrigation PPP project in North China invested by China Tiegong Investment & Construction Group Co., Ltd. (design sketch)

## 案例 Case

公司持续参与池州、镇江、岳阳、徐州、松原、日照等多地“海绵城市”建设，采用透水铺装、种植屋面等技术手段，达到下雨时吸水、蓄水、渗水、净水，需要时将蓄存的水“释放”并加以利用，使城市在适应气候变化和应对雨水带来的自然灾害等方面具有良好的弹性，有效缓解了城市热岛效应，解决城市内涝难题。

The Company has participated in the construction of “sponge cities” in multiple cities, including Chizhou, Zhenjiang, Yueyang, Xuzhou, Songyuan, and Rizhao. The sponge cities adopt technical means including permeable paving and planting roofs to achieve water absorption, storage, seepage and purification when it rains. “Releasing” and using the stored water at proper time allow cities to flexibly adapt to climate change and respond to natural disasters caused by rain, which can alleviate the urban heat island effect and resolve urban waterlogging problems.



# 社会篇

## Society

### 创造价值

Value Creation

### 人力资本管理

Human Capital Management

### 维护员工权益

Safeguarding of Staff's Rights and Interests

### 保障员工健康与安全

Employee Health and Safety Protection

### 关注员工成长与发展

Focusing on the Growth and Development of Employees

### 产品责任

Product Responsibility

### 供应商管理

Supplier Management

### 社区投资

Community Investment



## 创造价值 Value Creation

### 经济绩效

#### Economic performance

中国中铁致力成为国民经济发展的支柱。2021年，公司通过完成全球市场，特别是中国市场的铁路、公路、轨道交通、港口、市政、机场等基础设施建设，拉动了全球和地方经济增长，促进了经济发展和社会进步，不断为社会创造和积累优质物质财富。

2021年，公司新签合同额27,293.2亿元，同比增长4.7%；公司营业收入10,732.72亿元，同比增长10.11%；实现归属母公司净利润276.18亿元，同比增长9.65%，成为社会财富的重要创造者和社会经济发展的重要推动力量。

CREC is committed to becoming the pillar of national economic development. In 2021, the Company completed the infrastructure construction in railways, highways, rail transit, ports, municipal works and airports in the global market, particularly in the Chinese market. This stimulated global and local economic growth, bolstered economic development and social progress, and continuously created and accumulated high-quality material wealth for society.

In 2021, the Company recorded total value of newly-signed contracts of RMB27,293.2 billion, up 4.7% year on year; total revenues of RMB10,732.72 billion, up 10.11% year on year; realized net profit attributable to the parent company of RMB276.18 billion, up 9.65% year on year. These increases demonstrate that CREC has become the major creator of social wealth and an important driving force for social and economic development.



## 推动就业

### Employment promotion

公司始终把促进就业作为履行企业社会责任的一项关键内容。2021年，公司结合企业自身发展战略，稳定扩大招聘毕业生规模，持续加强推动高校毕业生人才引进工作，同时加大国家重点领域、重点产业科研人才，及碳达峰碳中和相关专业等急需紧缺人才招聘力度。2021年，公司共引进高校毕业生18,225人，含海外留学生214人，西藏、青海、新疆籍学生190人。同时，公司严格遵守《劳动合同法》等有关法律法规，及人力资源与社会保障部、教育部、国资委等有关要求，坚决杜绝一切针对民族、地域、宗教、性别、家庭等方面的歧视及恶性竞争行为，为所有员工提供平等就业与晋升机会，建立了人才市场化引入、与企业共同发展、依法依规退出的管理机制。

2021年，公司持续为稳定农民工就业创收提供机遇，推进农民工实名制管理、工资专用账户、工资保证金和银行代发工资等措施，保证农民工工资按时且足额发放。同时，公司严格做好农民工岗前安全教育培训和现场操作技能培训，并对特殊工种全部进行岗前强化培训，不断提高农民工作业技能。

The Company has regarded promoting employment as a key element to fulfill corporate social responsibilities. In 2021, the Company, based on its own development strategy, steadily scaled up the recruitment of graduates while continuing to introduce more college graduates. In 2021, the Company introduced a total of 18,225 college graduates, including 214 overseas students and 190 students from the Tibet Autonomous Region, Qinghai province and the Xinjiang Uygur Autonomous Region. At the same time, the Company strictly abides by the Labor Contract Law and other relevant laws and regulations, and the relevant requirements of the Ministry of Human Resources and Social Security, the Ministry of Education, the SASAC, etc., resolutely eliminates all actions of discrimination and vicious competition against ethnicity, region, religion, gender, family, etc., provides equal employment and promotion opportunities for all employees, and has established a management mechanism for talents of market-oriented introduction, common development with enterprises, and legal and compliant exit.

In 2021, the Company continued providing opportunities for stabilizing the employment and income of migrant workers and promoted the implementation of measures such as real-name management of migrant workers, special wage accounts, wage deposits and payroll credit, to see that their wages are paid on time and in full. Meanwhile, the Company strictly provided pre-job safety education and training and on-site operation skill training to peasant workers, and provided intensive pre-job training for workers involved in special types of work to improve their skills.



## 合作共赢

### Win-win cooperation

中国中铁十分重视与国内外各类组织和大型企业的战略合作。公司在人才培养、资金管理、施工生产、材料供应、文化构建、科技创新、战略发展等方面，与各级政府、高校、社会组织、金融机构及其他相关企业等建立了稳固的战略联盟和密切的合作关系，促进了多方优势互补，实现了资源共享与协同发展。

2021年，公司充分利用在资金、技术、管理及人才等方面的优势，与新疆维吾尔自治区、黑龙江省、山东省、河南省、湖北省、四川省、广东省、云南省、天津市、重庆市、国铁集团、中国电信、中国移动、中国有色、中智集团、中国宝武、中国大唐、南水北调集团等地方政府、企业进行了高层交流，为之后的深入合作奠定了良好基础。

CREC places considerable value on strategic cooperation with domestic and overseas organizations and large-scale enterprises. The Company has established stable strategic alliances and close cooperative relationships with governments at all levels, colleges and universities, social organizations, financial institutions and relevant enterprises in talent training, fund management, construction and production, material supply, culture construction, technological innovation and strategic development, and promoted all-round complementary advantages to achieve resource sharing and collaborative development.

In 2021, by making full use of its advantages in capital, technology, management and talent, the Company conducted high-level exchanges with local governments and enterprises including the Xinjiang Uygur Autonomous Region, Heilongjiang Province, Shandong Province, Henan Province, Hubei Province, Sichuan Province, Guangdong Province, Yunnan Province, Tianjin Municipality, Chongqing Municipality, China State Railway Group Co., Ltd., China Telecom, China Mobile, China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC), China International Intellectual Group Co., Ltd., China Baowu Steel Group Corporation Limited, China Datang Corporation Ltd., and China South-to-North Water Diversion Corporation Limited. This laid a good foundation for subsequent in-depth cooperation.



中国中铁与中国信保签署战略合作协议  
CREC and China Export & Credit Insurance Corporation signed a strategic cooperation agreement



中国中铁与成都市签署“十四五”战略合作协议  
CREC and the People's Government of Chengdu Municipality signed the strategic cooperation agreement for the 14th Five-Year Plan period

## 人力资本管理

### Human Capital Management

公司秉持“以人为本、平等公正，团结协作、开放包容，追求企业与员工、与股东、与社会的共同发展、和谐共赢”的核心价值观，深入贯彻人才强企战略，坚持人才资源是第一资源理念，推动人才发展和企业发展协同并进。以三项制度改革为切入点，不断健全完善人才市场化经营机制，有效盘活人才资源，激发各类人才队伍活力。

Adhering to the core values of “people orientation, equality and justice, unity and cooperation, openness and tolerance, pursuit of common development, harmony and win-win situation between the Company and employees, shareholders and society”, the Company thoroughly implements the strategy of strengthening enterprises with talents. Upholding the concept of viewing talents as the first resource, the Company promotes the synergy of talent and enterprise development. Taking the reform of three systems as the entry point, the Company keeps improving the market-oriented operation mechanism of talents, revitalizes the talent resources, and energizes various talent teams.

公司领导人员队伍结构更加优化。2021 年，公司通过调整选拔，本科以上学历领导人员占比达到 99.8%，高级及以上职称领导人员占比达到 97.3%，队伍梯次配置更加合理均衡，履职经历更加丰富，年龄结构更加科学。

公司高层次专家人才队伍建设获重大突破。2021 年，新增中国工程院院士 1 人，新增全国工程勘察设计大师 2 人，新增百千万人才工程国家级人选、有突出贡献的中青年专家 1 人，新增享受国务院政府特殊津贴 24 人。

公司高技能人才培养成效显著。2021 年，1 人获得中华技能大奖，9 人获得全国技术能手称号，获奖人数在同行业中名列前茅。6 名高技能人才获得国务院政府特殊津贴荣誉和奖励。

公司“双一流”高校毕业生引进力度进一步加大。结合公司业务特点和发展需求，2021 届引进“双一流”高校毕业生 3,434 人，占比 18.6%，较上年增长 3.6 个百分点。

The structure of the Company's leadership team is more optimized. In 2021, through adjustment and selection, the proportion of leaders with a bachelor's degree or above reached 99.8%, and that of leaders with senior and above titles reached 97.3%. The figures show that the echelon configuration is more rational and balanced, the experience in performing duties is richer, and the age structure is more scientific.

Major breakthroughs have been made in the construction of the Company's high-level expert team. In 2021, among our employees, one was selected as the academicien of the Chinese Academy of Engineering, two were masters of engineering survey and design, one was included on the list of "National Hundred, Thousand and Ten Thousand Talent Project", one was recognized as one of the "National Young and Middle-aged Experts with Outstanding Contributions", and 24 were entitled to the special allowances of the State Council.

The Company has made remarkable achievements in the training of highly skilled personnel. In 2021, one employee won the Grand Skill Award of China and nine employees won the National Technical Expert award. The number of winners of both awards is the highest in the industry. Six high-skilled personnel were honored and rewarded with the special allowances of the State Council.

The Company intensifies efforts to introduce the graduates of "Double First-rate" universities. In light of the business characteristics and development needs, the Company introduced 3,434 graduates from "Double First-rate" universities in 2021, accounting for 18.6% of the total, up 3.6 percentage points year on year.



中国中铁拥有一支数量适中、结构合理的人才队伍  
CREC has a talent team with adequate members and a reasonable structure



中铁大桥院总工程师高宗余当选中国工程院院士  
Gao Zongyu (高宗余), chief engineer of China Railway Major Bridge Design Institute, was elected as an academicien of the Chinese Academy of Engineering

## 案例 Case

中国中铁作为9家受邀央企代表之一，参加国家人社部举办的首届人力资源服务业发展大会并进行主旨发言，分享展示了公司人才队伍建设成果。

CREC, as one of the nine invited representatives of central enterprises, participated in the first conference on HR service industry development held by the Ministry of Human Resources and Social Security and delivered a keynote speech at the conference, to share and demonstrate the achievements of its talent team building.

中国中铁2021年员工总数及分类数据  
The total number of employees and classification data of CREC in 2021

截至本报告期末，公司共有在册员工294,013人。  
As of the end of the reporting period, the Company has 294,013 registered employees.

员工类型 Employee type	数量 (人) Quantity (person)	比例 Ratio to total number of employees
全职员工 Full-time employees	294,013	100%
兼职员工 Part-time employees	0	0%
男性员工 Male employees	247,534	84%
女性员工 Female employees	46,479	16%
35岁及以下员工 Employees at or under 35 years old	126,226	43%
35岁至50岁员工 Employees between 35 and 50 years old	105,491	36%
50岁及以上员工 Employees aged 50 years old and above	62,296	21%
境内员工 Domestic employees	287,579	98%
境外员工 Overseas employees	6,434	2%
大专及以下学历员工 Employees with college education or below	132,144	45%
本科学历员工 Employees with a bachelor's degree	149,226	51%
硕士学位员工 Employees with a master's degree employee	12,341	4%
博士学位员工 Employees with a doctorate degree	302	0.1%
高级职称员工 (含正高级) Employees with senior titles (including: those with professorate senior titles)	40,054 ( 3,211 )	14%
中级职称员工 Employees with intermediate titles	69,771	24%
助理级职称员工 Employees with assistant titles	76,603	26%
员级及以下 Employees with junior titles or below	18,863	6%
其他 Others	88,722	30%
专家 Experts	645	0.2%
有国家执业资格员工 Employees with national Vocational qualifications	30,068	10%

1.比例=该类型员工数量/员工总数；  
2.由于四舍五入关系，个别项目数字可能与总数略有出入。

1. Percentage = number of employees of such classification/total number of employees;  
2. The figures for certain items may not add up due to rounding.

流失员工类型 Types of employees lost	员工流失比率 Turnover Rate of employees	流失员工类型 Types of employees lost	员工流失比率 Turnover Rate of employees
男性员工 Male employees	2.81%	35岁及以下员工 Employees at or under 35 years old	5.16%
女性员工 Female employees	0.19%	35-50岁员工 Employees between 35 and 50 years old	1.08%
境内员工 Domestic employees	2.61%	50岁及以上员工 Employees aged 50 years old and above	0.31%
境外员工 Overseas employees	5.25%		

1.2021年，公司员工流失比率为2.67%；  
2.流失率=主动离职/同时期人数。

1.In 2021, the employee turnover rate of the Company was 2.67%;  
2.Turnover Rate = the number of voluntary resignation/concurrent employees.

## 维护员工权益 Safeguarding of Staff's Rights and Interests

公司严格遵守《中华人民共和国劳动法》《中华人民共和国劳动合同法》《禁止使用童工规定》《女职工劳动保护特别规定》和运营所在地所在国的其它对公司员工管理有重大影响的法律法规，不断强化契约化管理，制定了《人才引进管理规定》《劳动合同管理指导意见》《员工薪酬管理办法》《员工薪酬及休假管理指导意见》等制度。公司坚决抵制和反对任何形式的雇佣童工和强制劳动行为，在签订劳动合同过程中，严格核查应聘者身份信息，明确禁止雇佣童工，并在合同中详细载列双方的权利义务，强调依法按时支付员工薪酬，保障劳动者休息休假的权利，坚决维护广大员工合法权益。公司制定有《女职工权益保护专项集体合同》，致力于减少和解决女职工在劳动中因生理特点造成的特殊困难，从而保护女职工健康。本报告期内，未发现使用童工及强制劳工的事件。

公司各级企业每年都召开一次职工代表大会，持续推进四级职代会规范化建设。2021年，公司召开了三届二次职代会，按程序圆满完成了审议行政工作报告、提案征集处理报告、集体合同履行情况报告，以及民主评议职工董监事、签订集体合同等议程。对职代会征集审定立项的195项提案实现“一案一复”，提案办结率100%。1项提案申报全国优秀职工代表提案。规范基层民主管理，指导23家企业完成了职代会新建和换届工作。推进民主管理制度体系建设，制定了《企业民主管理办法》。加强日常民主管理，引导47家企业召开了职代会，履行了民主程序，落实了职代会职权。

公司认真履行“三重一大”决策机制和内控流程中的民主程序，职代会闭会期间召开5次代表团长联席会议，审议通过了职工工资支付保障、股票激励计划、工资总额管理等涉及职工切身利益的办法制度，选举了4名职工监事。

The Company strictly abides by the Labor Law of the People's Republic of China (《中华人民共和国劳动法》), Labor Contract Law of the People's Republic of China (《中华人民共和国劳动合同法》), Provisions on the Prohibition of Using Child Labor (《禁止使用童工规定》), Special Rules on the Labor Protection of Female Employees (《女职工劳动保护特别规定》) and other relevant laws and regulations that have significant impact on the employee management of the Company in countries where the Company conduct operations. The Company constantly strengthens contractual management and formulates systems such as Regulations on the Management of Talent Introduction (《人才引进管理规定》), Guidance on Labor Contract Management (《劳动合同管理指导意见》), Employee Salary Management Measures (《员工薪酬管理办法》), and Guidance on Salary and Attendance Management for Employees (《员工薪酬及休假管理指导意见》). The Company resolutely resisted and opposed any form of child labor and forced labor practices. In the process of signing labor contracts, the Company strictly verifies the identity information of candidates, clearly prohibits the employment of child labor, and sets out in detail the rights and obligations of both parties in the contract, emphasizing the timely payment of employees' salaries in accordance with the law, safeguarding employees' rights to rest, and firmly safeguarding the legitimate rights and interests of the employees. The Company has a Special Collective Contract for the Protection of Rights and Interests of Female Employees, which is dedicated to reducing and solving the special difficulties of female employees due to their physiological characteristics in labor, thereby protecting the health of female employees. During the reporting period, no incidents of child labor and forced labor were found.

Enterprises at all levels of the Company hold the workers' congress annually and continue to promote the standardized construction of the four-level workers' congress. In 2021, the Company held the 2nd session of the third workers' congress, and in accordance with the procedures, completed the review of the administrative work report, the proposal solicitation and processing report, the collective contract performance report, and the democratic evaluation of employees, directors and supervisors, and the signing of the collective contract. The Company achieved the "review of proposals one by one" for the 195 proposals solicited through the workers' congress, and the rate of representative's satisfaction with the review of proposals is 100%. Application was made for 1 proposal as national outstanding employee representative proposal. We standardized community-level democratic management, and guided 23 enterprises to complete the establishment and replacement of their workers' congresses. We promoted the development of democratic management systems, and formulated the Measures for Democratic Management of Enterprises. We enhanced the daily democratic management, and guided 47 enterprises to convene their workers' congresses to perform democratic procedures and implement the power of the workers' congress.

The Company earnestly implemented its "Three Major and One Big" decision-making mechanism and the democratic procedures in the internal control process. When the workers' congress was not in session, we held five joint meetings of leaders of workers' delegations, deliberated and approved measures and systems concerning the immediate interests of workers, such as guarantee of wage payment, stock incentive plan and management of total payroll, and elected four staff supervisors.

中国中铁制定有《女职工劳动保护特别规定》，维护女职工合法权益  
CREC has a Special Rules on the Labor Protection of Female Employees (《女职工劳动保护特别规定》) to Safeguard the legitimate rights and interests of the female employees



## 招聘与劳动合同管理

### Recruitment and labor contract management

公司深入贯彻落实《国企改革三年行动方案（2020-2022年）》要求，持续推动三项制度改革，健全完善市场化用工机制，坚持依法用工、规范管理，构建和谐的企业用工关系，为公司高质量发展提供人力资源储备。

在人才招聘方面，公司制定有《人才引进管理规定》，坚持严格规范招聘、录用、引进等工作程序，完善公开、竞争、择优的市场化公开招聘机制，采取多种方式和渠道引导高校毕业生参与就业择业，同时按需引进符合企业战略发展的高端人才。针对企业急需且短期无法通过内部培养的高端人才，通过人才引进绿色通道，采取“一人一策”，实行更加开放灵活的人才政策。

在劳动合同管理方面，公司认真贯彻落实《劳动法》和《劳动合同法》，制定有《加强劳动合同管理的指导意见》，坚持依法合规、协商一致、防范风险、创新发展的原则加强合同管理，与所有受聘者均依法签订劳动合同，明确在劳动保护、劳动报酬、保险福利、职业道德等方面的权利和义务，以及合同变更、解除、终止、续订的标准和程序，并严格执行合同条款，不断加强劳动合同全过程管理。

公司境外机构和项目按照当地劳动法和社保法等，制定属地化的劳工管理制度，规范当地员工招聘、合同签订、社保交纳、出勤管理、请假制度、薪酬标准、解聘流程等各环节要求。

在员工晋升方面，公司制定有工程、会计、经济等各系列人员任职资格的评审和晋级的管理规定，明确了晋升标准和评审程序，并成立了相应的任职资格评审机构，为员工晋升畅通了渠道。

## 薪酬与福利

### Remuneration and benefits

公司按照现代企业制度要求，持续推进市场化薪酬分配机制建设，不断完善科学合理、公平公正、规范有序的薪酬管理制度。注重发挥薪酬分配的激励约束作用，吸引和保留企业核心人才，并保持薪酬水平的规范有序增长。在薪酬制度方面，制定了《关于进一步加强市场化薪酬管理的指导意见》《关于加强关键人才薪酬分配的指导意见》《考核分配监督检查实施细则》等文件，为员工提供岗位

The Company earnestly implemented the requirements of the three-year action plan for deepening reform of state-owned enterprises (2020 - 2022), continued to promote the reform of the three systems, improved the market-oriented employment mechanism, and insisted on legal employment and standardized management, so as to build a harmonious employment relationship, and maintain sound human resources reserve for the high-quality development of the Company.

In terms of talents recruitment, the Company has formulated Regulations on the Management of Talent Introduction. We adhere to strict and standardized systems including recruitment, employment and introduction, improve the market-based recruitment mechanisms that are open, competitive and merit-based, guide college graduates to participate in employment through a variety of ways and channels, while introducing high-end talents in line with the strategic development of the Company. In recruitment of high-end talents who meet needs but the enterprise is unable to cultivate through internal training in short period of time, it is possible to recruit through a green path of "one policy for one talent" and implement the talent recruitment policy in a more welcome and flexible manner.

In terms of labor contract management, the Company conscientiously implements the Labor Law (《劳动法》) and the Labor Contract Law (《劳动合同法》), and has formulated Guidance on strengthening labor contract management (《加强劳动合同管理的指导意见》). We adhere to the principles of compliance with the law, consensus, risk prevention and innovative development to strengthen contract management, and sign labor contracts with all employed persons in accordance with the law to clarify the rights and obligations in labor protection, labor compensation, insurance and welfare, professional ethics, etc., as well as criteria and procedures for contract changes, cancellation, termination and renewal, strictly perform the contract terms, and continuously strengthen the whole process management of labor contracts.

For the overseas entities and projects of the Company, we have formulated localized labor management systems in accordance with the local labor laws and social security laws to standardize local employee recruitment, contract signing, social security payment, attendance management, leave system, salary standards, and dismissal process.

In terms of staff promotion, the Company has formulated management regulations on the evaluation and promotion of personnel qualifications in various series of engineering, accounting and economics, clearly defined promotion standards and evaluation procedures, and set up a corresponding qualification evaluation organization, which has opened up channels for staff promotion.

In accordance with the requirements of the modern enterprise system, the Company continues to develop a market-based mechanism for salary distribution, and constantly improves its scientific, reasonable, fair, impartial and standardized remuneration management system. It pays attention to the role of incentives and restraints in remuneration distribution, attracts and retains core talents, and maintains a regular and orderly increase in remuneration. In terms of the remuneration system, the Company has formulated the Guidelines on Further Strengthening Market-oriented Salary Management (《关于进一步加强市场化薪酬管理的指导意见》), the Guidelines on Strengthening Salary Distribution of Key Talents (《关于加强关键人才薪酬分配的指导意见》), Rules for the Implementation of Supervision and Inspection of Assessment Distribution (《考核分配监督检查实施细则》) and other documents, provided employees with post

工资、绩效工资和津补贴，明确了员工试用期考核、年度考核、调薪晋升、年终绩效等相关依据、并建立了员工薪酬与企业效益同步增长的机制。2021年，进一步健全了中长期激励制度体系，印发了《中长期激励管理办法》《上市公司股权激励管理规定》《超额利润分享管理规定》《实施跟投管理规定》等制度，优化了“技术、知识、管理”等生产要素参与分配的长效激励机制，结合公司前期印发的员工持股和科技型企业股权和分红管理制度，构建了完备的中长期激励制度体系，丰富了薪酬分配方式。

公司切实保障职工合法社保权益，及时为职工参加基本养老保险、基本医疗保险、工伤保险、失业保险及生育保险。建立企业职工终身重疾保障体系，在全公司推行团体长期重大疾病补充医疗保险，最大限度为广大员工提供全生命周期的健康保障。

公司落实国家及国资委政策规定，建立了企业年金缴费水平与企业运行质量挂钩及动态调整机制，合理确定缴费水平，发挥年金保障与激励作用。规范年金企业缴费分配，强化年金投资运作管理，加强年金基金投管人绩效考核。加大日常管理力度，督导所属企业提高年金覆盖率，增强投资风险防控，保障员工权益。

wages, performance pay and allowances, clarified the basis for employee probationary period assessment, annual assessment, salary transfer and promotion, year-end performance, and established a mechanism for synchronous growth of employee salary and corporate efficiency. In 2021, the Company further improved the mid and long-term incentive system, issued the Measures for Mid and Long-term Incentive Management (《中长期激励管理办法》), the Provisions on Equity Incentive Management of Listed Companies (《上市公司股权激励管理规定》), the Provisions on Excess Profit Sharing Management (《超额利润分享管理规定》) and the Provisions on The Implementation of Co-Investment Management (《实施跟投管理规定》) and other relevant rules, optimized the long-term incentive mechanism with allocation based on “technology, knowledge, management” and other factors of production, and built a comprehensive mid and long-term incentive system covering the employee stock ownership and technology enterprise equity and dividend management system to enrich the remuneration allocation methods.

The Company earnestly protects employees' legitimate social security rights and urges member companies to promptly pay basic endowment insurance, basic medical insurance, work injury insurance, unemployment insurance and maternity insurance. We have established a lifelong serious illness insurance system for employees, and implemented group supplementary medical insurance for long-term serious diseases throughout the Company, so as to provide full life cycle health insurance for employees to the maximum extent.

According to the requirements of State and SASAC policies the Company has established a mechanism where the level of annuity payment is linked to the quality of enterprise operation and where dynamic adjustments are permitted. The mechanism enables the reasonable determination of payment level and gives play to the role of annuity protection and incentives. We have standardized the allocation of annuity contributions among enterprises, strengthened the operation and management of annuity investment, and enhanced the performance evaluation of annuity fund investors and managers. We have strengthened daily management, supervised affiliated enterprises to improve annuity coverage, and enhanced investment risk prevention and control, in order to protect the rights and interests of employees.

**“中铁员工定制化自选保障方案”**

让全体员工老有所医、老有所养

**方案一**

**日常交通意外保险 20万**  
因乘坐飞机、轮船、火车、地铁、轻轨、运营汽车导致的意外身故或残疾  
保障期间：10天  
投保年龄：出生满30天（含）-65周岁（含）

**航空意外保险 100万**  
因航空意外导致身故或残疾全球各地均可享受保障  
保障期间：一年  
投保年龄：出生满30天（含）-70周岁（含）

**方案二**

**健康有约保障计划臻选版**

重疾125种 + 中症25种 + 轻症50种 + 身故保障

轻症/中症豁免 + 长期意外 + 投保人豁免 + 恶性肿瘤多次赔付

合理规划大病风险 弥补家庭收入损失  
不受社保限制 保障持续终身 全家均可参保

- 中国中铁为员工提供的定制化保险服务  
CREC provides customized insurance services for employees



- 中铁置业为员工提供“小学堂”职工子女托管班服务  
China Railway Real Estate Group Co., Ltd. provides employees with “Xiaoxuetang (小学堂)” after-school care services for the children of employees

## 关爱员工身心健康

### Caring for employees' physical and psychological health

公司严格执行《职业病防治法》，加强和改善劳动安全卫生条件、劳动防护以及特殊工种和女职工的特殊保护工作。持续做好职业健康和环境保护工作，研究、引进、使用绿色低碳循环生产技术和工艺，按国家规定的劳动卫生标准进行作业场所的尘毒治理，特别是加强隧道及地下工程、工业制造场所的尘毒危害防治工作，坚决杜绝一线作业人员尘肺病发生，推动企业绿色发展。

公司确保全体员工每年至少进行一次健康体检，不断提高检查标准和检查质量。推广应用大数据技术对员工体检结果进行分析评估，对群体性、普遍性问题实施有效预防。制定了《精准帮困专项基金资助大病职工实施细则》，进一步扩大了困难救助范围，全年救助困难职工389户次，发放救助金240.1万元，为45名大病职工发放救助款144.6万元。公司通过企业搭桥、员工自愿自选自助的方式，为14,054名员工及家属提供重疾保险、意外保险、新冠津贴、出行保险，风险保额14.76亿元，为3人申请理赔255万元。切实增强了员工抵御重大疾病、意外事故能力。

By strictly implementing the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases (《中华人民共和国职业病防治法》), the Company improves labor safety and health conditions, and implements labor protection as well as special protection for employees engaging in special types of work and female employees. The Company continues to do well in occupational health and environmental protection; researches, introduces, and uses green and low-carbon recycling production technologies and processes; implements dust and poison control in the workplace according to national labor and health standards, particularly strengthening the prevention and control of dust hazards in tunnels, underground projects, and industrial manufacturing sites; resolutely puts an end to pneumoconiosis among front-line workers; and pushes forward green development.

The Company ensures that all employees undergo at least one physical examination a year while continuing to improve examination standards and quality. The Company promotes the application of big data technologies in the analysis and evaluation of the physical examinations, and implements effective prevention of group and universal problems. The Company formulated the Implementation Rules of the Special Fund for Targeted Poverty Relief for Workers with Serious Illnesses, further expanding the scope of assistance to those in need. During the year, 389 families in need were assisted, relief fund of RMB 2.401 million was provided, and RMB 1.446 million was granted for 45 seriously ill workers. Through support by other companies and voluntary self-selection by employees, the Company provided 14,054 employees and their families with RMB1.476 billion insurance for major diseases, accidents, the COVID-19 and travel, and helped 3 employees apply for claims of RMB2.55 million, which effectively strengthened employees' ability to resist major diseases and accidents.



中国中铁在项目部广泛建立了“心灵驿站”  
CREC has established "spiritual stations (心灵驿站)" in the project department



中铁大桥局为项目员工提供“关爱工友健康体检”  
China Railway Major Bridge Design Institute provides "Health Checkup to Show Love for Workers (关爱工友健康体检)" for employees under projects

公司推广实施员工健康关爱计划，加强内部专员队伍建设，指导有条件的项目部积极建设员工心灵驿站，设置心理咨询室、放松室、健身房、健康体检仪等专属空间和设施，依托心理咨询、心理援助(EAP)和健康管理技术，对员工身心健康、职业发展、人际关系、婚姻家庭、压力管理、灾难事件应对等方面提供咨询帮助，有效促进员工身心健康。举办了第五批健康委员督导提升培训班和心理咨询师基础网络培训班。发挥内外部EAP队伍作用，建立了24小时线上和网上心理咨询热线，全天候做好员工“三级心理防护”。

The Company popularizes the implementation of the employee health care plan, strengthens the construction of the team of internal specialists, guides qualified project departments to actively build employees' mental stations, and sets up exclusive spaces and facilities such as psychological consultation rooms, relaxation rooms, gyms, and physical examination instruments. By relying on psychological consultation, employee assistance program (EAP) and health management technologies, the Company provides counseling assistance to employees in terms of psychological health, career development, interpersonal relationship, marriage and family, stress management, and disaster response, to effectively boost the physical and psychological health of employees. We organized the fifth training course on improving the supervision of health commissioners and the basic online training course on psychological counselors. To give full play to the internal and external EAP teams, we offered the 24-hour online psychological counseling services and psychological counseling hotline, in order to provide "three-level psychological protection" for employees around the clock.

### 案例 Case

2021年夏，郑州、山西发生汛情后，公司部分工程项目部遭受了洪涝灾害，职工生产生活和财产造成了较大损失。公司工会先后为受灾项目下拨专项救灾慰问款400万元，保障了受灾地区职工的正常生产生活。

In the summer of 2021, some of the Company's engineering project departments suffered floods in Zhengzhou City and Shanxi Province, and employees bore losses in the production, living and properties consequently. The Company's labor union promptly allocated special relief funds for the disaster-hit projects, totaling RMB4 million, to guarantee the production and life for the employees in the affected areas.

## 保障工作与生活平衡

### Work-life balance guarantee

公司严格遵守国家劳动相关法律法规，认真执行《职工带薪年休假条例》及其他各类假期规定，员工依法享受年休假、病假、婚假、丧假等权利。针对生产经营特别是一线项目部实际，采取轮休、调休、反探亲、发放补贴、重大节日延长放假时间等灵活多样的形式和措施，统筹安排员工休息休假，实行休假天数通报和年度清算制度。落实境外员工休假管理指导意见，保障境外员工休假权益。贯彻人力资源与社会保障部关于实行特殊工时制度的相关要求，依法合规加强工时管理，大多实行8小时标准工时制度，对符合规定条件的岗位申请实行特殊工时制度，切实维护劳动者权益。

The Company strictly abides by related national labor laws and regulations, and earnestly implements the Regulation on Paid Annual Leave for Employees (《职工带薪年休假条例》) and various other vacation regulations. Pursuant to these laws and regulations, employees are entitled to the annual leave, sick leave, marriage leave, funeral leave and other rights. With regard to production and operation, particularly the actual situation of front-line project departments, the Company makes an overall plan for employees' rest and vacation by adopting flexible and diverse forms and measures, such as having holidays by turns, having holidays for working an extra shift, leaving home to visit the workers, granting subsidies, and extending vacation time on major festivals. The Company also implements the system of notifying the number of vacation days and performing the annual settlement. The Company implements the guidelines for vacation management of overseas employees to protect their vacation rights. The Company implements the relevant requirements of the Ministry of Human Resources and Social Security on the implementation of the special working hour system, strengthens the management of working hours according to laws and regulations, with practicing 8-hour standard working hour system mostly, and applies for implementing a special working hour system for posts satisfying the prescribed conditions, to earnestly safeguard the rights and interests of employees.

加强以“工地文化、工地生活、工地卫生”为基础的“三工”建设，开展项目部“幸福之家十个一工程”创建活动，落实“幸福之家”建设资金，在美化劳动工作环境、搭建建功立业平台、丰富工地文化生活、关爱员工身心健康、维护员工合法权益、构筑员工精神家园等多方面改善一线员工的工作环境和生活水平。组建了文学、书法、摄影、漫画、桥牌、乒乓球、新媒体等七大职工兴趣协会。

The Company strengthens the “three-site” construction of “site culture, site life, and site hygiene”, carries out the activity of creating “a happy family through 10 key projects”, and puts the funds for creating “a happy family” into use. The Company works to improve the working environment and living standards of front-line employees from various aspects including beautifying the working environment, building a platform for making achievements, enriching the cultural life of the construction site, caring for the physical and psychological health of employees, safeguarding the legitimate rights and interests of employees, and building a spiritual home for employees. The Company has established seven major interest associations for employees, including literature, calligraphy, photography, comics, bridge, table tennis, and new media.



● 中铁电气化局北京地铁16号线项目组织员工子女假期期间到工地反探亲

China Railway Electrification Engineering Group Co., Ltd. organized the children of employees of Beijing Subway Line 16 Project to visit their relatives at the construction site during holidays



● 中铁三局五公司为员工举办集体婚礼

The Fifth Company of China Railway No.3 Engineering Group Co., Ltd. held a group wedding for its employees

## ○ 案例 Case

2021年，公司举办了“永远的开路先锋”职工文艺演出；组织参加全国铁路第十四届运动会，获得羽毛球男双冠军、乒乓球女子单打亚军、篮球冠军和网球季军，荣获全国铁路体育先进单位12个、全国铁路体育先进个人18人。

In 2021, the Company held the “Forever Trailblazer” staff performance; and organized employees to participate in the 14th National Railway Games, who won the champion of men's doubles badminton, the champion and runner-up of women's singles table tennis, the champion of basketball and the third place of tennis. 12 entities of the Company were granted the title of national railway sports advanced units, 18 employees were awarded the title of national railway sports advanced individuals.

## 保障员工健康与安全 Employee Health and Safety Protection

中国中铁作为工程施工类企业，保证安全生产、降低工伤事故是公司最为关注的领域之一，我们认为在生产运营中严格遵守法律法规对公司可持续发展至关重要。一直以来，公司严格遵守《中华人民共和国安全生产法》《中华人民共和国职业病防治法》《中华人民共和国消防法》《工伤保险条例》等相关法律法规，以及运营所在地、所在国的其它对公司员工健康与安全有重大影响的法律法规，不断在此领域强化管理，努力为员工提供健康安全的工作环境，减少工伤事故，保护劳动者的合法权益。

2021年，公司坚持生命至上、安全第一，树牢安全发展理念，强化红线意识和底线思维，始终把员工的生命安全和身体健康放在第一位，继续推动“管”“监”系统责任落实，策划实施安全生产专项整治三年行动，部署新时期安全生产“2468”管理要点，持续强化安全生产管控，全面加强和规范安全生产教育培训，严格落实安全生产述职机制，促进自控体系有效运行。

新冠肺炎疫情爆发后，公司遵照政府工作要求，迅速作出总体安排，逐级成立疫情工作领导小组，多次召开会议专题研究部署境内外疫情防控、复工复产工作，全公司在较短时间内就形成疫情防控、复工复产两兼顾的良好局面。2021年，全公司无新冠肺炎疫情死亡病例，无复工复产引起的疫情输入和聚集性传染事件。公司分布在90个国家和地区的600余个机构和项目、近六千余名中方员工，无一例因疫病死亡。

Production safety and reduction of industrial accidents are one of the major concerns of CREC that engages in engineering construction. We consider that strictly abiding by the laws and regulations during production and operation is utterly important for the Company's sustainable development. All along, the Company strictly abides by the relevant laws and regulations, such as the Production Safety Law of the People's Republic of China (《中华人民共和国安全生产法》), the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases (《中华人民共和国职业病防治法》), the Fire Control Law of the People's Republic of China (《中华人民共和国消防法》) and the Regulation on Work-Related Injury Insurances (《工伤保险条例》) as well as other laws and regulations that have a material effect on employees' health and safety in the regions and countries where the Company carries out operations, and continues to intensify management in this area, striving to provide employees with a healthy and safe working environment, reduce work-related accidents and protect the legitimate rights and interests of the workers.

In 2021, CREC adhered to the policy of supremacy of life and safety first. Bearing in mind the safe development philosophy, the Company strengthened red line awareness and bottom-line thinking. Giving top priority to the life safety and physical health of employees, the Company continued to promote the fulfillment of "management" and "supervision" responsibilities. The Company planned to launch a three-year plan for making special rectifications relating to safe production, and specified the "2468" management key points for safe production in the new era. At the same time, the Company continued to strengthen management and control of safe production, comprehensively strengthened and standardized safe production education and training, put in place the mechanism of safe production reporting, and promoted the effective operation of the automatic control system.

After the outbreak of the COVID-19, the Company quickly made overall arrangements as required by the government, and established leading groups responsible for the pandemic-related work level by level. The Company also held several meetings to carry out a topic research on the pandemic and made plans for domestic and foreign pandemic prevention and control as well as work and production resumption. In a short time, the Company found a compromise between pandemic prevention and control and work and production resumption. In 2021, there were no deaths from the COVID-19 in the Company, no pandemic inputs from work and production resumption, or infections from public gatherings. None of the approximately 6,000 Chinese employees involved in more than 600 institutions and projects of CREC in 90 countries and regions died from the pandemic.



## 安全生产

### Safe production

公司始终将“保持安全生产的稳定局面，为社会提供安全优质的建筑产品，为公众提供安全愉悦的周边环境，为员工创造安全健康的工作条件”，作为履行社会责任的重要方面。我们从落实安全责任、完善安全管理体系、强化安全施工管理、加强安全设备保障、开展安全教育培训五个方面，全方位强化安全生产，保障员工工作安全。

公司制定了项目“零事故、零伤害”和企业本质安全的长远目标，认真落实《安全生产管理“十四五”规划》，制定了《2021年安全生产、工程质量、环境保护和职业健康监督管理工作要点》，明确了全年工作思路和工作目标，并认真落实。公司施行的安全生产管理情况与高管薪酬挂钩措施，是国务院国资委对公司年度业绩考核和公司主要负责人任期考核的重要内容。在承包商安全生产管理方面，公司对劳务（专业）承包商实施负面清单管理。公司在评标过程中，对投标方的安全生产管理能力进行明确评估。

CREC always regards “to maintain the stable condition of safe production, to provide the society with safe and good-quality architectural products, to provide the public with a pleasant environment, and to create safe and health working conditions for the staff” as an important aspect of its social responsibility. We strengthen safe production and ensure the safety of employees in the following five aspects: implementing safety responsibility, improving safety management system, strengthening safety construction management, strengthening safety equipment protection and carrying out safety education and training.

The Company has set the long-term goals of “zero accident and zero injury” for projects and essential safety for itself, and has conscientiously implemented the “14th Five-Year Plan” for Management of Safe Production 《安全生产管理“十四五”规划》, and formulated the Safe Production, Engineering Quality, Environmental Protection and Occupational Health Supervision Management Essentials in 2021 《2021年安全生产、工程质量、环境保护和职业健康监督管理工作要点》. The Company defined and conscientiously implemented the work ideas and objectives for the whole year. The Company’s safe production management is linked to the remuneration of senior management, which is an important part of the SASAC’s appraisal of the Company’s annual performance as well as the evaluation of term of office of the Company’s major responsible persons. In terms of contractor safety management, the Company implemented negative list management for labor (professional) contractors. In bid evaluation, the Company evaluated the capabilities of bidders of managing safe production.



● 中铁七局三公司玉楚高速项目部姜春平安全护卫队在隧道掌子面检查安全

The security guard under the leadership of Jiang Chunping in the Yuchu Expressway Project Department of the Third Company of China Railway No.7 Engineering Group Co., Ltd., checked the safety of the tunnel face



● 中铁五局银西铁路二分部开展安全检查

Yinxi Railway Second Branch (银西铁路二分部) of China Railway No.5 Engineering Group Co., Ltd. carried out safety inspection

## 落实安全责任

### Implementing safety responsibility

公司设有安全生产（质量）委员会，统筹负责公司安全生产各项工作。委员会设主任2名，由公司党委书记、董事长和总裁担任；设副主任1名，由分管安全质量的副总裁担任；委员若干名，包含公司领导班子其他成员和高管、安全生产总监（高管）、高级专家、总部相关部门负责人。从公司总部到项目部，各级组织都设有安全生产总监和安全生产监督部门。

为进一步强化主体责任落实，完善管理体系，夯实管理基础，先后出台了《进一步落实安全生产“管”“监”责任暨构建风险和隐患双重预防长效机制的通知》，印发了《安全生产专项整治三年行动计划实施方案》《新时期安全生产“2468”管理要点》，配套编制了“2468”管理要点100题问答手册和宣传海报；发布了《总部安全生产责任制》《关于进一步明确企业主要负责人安全生产责任的通知》《关于进一步明确项目经理安全质量责任的通知》《因质量安全、环境保护与职业健康事件被限制市场准入责任追究办法》等规范性文件；修订了《防范惯性事故强化技术及管理交底刚性要求》《安全质量、生态环境事故（事件）应急预案》；印发了年度工作要点、起重吊装专项整治、重点时段安全检查、“安全月”“质量月”、50作业岗位员工安全卡控等40余份业务管理文件和作业指导手册。公司不断加强安全生产体系建设，加大安全生产投入和管控力度，采取了设立“片区安全生产稽查队”等一系列强化安全生产工作的管控措施，实现了营业收入大幅增长、百亿元营业额死亡人数大幅下降。

The Company has a safe production (quality) committee, which is responsible for all aspects of the Company's safe production. The committee has 2 directors who are the Company's Party Secretary and chairman, and the president; 1 deputy director who is the vice president in charge of safety and quality; several members who are the members of the Company's leadership team and senior management, safe production directors (senior executives), senior experts, and head of relevant departments at headquarters. From the Company's headquarters to the project department, organizations at all levels have safety production directors and production safety supervision departments.

In order to further strengthen the fulfillment of main responsibilities, perfect the management system, and consolidate the management foundation, the Company has published the notice of Further Fulfilling the "Management" and "Supervision" Responsibilities of Safe Production and Establishing a Long-term Mechanism for Double Prevention of Risks and Hidden Dangers (《进一步落实安全生产“管”“监”责任暨构建风险和隐患双重预防长效机制》); issued the Implementation Plan of the Three-Year Action Plan for the Special Rectification of Safe Production (《安全生产专项整治三年行动计划实施方案》) and CREC's "2468" Management Keypoints for Safe Production in the New Era (《中国中铁新时期安全生产“2468”管理要点》), and prepared the 100-question carritch and promotional posters for the 2468 management key points as supporting measures; issued normative documents including the Safe Production Responsibility System for CREC Headquarters (《中国中铁总部安全生产责任制》), the Notice on Further Clarifying the Safe Production Responsibilities of the Main Persons in Charge of Enterprises (《关于进一步明确企业主要负责人安全生产责任的通知》), the Notice on Further Clarifying the Safety and Quality Responsibilities of Project Managers (《关于进一步明确项目经理安全质量责任的通知》), and the Measures for Accountability for Restricted Market Access of CREC due to Quality Safety, Environmental Protection and Occupational Health Incidents (《中国中铁因质量安全、环境保护与职业健康事件被限制市场准入责任追究办法》); revised the Rigid Requirements for CREC Preventing Inertial Accidents and Strengthening Technology and Management Disclosures (《中国中铁防范惯性事故强化技术及管理交底刚性要求》) and the Emergency Plan for Safety Quality, Ecological and Environmental Incidents (Events) (《安全质量、生态环境事故（事件）应急预案》); and issued more than 40 business management documents and operation instruction manuals covering annual work points, special rectification of hoisting, safety inspections at key periods, "safety months", "quality months", and control of safety of employees taking up 50 posts. The Company continuously strengthened the construction of production safety system, enhanced the investment and control of production safety, and adopted a series of control measures to strengthen production safety, such as setting up "regional production safety inspection team", thus achieving significant decline of deaths per ten billion turnover while ensuring substantial increase in operating income.

2021年，公司严格执行《关于建立安全生产述职机制的通知》要求，完善了企业安全生产考核评价体系，督促安全生产第一责任人和分管负责人履职尽责。同时，公司落实开展为期三年的安全生产责任“落实年”活动，通过开展安全生产“管”“监”责任大宣贯大培训活动、安全生产“管”“监”责任落实专项检查活动、筑牢安全生产管理基础专项行动、生产安全惯性事故防控专项行动、本质安全保障能力提升行动等五大主题活动，进一步推动安全生产“管”“监”系统责任落实，不断提升企业和项目本质安全保障能力。

2021年，虽受疫情影响，公司仍坚持组织开展了安全生产集中整治、专项整治、防洪防汛安全生产大检查、岁末年初安全质量检查等检查7次，涉及30家二级公司承建的129个项目，检查及整改资料全部闭合存档。

2019年和2020年，公司无因重大生产安全责任事故造成的死亡和因工伤损失工作日数。2021年，公司发生重大生产安全责任事故1起，致14人死亡，该年度因工伤损失工作日数169天，每百亿元营业收入重大生产安全责任事故死亡人数为0.18人。

## 完善安全管理体系

### Improving safety management system

为提升企业安全工作保障能力，公司提出了新时期落实企业主体责任的“2468”管理要点，即落实“两个”责任、推进“四化”建设、健全“六大”体系、强化“八个”到位，科学阐述建筑企业安全管理的多层面、多领域、全要素管理内容、要求和作用。

In 2021, the Company strictly enforced the requirement of the Notice on Establishing a Mechanism of Safe Production Reporting (《关于建立安全生产述职机制的通知》), improved the Company's safe production assessment and evaluation system, and urged the persons chiefly in charge of safe production and other persons in charge of safe production to fulfill their duties with due diligence. At the same time, the Company implemented a three-year "implementation year" activity, to fulfill safe production responsibilities. The Company further promoted the fulfillment of "management" and "supervision" responsibilities of safe production and continuously improved the intrinsic safety guarantee capabilities for itself and projects by carrying out five theme activities. These theme activities included the major publicity and training of the "management" and "supervision" responsibilities of safe production, the special inspection of the fulfillment of "management" and "supervision" responsibilities of safe production, special action to strengthen the foundation of safe production management, special action to prevent and control inertial production safety accidents, and action to enhance intrinsic safety guarantee capabilities.

In 2021, in spite of the pandemic, the Company continued to organize and carry out 7 inspections including centralized rectification of safe production, special rectification, major inspection of flood control and safe production, and safety and quality inspection at the end of the year. The inspections involved 129 projects undertaken by 30 secondary companies. The inspection and rectification materials were archived.

In 2019 and 2020, the Company has no major production safety liability accidents resulting in death and loss of working days for work-related injuries. In 2021, one major production safety liability accident occurred in the Company, resulting in 14 deaths and 169 working days lost for work-related injuries in the year, the number of deaths from major production liability safety accidents per RMB10 billion of operating revenue was 0.18.

In order to improve the capability of ensuring safe production, the Company put forward "2468" management key points for implementing its main responsibilities in the new era, namely fulfilling the "two" responsibilities, advancing the "four modernizations", improving the "six major" systems, and strengthening the "eight" implementations. The management key points scientifically elaborate the multi-level, multi-field and total-factor management content, requirements and functions of safety management of construction enterprises.



公司深入贯彻《中共中央 国务院关于推进安全生产领域改革发展的意见》，认真落实GB/T28001标准，把生产要素系统（组织指挥、技术保障、资源配置）的常态管控作为安全生产的基础，采取有效措施，加强安全生产的源头管控和预防预控。同时，公司运用顶层设计、制度建立、监督检查等手段对安全生产情况进行纠偏，建立起层层预防、纠偏补充的多重保障体系，真正形成安全生产的长效机制，提高企业和项目本质安全保障能力。

2021年，公司发布了《铁腕治安全硬十条》，以“铁腕治安全”的主基调，从主体责任落实、现场网格化管理、“六不施工”、设计和施工方案执行落实、分承包管控、跟班作业、施工验收和过程检查、严格强制标准和红线、施工过程责任追究等十个方面提出了“硬要求”。公司各施工成员企业均成立了稽查总队和片区稽查队，建立了监督情况定期报告制度，及时消除现场安全质量环保各项隐患。

2021年，公司全面强化安全生产风险分级管控，针对安全风险辨识评估清单，明确各层级安全风险管控等级、范围、重点和责任人，明确落实每一处重大安全风险和重大危险源的安全管理与监管责任，严格落实风险控制方案和措施，强化风险管控技术、制度的刚性落实与执行。

公司在重要时间节点，采用作业条件危险性评价法（LEC）、专家调查法、是非判断法、安全检查表分析等方法，开展全方位、全流程的风险辨识评估，并通过安全教育培训、技术交底、更新公示等方式将风险源和管控措施告知从业人员。把风险辨识评估、分级、管控等内容作为项目安全策划的重要组成部分。

在应急管理方面，公司制定了《安全质量、生态环境及灾害事故（事件）应急预案》，采用桌面演练、功能演练和全面演练三种方式进行应急演练。2021年6月“安全生产月”期间，公司广泛组织开展了应急演练活动。

The Company thoroughly implements the Opinions of the CPC Central Committee and the State Council on Advancing the Reform and Development of the Work Safety Field (《中共中央 国务院关于推进安全生产领域改革发展的意见》), and earnestly implements the GB/T28001 standard. By taking the normal control of the production factor system (organizational command, technical support, and resource allocation) as the basis for safe production, the Company adopts effective measures to strengthen the safe production at the source. At the same time, the Company rectifies production safety by adopting top-level design, system establishment, supervision and inspection and other measures, establishes a multi-level protection system of prevention, rectification and supplementation, and truly forms a long-term mechanism for safe production, to enhance intrinsic safety guarantee capabilities for itself and projects.

In 2021, the Company issued the Ten Mandatory Rules for Ensuring Safety with Iron Hand. With the keynote of “ensuring safety with iron hand”, the paper puts forward “mandatory requirements” from ten aspects, such as the implementation of principal responsibility, on-site grid management, “six no construction”, the implementation of design and construction scheme, subcontracting control, following work, construction acceptance and process inspection, strict and compulsory standard compliance and red line management, and responsibility investigation in the construction process. Each construction member enterprise of the Company has set up general inspection team and a regional inspection team, and established a regular supervision report system to eliminate all hidden dangers concerning safety, quality and environmental protection in time.

In 2021, the Company strengthened the tiered control of safe production risks in an all-round way. Based on the list of identification and evaluation of safety risks, the Company identified the control level, scope, priorities and persons in charge of safety risks at each layer, and implemented safety management and supervision responsibilities for every major safety risk and major hazard source. The Company strictly implemented risk control plans and measures, and strengthened the rigid implementation of risk control technologies and systems.

At important time nodes, the Company adopts LEC, expert investigation method, right and wrong judgment method, safety check list analysis and other methods to carry out omni-directional and full-process risk identification and evaluation, and to inform employees of risk sources and control measures by means of safety education and training, technical disclosure, update and publicity, etc. The Company regards risk identification, evaluation, ranking, and control as an important part of project safety planning.

In terms of emergency management, the Company formulates the Emergency Plan for Safety, Quality, Ecological Environment and Disaster Accidents (Events) (《安全质量、生态环境及灾害事故（事件）应急预案》) and carries out three kinds of emergency drills, namely desktop drills, functional drills, and comprehensive drills. During the “Safe Production Month” in June 2021, the Company extensively organized emergency drills.



## 强化安全施工管理

### Strengthening safe construction management

公司加强施工技术管理工作，与施工企业签订《安全质量责任书》，推进科学施工，持续优化策划，合理安排资源配置，坚决杜绝盲目赶工期、抢进度，做到手续不齐全不施工、地质条件不清楚不施工、安全措施不落实不施工、人员培训不到位不施工、隐患不排除不施工。项目过程中，随时做好施工图审核与勘探设计复核工作，对实际地质与设计图纸不符等问题及时向设计方及业主方反馈，及时落实变更方案，排除重大安全质量隐患。

The Company strengthens the construction technology management, enters into the Safety and Quality Responsibility Letter with the construction enterprise, promotes scientific construction, continuously optimizes planning, rationally arranges resource allocation, and resolutely avoids blindly meeting tight deadlines, to see that no construction is carried out without complete formalities, clear geological conditions, safety measures, well-trained personnel, and the elimination of hidden dangers. During the course of the project, the Company is ready to review the construction drawings and the exploration design at any time. In the event of discrepancies between the actual geology and the design drawings, the Company shall promptly feed back to the designer and the owner and implement the change plan in time, to eliminate major safety and quality risks.

## 加强安全设备保障

### Strengthening security equipment protection

公司进一步加强安全生产关键技术装备的研发推广力度，推动信息化、机械化、智能化技术和装备在危险工艺和关键环节上的应用，加强现代信息技术与安全生产的深度融合和推广应用。

The Company further strengthens the research and development and promotion of key technologies and equipment for safe production, promotes the application of informatization, mechanization, intelligent technology and equipment in dangerous processes and key aspects, and strengthens the further integration and promotion of modern information technology and safety production.

#### ○ 案例 Case

在北京丰台站建设中，公司运用BIM技术提高既有有线施工安全系数。基于BIM模型建设，对现场构筑物、既有线路、接触网等位置，大型机械布置和工作范围等进行分析，通过可视化模拟和碰撞检查，评估施工进度中工作空间的可用性和安全性，预估施工现场安全事故发生的概率和程度，提前作出规避或预防方案，有效地提高工作效率，排除安全隐患。

In the construction of Beijing Fengtai Station, the Company used the BIM technology to improve the safety factor of existing cable construction. Based on BIM construction, analysis of on-site structures, existing lines, contact nets, etc., large-scale mechanical layout and working range, etc., was conducted. Through visual simulation and collision inspection, the availability and safety of the working space in the construction were evaluated, the probability and degree of accidents at the construction site were predicated, and evasion or prevention plans were formulated in advance, to effectively improve work efficiency and eliminate potential safety hazards.

## 开展安全教育培训

### Carrying out safety education and training

公司不断完善项目安全教育培训体系，持续推广应用安全教育培训微课堂，编写和补充质量通病预防课件，利用多媒体安全培训工具箱对现场作业人员进行培训，实现安全教育培训的趣味化、信息化、系统化和规范化以及培训内容的多样化、专业化。2021年，公司举办了第三期安全生产高级人员培训班，共128人参加了集中封闭培训，邀请了国内权威专家学者、国家部委领导授课。培训期间，公司总裁陈文健与学员进行座谈并对参培的领导干部提出了安全工作要求。2021年，公司还举办了盾构管理及操作人员安全培训，注册安全工程师继续教育、“三类人员”考核续期等3期培训班，1,600余名专职人员参加培训。全公司各层级企业通过线上与线下相结合，共培训企业主要及分管领导、项目经理、安全质量专职人员及作业人员计36.5万余人次，持续提升专职队伍和员工安全素质。

The Company continuously improves the education and training system for project safety, continuously promotes the application of safety education training micro-classes, prepares and supplements the courseware on the prevention of common quality problems, and uses multimedia safety training toolbox to train field operators to realize the fun, informatization, systematization and standardization as well as diversification and specialization of training. In 2021, the Company provided the third training course on safe production for senior personnel. A total of 128 people participated in the centralized closed training. Domestic authoritative experts and scholars and leaders of national ministries and commissions were invited to give lectures. During the training, Mr. Chen Wenjian, President of the Company, had a discussion with the trainees and put forward the requirements of safe work for the cadres. In 2021, the Company also held three training classes involving various topics such as shield management and operator safety, continuing education for registered safety engineers, and renewal of the assessment period of "three types of personnel". More than 1,600 full-time employees received the training courses. By combining online and offline training, enterprises at all levels of the Company have trained more than 365,000 main and responsible leaders, project managers, full-time safety and quality personnel and operation personnel, continuously improving the safety quality of full-time teams and employees.



● 中铁大桥局珠机城际金海大桥项目部开展安全生产宣传教育活动

Zhuji Intercity Jinhai Bridge Project Department of China Railway Major Bridge Design Institute launched safety production publicity and education activities

## 职业健康

### Occupational health

公司严格遵循《中华人民共和国安全生产法》《中华人民共和国职业病防治法》等法律法规。2021年，公司按照《关于进一步加强职业健康工作的通知》，认真开展建设项目职业病危害预评价、全员职业健康教育培训、职业危害因素告知、完善健康体检档案、配备合格劳动保护用品、加强过程监督检查等工作。

公司加强职业病危害申报、监测、告知和警示工作，按照国家“职业病危害因素分类目录（2015年）”所列职业病的危害因素进行识别，及时、如实向项目所在地或公司注册地卫生行政主管部门主动申报并接受监督。公司坚持每年对职业病危害因素进行检测，每三年进行一次职业病危害评价。2021年，公司未发生职业病事件。

## 承包商劳工管理

### Labor management of contractors

公司把承包商的劳工管理作为准入条件，并作为评价要素纳入对承包商的日常评价和年度评价。公司与承包商签订的合同明确了劳务安全与劳工权益等条款，要求劳务承包商依照公司要求，落实安全生产与职业健康保障措施，为劳工提供安全就业环境和生产条件。公司为劳工提供工伤保险和意外伤害保险，定期对劳工开展安全卫生教育，最大限度地减少安全事故与职业危害。

公司下发《加强境外安全生产管理工作的通知》，要求把包括承包商员工在内的境外全体员工的安全放在首位，把境外企业统一纳入企业安全生产管理体系，并结合项目所在国有关规定设置安全生产专职机构，配置安全生产监管人员。公司提出了制定境外安全生产发展规划、加强境外项目安全生产管控、强化安全生产标准化管理、运用安全信息化技术、保障安全投入、加强安全培训、开展风险管控和隐患排查、提升应急处置能力、依规应对安全事故等9项加强境外安全生产的举措。

The Company strictly abides by laws and regulations such as the Production Safety Law of the People's Republic of China (《中华人民共和国安全生产法》) and the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases (《中华人民共和国职业病防治法》). In 2021, based on the Notice on Further Strengthening Occupational Health (《关于进一步加强职业健康工作的通知》), the Company conscientiously carried out the pre-assessment of occupational disease hazards for all construction projects, occupational health education and training for all employees, notification of occupational hazard factors, improvement of health examination files, provision of qualified labor protection supplies and strengthening of process supervision and inspection.

The Company strengthens the declaration, monitoring, notification and warning of occupational disease hazards, identifies them according to the Catalogue of Categorized Occupational Disease Hazard Factors (2015), promptly and truthfully reports to the competent public health authority at the location of projects or the Company's registration and accepts the supervision. The Company insists on the detection of occupational disease hazards every year and the evaluation of occupational hazards every three years. In 2021, there were no occupational disease incidents in the Company.

The Company regards the labor management of contractors as an entry condition and includes it as an evaluation element in the daily evaluation and annual evaluation of contractors. The contract entered into between the Company and contractors clarify the labor safety and labor rights and other provisions, requiring the labor contractors to implement measures of safety production and occupational health protection as required by the Company, to provide laborers with a safe employment environment and production conditions. The Company provides workers with work injury insurance and accident insurance, and regularly conducts safety and health education for workers to minimize safety accidents and occupational hazards.

The Company issued the Notice on Strengthening Management of Overseas Safety Production (《加强境外安全生产管理工作的通知》), which requires that the safety of all overseas employees, including contractor employees, be given the highest priority, and that overseas enterprises be integrated into the enterprise's safe production management system, a production safety special institution be set up, and personnel in charge of safe production supervision be assigned according to the relevant regulations of the countries where projects are located. The Company has put forward 9 measures to strengthen overseas safe production, such as formulating overseas production safety development plans, strengthening production safety management and control of overseas projects, strengthening production safety standardization management, applying safety information technology, ensuring safety operation, strengthening safety training, carrying out risk control and hidden danger investigation, improving emergency handling capacity, and dealing with safety accidents in accordance with regulations.

## 关注员工成长与发展

### Focusing on the Growth and Development of Employees

公司大力实施“人才强企”战略，把人才资源视为企业的第一资源，努力做到人才资源优先开发、人才结构优先调整、人才投入优先保证、人才制度优先创新，积极构建以品德、业绩和贡献为主的分类考核评价体系。进一步规范了动议、推荐、考察、决定等员工晋升程序。公司从组织员工培训、职业技能评选、鼓励资格认证三个方面为员工职业成长与发展提供系统地支持。

The Company vigorously implements the strategy of “strengthening the enterprise with talents”, regards human resources as its first resource, and strives to give priority to the development of human resources, the adjustment of the talent structure, the guarantee of talent input, and the innovation of the talent system. The Company also actively builds a classification assessment system based on morality, performance and contribution to further standardize employee promotion procedures such as motions, recommendations, inspections and decisions. The Company provides systematic support for employees’ career growth and development from three aspects: organizing employee training, appraisal and selection based on vocational skills, and encouraging qualification certification.

### 组织员工培训

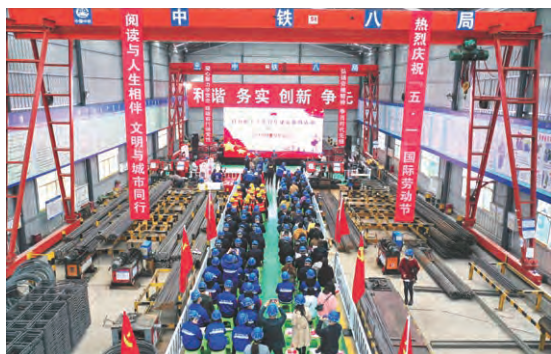
#### Organizing employee training

2021年，公司持续加强实施“大规模培训员工、大幅度提高素质”工程，持续优化完善培训制度体系，统筹分类抓好各层级干部教育培训，强化关键人才培养，确保培训与企业发展和人才培养保持高度一致，加快提升员工队伍素质，促进企业高质量发展。期间，公司及所属企业通过线下、在线等多种培训方式，进一步促进员工队伍能力素质提升。

In 2021, the Company continued to strengthen the implementation of the project of “training employees on a large scale and greatly improving quality”, continued to optimize and improve the training system, coordinate the education and training of officials at all levels, and strengthen the training of key personnel, in order to ensure that training is highly consistent with enterprise development and talent cultivation, accelerate the improvement of staff quality, and promote high-quality development of the Company. During this period, the Company and its affiliated enterprises further improved the ability and quality of the employees through offline training, online training and other training methods.

2021年，公司累计培训各类人员49万余人次，培训员工占员工总数的84%。其中，男员工培训20.4万人，占比83%，女员工培训3.9万人，占比82%；高级管理层培训709人，占比100%；中层管理人员培训9,079人，占比100%。员工平均受培训72课时，男性及女性员工平均受培训均约72课时；高级管理层平均受培训96课时，中层管理平均受培训90课时。

In 2021, the Company trained more than 490,000 personnel, accounting for 84% of the total number of employees. Among them, 204,000 were male, accounting for 83%, and 39,000 were female, accounting for 82%; 709 were senior management personnel, accounting for 100%; 9,079 were middle management personnel, accounting for 100%. The employees received an average of 72 hours of training, for male and female both. Senior management personnel received an average of 96 hours of training, while middle management personnel received an average of 90 hours.



● 中铁八局结合“五一”国际劳动节开展关怀职工读书活动  
China Railway No.8 Engineering Group Co. launched a reading activity caring for employees during the “May 1st” International Labor Day



● 中铁五局机械化公司青年书屋  
The Bookstore for the Youth of Mechanization Company (机械化公司) of China Railway No.5 Engineering Group Co., Ltd.

## 职业技能评选

### Appraising and selecting vocational skills

公司完善健全了职称评审制度体系，更加突出业绩、能力和实际贡献导向。2021年，评审通过正高级工程师436人，高级工程师3,774人；正高级会计师54人、高级会计师231人；正高级经济师60人、高级经济师109人；高级政工师328人。

2021年，公司举办了工程测量和试验两项国家级二类大赛，带动所属企业开展各类技能培训、岗位练兵、技术比武和技能竞赛等技能提升活动850多场次，16,000多人次参与，掀起了广大员工立足岗位学习技术、提升技能、岗位建功的热情，提升了技术技能人才队伍的整体素质水平。

2021年，公司选拔推荐中华技能大奖1名，全国技术能手9名；所属各级企业积极选拔推荐优秀员工，为佼佼者提供上升通道，展示了优秀技能人才风采，弘扬了企业员工的劳动精神和工匠精神。



中国中铁举办第四届职业技能竞赛暨第二十届青年职业技能竞赛测量员项目大赛

CREC held the 4th Vocational Skills Competition and the Surveyor Projects Competition of the 20th Youth Vocational Skills Competition (第四届职业技能竞赛暨第二十届青年职业技能竞赛测量员项目大赛)

The Company has improved the professional title evaluation system, focusing more on the performance, ability and actual contribution. In 2021, 436 professorate senior engineers and 3,774 senior engineers; 54 professorate senior accountants and 231 senior accountants; 60 professorate senior economists and 109 senior economists; and 328 senior political engineers passed the evaluation.

In 2021, the Company held two national second-class engineering survey and test competitions, and led its affiliated enterprises to carry out more than 850 skills upgrading activities such as skills training, post training, technical contests and skill contests, attracting more than 16,000 persons to participate. These competitions and events aroused the enthusiasm of employees to learn technology, improve their skills and make contributions, and improved the overall quality of the team of technical and skilled personnel.

In 2021, the Company selected and recommended 1 candidate for the Grand Skill Award of China, and 9 candidates for the National Technical Expert award. Enterprises at all levels actively select and recommend outstanding employees to provide a promotion pathway for the best employees. These awards demonstrate the elegant demeanour of CREC's excellent skilled personnel and carry forward the labor spirit and craftsman spirit of the employees.



中国中铁举办第四届职业技能竞赛暨第二十届青年职业技能竞赛试验员大赛  
CREC held the 4th Vocational Skills Competition and the Tester Competition of the 20th Youth Vocational Skills Competition (第四届职业技能竞赛暨第二十届青年职业技能竞赛试验员大赛)

## 鼓励资格认证

### Encouraging qualification certification

公司鼓励员工进行相关资格认证，并设有工程、会计、经济、政工多个系列的专业技术职务人员晋升评审委员会，按照公司有关规定对申报上述系列高级专业技术职务人员进行资格评审。2021年，公司评审通过高级职称4,994人。

公司高度重视技能人才队伍建设工作，按照“提素质、拓渠道、增待遇、强管理、树形象”五位一体的系统管理思路，努力培养建设一支规模适度、结构合理、素质优良、技艺精湛的技能人才队伍。2021年评定工匠技师5人、特级技师104人、高级技师517人、技师1,366人，高水平技能人才数量不断增加，质量稳步提升。

The Company encourages employees to apply for related qualification certification. The Company sets up promotion review committees for personnel taking up professional and technical posts in engineering, accounting, economics and political work, etc., and evaluates qualifications of the personnel applying for the above professional and technical posts in accordance with the Company's relevant regulations. In 2021, 4,994 employees passed the evaluation of senior professional titles of the Company.

The Company attaches great importance to the technical talents team building. Following the five-sphere management thinking of "improving quality, expanding channels, increasing remuneration, strengthening management, and establishing image", the Company strives to build a team that is appropriate in scale and reasonably structured and that boasts high-quality skilled personnel with exquisite craftsmanship. In 2021, the Company appraised 5 craftsman technicians, 104 special technicians, 517 senior technicians, and 1,366 technicians. The number of highly skilled personnel is on the rise and their quality is steadily improving.

## 产品责任 Product Responsibility

公司秉承“不断增强企业核心优势，发挥龙头企业示范带动作用，做中国建筑行业的领跑者；走全球发展道路，提升企业国际影响力，建设具有全球竞争力的世界一流综合性建筑产业集团”的愿景，已发展成为集勘察设计、施工安装、房地产开发、工业制造、科研咨询、工程监理、资本经营、金融信托、资源开发和外经外贸于一体的多功能、特大型企业集团。公司致力于奉献精品工程、精良产品和精益服务，目前工程项目遍布中国除台湾省以外的各省市自治区以及全球90多个国家和地区。

## 产品质量保证 Product quality assurance

公司秉承“百年大计，质量第一”的方针，按照“政府监督、社会监理、企业自控、用户评价”的工程质量监督管理模式，建立健全工程质量保证体系与组织体系。在质量管理方面，公司认真贯彻实施ISO9000体系标准和《质量管理体系文件》《质量程序文件》《工程质量监督管理办法》等文件办法，不断强化施工过程卡控，加强施工过程中的自检、互检和交接检验工作，以确保施工工程质量始终处于受控状态，从而使工程质量达到有关规范、标准和合同要求。

公司全面开展质量安全通病预防及整治工作。对在建工程施工质量通病进行排查整治，发现问题和隐患迅速按照定人、定期、定岗、定责、定点的“五定”原则整改，重大隐患及时上报，及时处置，坚决将工程质量隐患消灭在开通运营之前。

公司持续加强安全质量标准化建设。指导各企业和项目把优秀的管理制度、管理流程、管理模式、管理做法广泛应用到各管理层级，并根据实际情况不断完善、持续改进，充分发挥管理效能。把安全质量管理的各项要求嵌入工程建设各个环节的管理标准、技术标准和作业标准中，把标准细化到每个工种和每道工序，成为施工作业的强制性规范和评价标准，固化作业程序，达到闭环管理。

2021年，公司按照《中国中铁杯优质工程评选办法》，以规范优质工程评审工作流程，通过深入开展工程创优活动，从而推动企业和施工现场加强工程质量管理，最终确保工程质量水平的持续改进与提高。公司作为建筑类企业，不存在因安全与健康理由须回收产品的情形。

Adhering to the vision of “continuously strengthening the core advantages of enterprises, giving play to the leading role of leading enterprises, and being a leader in the Chinese construction industry; taking a global development path, enhancing the Company’s international influence, and building a world-class comprehensive construction industry group with global competitiveness”, has developed into a large-scale enterprise group integrating survey and design, construction and installation, real estate development, industrial manufacturing, scientific research consulting, engineering supervision, capital management, financial trust, resource development and foreign trade and other businesses. The Company is committed to dedicating high-quality engineering, excellent products and lean services. The Company’s current engineering projects cover all provinces, municipalities and autonomous regions in China except Taiwan province, and more than 90 countries and regions around the world.

Following the “hundred-year plan with quality priority” policy and based on the project quality supervision and management model of “government supervision, social supervision, enterprise self-control and user evaluation”, the Company establishes and improves the project quality assurance system and organizational system. In terms of quality management, the Company conscientiously implements ISO9000 system standards and documents and measures such as the Quality Management System Documents (《质量管理体系文件》), Quality Procedure Documents (《质量程序文件》), and Measures for Supervision and Management of Project Quality (《工程质量监督管理办法》). The Company constantly strengthens the control of the construction process, and strengthens the self-inspection, mutual inspection, and handover inspection in the construction process to ensure that the quality management of construction projects is always under control, so that the project quality meets relevant specifications, standards and contract requirements.

The Company has comprehensively carried out the prevention and rectification of common quality and safety problems. The common defects in the construction quality of projects under construction are investigated and rectified, and the problems and hidden dangers should be quickly rectified in accordance with the “five fixed” principles of fixed personnel, fixed time, fixed post, fixed responsibility and fixed locations. Major hidden dangers are reported and dealt with in a timely manner, and the hidden dangers of project quality are resolutely eliminated before projects are put into operation.

The Company continues to strengthen the standardization of safety and quality, guides all enterprises and projects to apply excellent management systems, management processes, management modes and management practices to various management levels, continuously improve and optimize according to actual conditions, and give full play to management effectiveness. The Company incorporates the requirements of safety and quality management into the management standards, technical standards and operating standards in all aspects of engineering construction, refines the standards involving each post and process, form mandatory specifications and evaluation standards for construction operations, and solidify operating procedures to achieve closed-loop management.

In 2021, the Company implemented the “Selection Method of CREC’s Quality Project Cup” (《中国中铁杯优质工程评选办法》) to regulate the quality project review process. Through in-depth project excellence activities, the Company and the construction site are promoted to strengthen project quality management, and ultimately ensure continuous improvement and optimization of project quality. As a construction company, the Company does not have to recall products for safety and health reasons.

2021年，公司获中国建设工程鲁班奖17项；获国家级优质工程奖54项，其中金奖4项。公司所属企业中铁装备获中国质量领域最高奖——中国质量奖。



世界跨度最大的双层悬索桥、长江上首座双层公路大桥武汉杨泗港长江大桥（鹦鹉堤-八铺街堤）正桥工程

Main Bridge Project of Wuhan Yangsigang Yangtze River Bridge (Yingwu Embankment-Bapujie Embankment), the world's longest double-deck suspension bridge and the first double-deck highway bridge on the Yangtze River

In 2021, the Company won 17 China Construction Engineering Luban Prizes and 54 National Quality Engineering Awards, including 4 Gold Awards. CREG, an affiliated enterprise of the Company, won the highest quality award in China - China Quality Award.



新建北京至张家口铁路（含崇礼铁路）工程获国家优质工程金奖

The newly built Beijing-Zhangjiakou Railway (including Chongli Railway) project won the National Gold Award for Quality Engineering

## 中国中铁入选2020~2021年度中国建设工程鲁班奖名单

### List of the First Batch of Projects in 2020-2021 Winning the China Construction Engineering Luban Prize

双辽至洮南高速公路建设项目 Construction project of Shuangliao to Taonan Highway

成都地铁7号线工程 Chengdu Metro Line 7 project

武汉杨泗港长江大桥（鹦鹉堤-八铺街堤）正桥工程

Main bridge project of Wuhan Yangsigang Yangtze River Bridge (Yingwu Embankment-Bapujie Embankment)

邕江综合整治和开发利用景观及亮化工程（北岸清川大桥至五象大桥段）

Project of Comprehensive Rehabilitation, Development and Landscape Utilization and Lighting of Yongjiang (Qingchuan Bridge to Wuxiang Bridge in north bank)

新八达岭隧道及长城站工程 New Badaling Tunnel and Great Wall Station project

新建蒙华铁路洛河大桥 Construction of Menghua Railway Luohe Bridge

新建南昌至赣州铁路客运专线站房和生产生活用房及配套工程CGFJ-5标

Tender CGFJ-5 for construction of Nanchang to Ganzhou railway passenger dedicated line station and production and living rooms and supporting projects

甘肃敦煌机场扩建工程航站区等工程 Construction of terminal area and other projects for expansion of Dunhuang Airport

宁安铁路芜湖站工程 Wuhu Station project of Ning'an Railway

川藏公路（西藏境）通麦至105道班段整治改建工程迫龙沟特大桥 Construction of Polonggou bridge for renovation project of Tongmai to national road 105 section in Sichuan - Tibet Highway (Tibet)

云南省牛栏江-滇池补水工程 Yunnan Niulanjiang Dianchi water supply Project

环湖南路古城段景观及道路提升改造工程

Landscape and road upgrading project for ancient city section of Huanhu South Road

新建南阳东车站站房及相关工程 Construction of Nanyang East station house and related projects

新建北京至张家口铁路清华园隧道工程 Qinghuayuan tunnel construction project for Beijing - Zhangjiakou Railway

雅康高速泸定大渡河大桥 Luding Dadu River Bridge of Yakang Highway

浙江省乐清湾大桥及接线工程 Zhejiang Yueqing Bay Bridge and connection project

浙江省台州湾大桥及接线工程 Zhejiang Taizhou Bay Bridge and connection project

## 知识产权管理

### Intellectual property management

中国中铁坚持以发展需求为目标，严格遵守《中华人民共和国专利法》和《中华人民共和国商标法》，认真推行和落实《企业知识产权管理规范》国家标准，按照《企业知识产权管理规范》（GB/T29490-2013），全面提高公司知识产权的创造和运营能力，促进知识产权流的通和利用。修订了公司专利管理规定，下发了关于全面提升公司专利质量的文件，完成了工法、专利业务在科技管理信息系统在线办理工作，做到管理全覆盖、无死角。根据工法开发和专利授权情况，加大了省部级工法开发任务指标、专利授权任务指标（增加了发明专利的授权占比），推动量质齐升。注重专利、工法、标准的布局，对自主知识产权的关键技术给予重点支持，构建支撑企业发展和提升企业竞争力的专利储备，推动企业在市场竞争中占据有利地位。

2021年，公司工法开发和专利申请计划全面完成。6月，国家知识产权局和世界知识产权组织发布第二十二届中国专利奖授权决定，中国中铁荣获中国专利奖金奖1项、银奖1项、优秀奖7项的历史最好成绩，公司知识产权数量和质量得到了进一步提升。2021年，公司共获得国家科技进步奖6项，技术发明奖1项，获省部级工法835件，授权专利7,170项，其中发明专利1,176项，PCT专利110项。

Taking development needs as the target, the Company strictly abides by the Patent Law of the People's Republic of China 《中华人民共和国专利法》 and the Trademark Law of the People's Republic of China 《中华人民共和国商标法》, and earnestly pursues and implements the national standards of the Specifications for the Administration of Intellectual Property Rights of Enterprises 《企业知识产权管理规范》. According to the Specifications for the Administration of Intellectual Property Rights of Enterprises 《企业知识产权管理规范》 (GB/T29490-2013). The Company comprehensively improves its ability to create and operate intellectual property rights, and promotes the flow and use of intellectual property rights. The Company revises the patent management regulations, issues a notice on comprehensively improving the quality of CREC's patents, and completes the online processing of construction methods and patent businesses in the technology management information system. The Company has increased the task index of provincial and ministerial industrial method development and patent authorization task index (increasing the proportion of invention patent authorization) according to the situations of industrial method development and patent authorization, promoting the upgrade of both quantity and quality. The Company attaches importance to the layout of patents, construction methods, and standards, with major support on key technologies of independent intellectual property rights, and creates a patent reserve that underpins enterprise development and enhances enterprise competitiveness.

In 2021, the Company completed the industrial method development and patent application plan. In June, the State Intellectual Property Office and the World Intellectual Property Organization issued the decision of granting the 22nd China Patent Award. The Company created a historical best record of winning one gold prize, one silver prize and seven excellence prizes of China Patent Award, further improving the quantity and quality of its intellectual property. In 2021, the Company won 6 National Science and Technology Progress Awards, 1 Technology Invention Award, 835 provincial and ministerial industrial method development awards, and owned 7,170 authorized patents, including 1,176 invention patents and 110 PCT patents.



## 隐私和数据保护

### Privacy and data protection

中国中铁全面保护客户商业敏感信息和个人隐私。公司按照习近平总书记关于网络安全工作“四个坚持”的重要指示精神，贯彻落实及遵守《网络安全法》《数据安全法》《个人信息保护法》《国家网络空间安全战略》《关键信息基础设施安全保护条例》《网络安全审查办法（征求意见稿）》等网络安全相关的法律法规、重要政策文件要求，进一步规范公司网络信息安全管理，保护客户隐私和企业数据安全，保障信息系统的正常、高效、安全运行。2021年，公司加强网络安全基础设施建设，健全网络安全人员队伍，全面提升网络安全防护能力、管理能力和应急处置能力。公司强化员工网络安全意识提升工作，通过网络安全宣传、安全专题讲座、线上培训等线上线下相结合的方式，切实提升了全公司员工的网络安全意识、防护技能和网络诈骗意识。

2021年，公司按照国资委、公安部等上级单位的工作要求，积极开展2021年度国家重要时期网络安全保障工作，取得了在全年重保期间“零安全事件”的成绩。2021年10月，公司举行了内部网络安全攻防演练活动，组织了5支攻击队伍、6家防守企业参与演练活动，达到了“保系统、建队伍、提能力”的本年度攻防演练目标。

公司持续组织商密系统建设与推广工作，十余家二级企业开展了商密系统建设，构建了总分两级技术架构，加强了全公司商业秘密技术防护能力。

CREC comprehensively protects customers' business sensitive information and personal privacy. In accordance with the important instructions of General Secretary Xi Jinping on the "Four Adherence" for network security, the Company earnestly implements and abides by the Cybersecurity Law, Data Security Law, Personal Information Protection Law, National Cyberspace Security Strategy, Regulations on the Security protection of Critical Information Infrastructure, cybersecurity Review Measures (Draft for Comments) and other cybersecurity related laws and regulations, as well as important policy documents, further standardizes the security management of network information, in order to protect the customer privacy and enterprise data security, and guarantee the normal, efficient and safe operation of the information system. In 2021, the Company strengthened the construction of network security infrastructure, and improved the network security team, so as to comprehensively enhance the network security protection capacity, management capacity and emergency response capacity. The Company focused on the promotion of the staff's network security awareness, and practically improved the staff's network security awareness, protection skills and network fraud awareness through network security publicity, security lectures, online training and other integrated online and offline means.

In 2021, the Company actively carried out the network security work in the important periods of 2021 according to the work requirements of the SASAC, Ministry of Public Security and other superior units, achieved the result of "zero safety incident" during the key periods. In October 2021, the Company held an internal network security attack and defense drill, and organized 5 attack teams and 6 defense enterprises to participate in the drill, achieving the objectives of this year's attack and defense drill: "protecting systems, building teams and improving capabilities".

The Company continued to organize the construction and promotion of business secret system. More than ten secondary enterprises participated in the construction of business secret system, and built a two-level technical framework, strengthening the technical protection ability of the Company.



● 中铁四局五公司福厦铁路项目部正在使用自主研发的BIM管理系统  
The Fuxia Railway Project Department of the Fifth Company of China Railway No.4 Engineering Group Co., Ltd. is using the self-developed BIM management system

## 重视客户沟通

### Attaching importance to customer communication

中国中铁始终坚持“精益求精，持续改进”的总体思路，坚持以人为本的理念，以对国家、对人民、对客户、对企业高度负责的态度，不断提高服务质量。公司高度重视与客户的沟通，积极营造良好的客户关系，设立了指定渠道（包括电话、传真和邮件）供客户提出投诉，成立了相关监管中心，认真对待客户的投诉与建议。公司收到客户投诉和建议后，相关监管中心将及时作出调查，并将结果报告至公司经理层，依据相关制度给予妥善处理，并向客户及时反馈处理结果。公司与各地方政府、大型企业等客户签订战略合作协议或服务协议时，均会明确定期联系沟通机制和法律适用及争议解决条款。2021年，我们作为上市公司，共收到业主有关诉求13起，均采取积极态度予以回应，依法依规及时处理，有关诉求均得到妥善解决，诉求回复率、满意率100%。

CREC always adheres to the general idea of “striving for excellence and continuous improvement”, adheres to the people-oriented concept, and continuously improves the quality of services with a highly responsible attitude towards the country, the people, the customers, and the enterprise. The Company attaches great importance to communication with customers, actively builds good customer relationships, sets designated channels (including telephone, fax and mail) for customers to file complaints, establishes a related supervisory center, and seriously treats customers' complaints and suggestions. After the Company receives customer complaints and suggestions, the relevant supervisory center will promptly make investigations and report the results to the Company's managerial level, give proper treatment according to the relevant system, and provide timely feedback to customers on the results. When the Company enters into strategic cooperation agreements or service agreements with various local governments, large enterprises and other customers, it will clearly specify regular communication mechanisms and clauses of application of law and dispute resolution. In 2021, as a listed company, we received a total of 13 requests from owners, all of which were responded to in a positive manner and dealt with in a timely manner in accordance with the laws and regulations, and the requests were properly resolved, with a 100% response rate and satisfaction rate.

## 供应商管理

### Supplier Management

### 建立公平运行机制

#### Fair operation mechanism establishment

公司秉持科学、高效、公平的管理理念持续建立健全供应商管理体制机制，通过供应商公开招募、准入评审和考核评价，建立战略、优质、合格供应商名录并进行动态管理，推动公司供应链管理持续升级。公司严格开展供应商综合评审，按照“先评审、后采购”的原则，从技术、质量、服务、价格、技术、信誉等方面对供应商进行全面评审，辅之以实地考察，遴选优质供应商资源，优化供应结构，拓宽采购渠道，打造高质量采购价值链；公司实行阳光采购，倡导公平竞争，搭建了全公司统一的采购电子商务信息化平台——中国中铁采购电子商务平台（即鲁班电子商务网），公开采购信息、固化采购流程，充分利用采购电子商务平台开展各类产品和服务上网采购，促进采购活动公开化、透明化。截至本报告期末，公司电商平台拥有各类注册供应商21万余家，其中境内供应商21.7万家，境外供应商24家。

Upholding the scientific, efficient and fair management concept, the Company continues to establish and perfect the supplier management system and mechanism. Through open supplier recruitment, access review and evaluation, the Company establishes a strategic, high-quality and qualified supplier catalog and implements dynamic management, to drive the continuous upgrade of supply chain management. The Company strictly carries out comprehensive supplier review based on the principle that “review comes before procurement” and in terms of technology, quality, service, price, reputation, etc., supplemented by on-the-spot investigation. The Company selects high-quality suppliers, optimizes the supplier structure, and expands procurement channels, to create a high-quality procurement value chain. The Company implements sunshine procurement, promotes fair competition, and establishes a unified Company-wide e-commerce procurement platform, CREC Procurement E-commerce Platform (namely Luban E-commerce Network), which publicizes procurement information and solidifies procurement processes. In addition, the Company makes full use of the e-commerce procurement platform to purchase various products and services online, and promotes open and transparent procurement activities. As of the end of the reporting period, there were more than 210,000 registered suppliers on the e-commerce platform of the Company, including 217,000 domestic suppliers and 24 overseas suppliers.

## 禁止贿赂等非法活动

### Prohibition of bribery and other illegal activities

公司实行抵制商业贿赂承诺制，在《供应商管理规定》中明确要求各类供应商在办理注册申请时须签署《供应商承诺书》，承诺遵守国家反腐败相关法律法规，守法诚信；公司在选择供应商时，充分考虑供应商的环境及社会风险因素，均在采购文件中明确各类供应商须严格遵守国家反不正当竞争等相关法律法规，要求提供生产经营许可证、资质证书、无严重违法失信记录等，禁止贿赂等非法活动，成交供应商还应签署廉洁协议书并严格履约；公司对供应商采取准入制度，建立统一、全面的供应商评价指标体系和评价模型，制定了《供应商不良行为认定标准和限制交易期限表》建立供应商不良行为负面清单，并将贿赂员工行为列入供应商重大不良行为认定标准，对存在相应不良行为的供应商，公司将对其采取限制交易措施，在一定期限内禁止其参与公司新的采购活动，引导供应商廉洁经营。2021年，公司依规对部分违反廉洁规定的供应商进行了限制交易管理，营造了公平竞争的采购环境。

## 推动供应商履行社会责任

### Promoting suppliers to fulfill their social responsibilities

公司建立供应商准入及评价管理体系，开展合格供应商准入评审，审查供应商诚信经营、安全生产、环境保护等情况，对合格供应商实行供应目录管理。公司在开展供应商日常评价和年度评价中，大力倡导品质理念和环保理念，对供应商所提供的原材料质量、环境保护措施等进行综合评价，根据评价结果将供应商划分为合格、优质、战略供应商等相应管理等级。

公司与供应商签订的合同中，明确了劳务安全、维护农民工权益、环境保护等方面的约束性条款，要求供应商积极落实职业安全卫生保障措施，加大安全管理投入，持续改善安全设备设施，为农民工提供安全就业环境和生产条件；对农民工开展安全卫生教育和培训，积极防止劳动过程中安全事故的发生，最大限度地减少职业危害；认真落实国家有关工伤保险和意外伤害保险的规定，把农民工纳入保险范围之内；进一步落实农民工劳动报酬的支付规定，通过建立农民工工资专用账户制度、保证金制度、代发工资制度等，确保农民工工资按时足额发放到位。公司注重加强对供应商保障劳务安全、维护农民工权益、保护环境的日常监督，引导其履行社会责任。

The Company implements a commitment system to resist commercial bribery. In the Supplier Management Regulations (《供应商管理规定》), various suppliers are explicitly required to sign the Supplier Commitment Letter (《供应商承诺书》) when they apply for registration, and they should promise to abide by national laws and regulations related to anti-corruption and be law-abiding and upright. When the Company selects suppliers, it shall take into full consideration of the environmental and social risks of suppliers, it is clear in the procurement documents that all types of suppliers must strictly abide by relevant laws and regulations such as the national Anti-Unfair Competition Law, and require suppliers to provide production and operation licenses, certificates of qualification, no serious violations of the law and breach of trust records, etc., and prohibit bribery and other illegal activities. Suppliers should also sign integrity agreements and strictly implement the agreement. The Company adopts an access system for suppliers, establishes a unified and comprehensive supplier evaluation index system and evaluation model, formulates the Supplier Bad Behavior Determination Criteria and Restricted Transaction Period Table (《供应商不良行为认定标准和限制交易期限表》), establishes a negative list of supplier bad behaviors, and includes bribery of employees in the identification standard of suppliers' major bad behaviors. For suppliers with corresponding bad behaviors, the Company will take measures to restrict transactions and prohibit them from participating in the Company's new procurement activities within a certain period of time, and guide suppliers to operate incorruptibly. In 2021, the Company carried out restricted transaction management on some suppliers that violated the integrity regulations in accordance with the integrity agreement, and created a fair competition procurement environment.

The Company establishes a supplier access and evaluation management system, conducts a qualified supplier access review for supplier integrity management, safe production, environmental protection, etc., and implements supply directory management for qualified suppliers. While carrying out daily evaluations and annual evaluations of suppliers, the Company strongly advocates the ideas of quality and environmental protection, comprehensively evaluates the quality of raw materials provided by suppliers, environmental protection measures, etc., and classifies suppliers into corresponding managerial levels including qualified, superior and strategic suppliers in accordance with the evaluation results.

In the contracts between the Company and suppliers, the binding clauses on labor safety, safeguarding the rights and interests of peasant workers, and environmental protection are specified. Suppliers are required to actively implement occupational safety and health protection measures, increase investment in safety management, and continue to improve safety equipment and facilities, to provide a safe employment environment and production conditions for peasant workers. The Company conducts safety and health education and training for peasant workers, and actively prevents safety accidents in the work process, to minimize occupational hazards. The Company earnestly implements national regulations on work injury insurance and accident insurance, and includes peasant workers in the insurance coverage. The Company further implements the provisions on the payment of peasant workers' labor remuneration, and ensures that peasant workers' remunerations are paid in full and on time by establishing a special account system, a security system, and a payroll system. The Company lays emphasis on daily supervisions on suppliers to ensure labor safety, safeguard the rights and interests of peasant workers, protect the environment, and guides them to fulfill their social responsibilities.

## 社区投资 Community investment

中国中铁在自身发展的同时高度重视回馈社会，积极主动承担社会责任，活跃在抗灾抢险第一线，鼓励员工参与志愿活动，支持基础教育，重视中华文化的传承和保护，为构建和谐美好社会持续贡献力量。

### 抗击新冠肺炎疫情 Fight against COVID-19

公司坚决执行属地政府疫情防控政策，坚持“外防输入、内防反弹”，统筹疫情防控和生产经营，全年未发生确诊病例、无症状感染者。

公司在大战大考中彰显担当，积极响应属地政府防控政策，调动精干队伍、设备投身石家庄、广州、郑州、南京、阿拉善、西安等地疫情防控工作，积极承担方舱实验室、集中隔离点等基础设施建设，受到各地政府高度评价。

公司广大干部职工纷纷发挥志愿者精神，积极开展捐款捐物，自愿投入身边的社区、村镇防疫。聚焦老、弱、病、残、孕等重点群体，围绕解决社区工作人员不足、老百姓社区（村）封闭、物流不畅、购物难、情绪不安等难点问题，协助开展入户登记、核酸检测、运输防疫物资、隔离消杀、接听电话热线等工作，筑起了志愿“防疫墙”。



● 中铁上海局七公司青年志愿者深夜协助社区开展核酸检测  
Young volunteers from the Seventh Company of China Railway Shanghai Group Co., Ltd. assisted the community in carrying out nucleic acid testing late at night

While developing, CREC attaches great importance to giving back to the society, takes the initiative to assume social responsibilities, actively participates in the front line of disaster relief, encourages employees to participate in voluntary activities, supports basic education, puts emphasis on the inheritance and protection of the Chinese culture, and makes continuous contributions to the construction of a harmonious and beautiful society.

The Company resolutely implemented the epidemic prevention and control policies of the local government, adhered to the principle of “preventing import from abroad and preventing rebound at home”, and coordinated epidemic prevention and control with production and operation. There were no confirmed cases or asymptomatic infected persons in the Company throughout the year.

The Company embraced responsibility with passion during this big test. We actively responded to the prevention and control policies of the local governments, mobilized competent teams and equipment to fight the epidemic in Shijiazhuang, Guangzhou, Zhengzhou, Nanjing, Alxa and Xi'an, and actively undertook the construction of temporary laboratories, centralized isolation centers and other infrastructure. We were highly regarded by the local governments for our efforts.

Cadres and employees of the Company gave full play to the volunteer spirit, actively donated money and materials, and volunteered for the epidemic prevention in the communities and villages. Focusing on the elderly, weak, sick, disabled, pregnant and other key groups, and addressing difficult problems such as insufficient community workers, closed communities (villages), poor logistics, shopping difficulty, and emotional unrest, we assisted in carrying out household registration, nucleic acid testing, transportation of epidemic prevention materials, isolation and disinfection, and answering telephone hotlines, thus setting up a voluntary “epidemic prevention wall”.



● 中铁四局二公司驰援南京方舱实验室建设工作  
The Second Company of China Railway No.4 Engineering Group Co., Ltd. Helped construct the Nanjing Mobile Cabin Laboratory (南京方舱实验室)

### ○ 案例 Case

2021年1月，石家庄地区爆发新冠肺炎疫情，公司积极驰援石家庄黄庄公寓隔离场所建设，调集援建队伍近1,500人，协调大型机械设备百余台投入现场施工，经过5天日夜奋战，完成1,512套集成房屋主体拼装并交付，以及土地平整、路面硬化、板房拼接和水电安装等工作，为抗疫前线贡献中国中铁力量，受到了石家庄政府的高度赞扬。

In January 2021, COVID-19 broke out in Shijiazhuang. The Company actively assisted in the construction of the isolation site of Huangzhuang Apartment in Shijiazhuang, mobilized a construction assistance team of nearly 1,500 persons, and coordinating more than 100 large machines for the site construction. After 5 days of hard work, we completed the structure assembly and delivery of 1,512 integrated houses, as well as the work of ground leveling, road hardening, splicing of slab houses and installation of water and electricity facilities. We were highly praised by the Shijiazhuang government for contributing the force of CREC to the front line of fighting the epidemic.

### ○ 案例 Case

2021年6月上旬，广州市本土新增多例新冠肺炎病例，公司驻广州地区各企业积极参与疫情防控、核酸检测、隔离点建设等相关工作。中铁隧道局大岗项目部在短短15分钟内，集结志愿者40名，调转水马710个，连夜为附近居民筑起隔离墙。

In early June 2021, there were sporadic outbreaks of COVID-19 in Guangzhou. The member companies of the Group in Guangzhou actively participated in epidemic prevention and control, nucleic acid testing, isolation site construction and other related work. Dagang Project Department of China Railway Tunnel gathered 40 volunteers in just 15 minutes and transferred 710 water-filled barriers to build the separation wall for nearby residents overnight.

### ○ 案例 Case

中海外、中铁国际等企业海外青年志愿者积极协助实施“春苗行动”，全力参与海外疫情防控，受到我驻玻利维亚大使馆等明电表彰。

Overseas young volunteers from COVEC, China Railway International and other enterprises actively assisted in the implementation of "Spring Seedling Action" and participated in overseas epidemic prevention and control. They were commended by the Chinese Embassy in Bolivia.



## 抢险救援

### Emergency rescue

公司持续推动应急救援体系建设，继续加强三支国家专业救援队建设，按照应急救援体系建设工作总体部署，持续推进昆明救援队、贵阳救援队基地建设和救援装备升级改造，并逐步拓展应对各类自然灾害综合应急救援能力。同时，围绕基地建设项目的实施和基地的新定位、新任务，全面系统开展补充救援人员、完善指挥系统、健全协调机制、配套基础设施、完善规章制度、加强培训演练和构建保障体系等工作，有效提升基地专业救援、快速机动和综合保障能力。

2021年，公司三支专业应急救援队伍全年出警8次，救援生还人数7人、搜寻遇难人数1人。三支专业救援队伍先后收到表扬信、感谢信、表彰文件（函）、锦旗等共计43项次，其中省部级荣誉及感谢信12项次，其他各级政府、企业、国外使领馆表扬信、感谢信、表彰文件（函）等31项。特别是2021年11月，中铁二局昆明队从全国1,263支安全生产应急救援队伍中脱颖而出，荣获首届“全国应急管理系统先进集体”荣誉称号，成为全国3支获此殊荣的国家安全生产应急救援队伍之一，救援队代表于11月5日受到习近平总书记亲切会见。



中国中铁救援队紧急驰援云南隧道坍塌抢险  
CREC Rescue Team rushed to rescue people from the collapsed tunnel in Yunnan



中铁七局紧急驰援太焦铁路抢险  
China Railway No.7 Engineering Group Co., Ltd. rushed to restore Taijiao Railway

The Company continues to promote the construction of the emergency rescue system and strengthen the building of three national professional rescue teams. According to the overall plan for the construction of the emergency rescue system, the Company continues to promote the construction of the bases of the Kunming rescue team and the Guiyang rescue team and the upgrading and transformation of rescue equipment, and gradually expands their comprehensive emergency rescue capabilities to respond to various natural disasters. Centering on the implementation of construction projects at the bases and the new positioning and new tasks of the bases, the Company comprehensively and systematically carries out the following work: supplementing rescue personnel, improving the command system, perfecting the coordination mechanism, providing supporting infrastructure, improving rules and regulations, strengthening training exercises, and establishing a guarantee system. At the same time, the Company meaningfully strengthens the professional rescue, rapid maneuver and comprehensive guarantee capabilities of the bases.

In 2021, the three professional emergency rescue teams of the Company were dispatched for 8 times, saving 7 people and searching for 1 victim. The three professional rescue teams received 43 letters of commendation, letters of appreciation, commendation documents (letters) and flags, among which 12 were letters of honor and appreciation at provincial and ministerial levels, and 31 were letters of commendation, letters of appreciation and commendation documents (letters) from governments at other levels, enterprises and foreign embassies and consulates. In particular, in November 2021, Kunming Team of China Railway No.2 Engineering stood out from the 1,263 emergency rescue teams nationwide and won the honorary title of the first “Advanced Collective of National Emergency Management System”, becoming one of the three national production safety emergency rescue teams that have won this award. Representatives of the rescue team received a cordial meeting with General Secretary Xi Jinping on November 5.



国家隧道应急救援中铁二局昆明队荣获首届“全国应急管理系统先进集体”荣誉称号

The Kunming Team of China Railway No.2 Engineering Group Co., Ltd. won the honorary title of the first Advanced Group with National Emergency Management System (全国应急管理系统先进集体) in the national tunnel emergency rescue

## 案例 Case

2021年8月23日，云南省红河县某隧道塌方，中铁二局昆明队按照应急管理部和地方政府协调，积极响应，经77小时救援，被困5人全部获救。

On 23 August 2021, the a tunnel collapsed in Honghe County, Yunnan Province. Kunming Team of China Railway No.2 Engineering responded actively to the coordination of the Ministry of Emergency Management and the local government. After 77 hours of rescue, all the five trapped people were rescued.

## 社区服务

### Community service

中国中铁长期以来坚持“地企文明、和谐共建”的工作思路，志愿服务敬老院、医院、街道、社区、学校等地方单位，以实际行动履行企业社会责任。

CREC has always insisted on the work ideas of “local corporate civilization and harmonious construction”, offered volunteer services to gerocomium, hospital, street office, community, school and other local institutions, fulfilling its corporate citizenship responsibility with actual actions.

2021年，全公司以“青年文明号、青年安全质量监督岗、青年突击队”三支队伍为载体，组建青年志愿服务队2,000余支，投入到包含疫情防控、防汛救灾、助老帮困、助力高考等工作在内的各类志愿服务

In 2021, with the three teams of “youth civilization, youth safety and quality supervision post, and youth shock brigade” as the carrier, the Company set up more than 2,000 voluntary service teams who devoted themselves to the various types of voluntary services, including pandemic prevention and control and construction of specialized hospital facilities. More than 30,000 volunteers conducted nearly 4,000 voluntary service activities and assisted



中国中铁开展第五季“五彩梦想”圆梦行动  
CREC launched the Fifth Season “Colorful Dreams (五彩梦想)” Dream-achieving Action

务达到3万余人次，开展各类志愿服务活动近4,000余次，帮扶人数超过3.5万人次。精心打造中国中铁“五彩梦想”接力计划品牌项目，联合中国志愿服务基金会通过腾讯公益平台启动公开募捐，参与人数达3.2万余人，大力弘扬社会道德风尚，积极构建和谐

more than 35,000 people. We created CREC “Colorful Dream” relay program, and jointly launched public fundraising with the China Volunteer Service Foundation through the Tencent public welfare platform. More than 32,000 persons participated in the event, contributing their share to vigorously fostering social morals and actively building a harmonious society.

## 案例 Case

2021年7月20日，河南郑州爆发特大暴雨自然灾害，中铁七局电务公司组织120余名职工成立通信、信号、电力、电气化4个青年突击队参与抢险任务，连续奋战36个日夜，敷设光电缆75条公里、接触线架设调整23条公里，恢复电力贯通线15条公里。中铁一局电焊工袁格兵在抢险中，在隧道积水中连续施救16个小时，救起被困群众50多名，被新华社、中央电视台等媒体广泛报道，受到社会各界赞誉。

On 20 July 2021, Zhengzhou, Henan Province was hit by a heavy rainstorm. The telecommunication company of China Railway No. 7 Engineering organized more than 120 workers to set up 4 young commandos for communication, signal, electric power and electrification to participate in the rescue mission. They worked continuously for 36 days and nights, laying 75 kilometers of optical cables, setting up and adjusting 23 kilometers of contact lines and restoring 15 kilometers of power through-lines. Yuan Gebing, an electric welder from China Railway No. 1 Engineering, made continuous rescue for 16 hours in the flooded tunnel and saved more than 50 trapped people. He was widely reported by Xinhua News Agency, CCTV and other media and praised by all walks of life.

## 教育和文化

### Education and culture

公司重点面向生产一线员工、海外员工、困难员工、艰苦环境工作的员工及家庭，以及先进模范人物、有突出贡献的科技专家等，广泛开展“两节”送温暖、夏送清凉、一年四季送健康活动。筹集发放送温暖和送清凉资金1.95亿元，走访慰问职工（民）工25万人次；发放金秋助学款661万元，资助职工（民）工子女2,358人次。开展“情暖一线，就地过年”迎新春慰问活动，邀请全国总工会领导到丰台火车站现场慰问。制定下发《关于进一步推进“我为群众办实事”走深走实的指导意见》《工会干部常态化联系群众工作的指导意见》，构建了为群众办实事长效机制。全公司二级工会干部共建立职工联系点310多个，聚焦“权益维护、因病致困、健康关爱、普惠服务”等九个方面，累计为职工办实事700余件，推动解决了一线职工的急难愁盼问题。

The Company carries out the activities of delivering warm in the “two festivals”, bringing coolness in summer, and providing health services throughout the year, particularly to production frontline employees, overseas employees, employees in difficulties, employees and families working in a tough environment, advanced model figures, and scientific and technological experts with outstanding contributions, etc. The Company has raised and distributed RMB195 million for delivering warm and bringing coolness, visited and extended its regards to 250,000 migrant workers, offered a student loan of RMB6.61 million in the autumn, and subsidized 2,358 children of migrant workers. We carried out the Chinese New Year greeting activities of “Bringing Warm to the Front Line, and Staying Local for the Spring Festival”, invited the All-China Federation of Trade Unions to Fengtai railway station for on-site condolence. We formulated and issued the Guiding Opinions on Further Promoting “I Do Practical Things for the People” and the Guiding Opinions on Trade Union Cadres Contacting the People on a Regular Basis, establishing a long-term mechanism for doing practical things for the people. The second-level trade union cadres have established more than 310 employee contact points across the Company, focusing on nine aspects, including “rights and interests protection, illness-related difficulties, health care and inclusive services”. They have handled more than 700 practical matters for employees, helping to solve the urgent and anxious problems of front-line workers.



# 专题一： 践行“三个转变”重要指示

## Topic 1: Implementing the Important Instructions of “Three Transformations”

推动中国制造向中国创造转变

Promoting the Transformation from Being ‘Made in China’ to Being ‘Created in China’

推动中国速度向中国质量转变

Promoting the Transformation from Chinese Speed to Chinese Quality

推动中国产品向中国品牌转变

Promoting the Transformation from Chinese Products to Chinese Brands



劳动光荣  
知识崇高  
人才宝贵  
创造伟大



台盾构机成功下线

2014年5月10日，习近平总书记在视察中国中铁装备集团时，提出要“推动中国制造向中国创造转变、中国速度向中国质量转变、中国产品向中国品牌转变。”5月10日中国品牌日由此诞生。7年来，我们始终牢记习近平总书记的嘱托，认真贯彻落实“三个转变”重要指示。

On 10 May 2014, when General Secretary Xi Jinping inspected China Railway Engineering Equipment Group Co., Ltd. (CREG), he proposed to “promote the transformations from being ‘Made in China’ to being ‘Created in China’, from China’s Speed to China’s Quality, and from Chinese Products to Chinese Brands.” The Chinese Brand Day on 10 May was thus born. For the past seven years, we have always kept in mind and carefully implemented General Secretary Xi Jinping’s important instructions of “Three Transformations”.



● 中铁工业研发的世界首台桩梁一体架桥机“共工号”

“Gonggong No.”, the world’s first pile beam integrated bridge erecting machine developed by China Railway Hi-tech Industry Corporation Limited



● 中国中铁设计制造的直径为9.86米土压平衡盾构出口到法国，为世界轨道交通建设提供中国方案

The earth pressure balance shield with a diameter of 9.86 meters designed and manufactured by CREC was exported to France, providing Chinese solutions for the construction of global rail transit

## 推动中国制造向中国创造转变

Promoting the Transformation from Being ‘Made in China’ to Being ‘Created in China’

### 完善创新体系

#### Innovation system improvement

公司制定发布了《实用技术创新大赛及推广应用管理规定（试行）》。针对科技创新平台建设进行专项调研和督促，提出国家级、省部级和公司级研发平台建设的政策建议。对《中国中铁科技成果奖励管理办法》作出补充规定，对企业当年新获得认定国家级创新平台给予100-300万不等的奖励。进一步推动国家级创新平台建设，组织召开高铁实验室第十三次理事会及第三次技术委员会会议，进一步明确高铁实验室发展方向和建设思路。围绕建筑行

The Company formulates and issues the Practical Technology Innovation Competition and Promotion and Application Management Regulations (Trial) (《实用技术创新大赛及推广应用管理规定(试行)》). For the construction of scientific and technological innovation platforms, the Company conducts special investigation and supervision, puts forward policy recommendations for the construction of national, provincial and ministerial- and company-level R&D platforms. The Company makes supplementary provisions to the Measures for the Management of Incentives for CREC’s Scientific and Technological Achievements (《中国中铁科技成果奖励管理办法》), and gives a reward ranging from RMB1 million to RMB3 million to enterprises accredited as national innovation platforms in the year. The Company further promotes the construction of a national innovation platform, and organizes and convenes the thirteenth council meeting and

业关键核心技术，开展科研攻关。依托常泰、马鞍山等长江大桥，黄茅海跨海通道工程、琼州海峡跨海通道等重难点工程，开展桥梁勘察设计理论及方法、桥梁新结构与新材料、桥梁智能建造技术和装备的技术研究；依托大渡河桥等一批高原工程项目，开展高原峡谷千米级跨度铁路悬索桥关键技术、高海拔深埋复杂地质及环境隧道钻爆法修建技术等课题研究。

## 引领科技进步

### Leading technological progress

2021年，公司共获得国家科技进步奖6项、技术发明奖1项，中国专利奖金奖1项、银奖1项、优秀奖7项，中国土木工程詹天佑奖15项；获得授权专利7,170项，其中发明专利1,176项，PCT等海外专利110项，获得省部级工法835项。

公司所属企业参与完成的《铁路轨道用高锰钢抗超高应力疲劳和磨损技术及应用》荣获2021年度国家科学技术发明奖二等奖，参与完成的《深水大断面盾构隧道结构/功能材料制备与工程应用成套技术》等6项成果荣获2021年度国家科学技术进步奖二等奖。

截止本报告期末，公司拥有“高速铁路建造技术国家工程研究中心”“盾构及掘进技术国家重点实验室”和“桥梁结构健康与安全国家重点实验室”三个国家实验室及10个博士后工作站，1个国家地方联合研究中心（数字轨道交通技术研究与应用国家地方联合工程研究中心），44个省部级研发中心（实验室）（新增8），19个国家认定企业技术中心和120个省级认定企业技术中心（新增13）；组建了20个专业研发中心。

截止本报告期末，公司累计荣获国家科技进步和发明奖127项，其中特等奖5项、一等奖16项，中国土木工程詹天佑奖167项，荣获省部级（含国家认可的社会力量设奖）科技进步奖4,253项。拥有专利24,973项，其中发明专利5,157项，海外专利157项。拥有国家级工法166项，省部级工法4,609项。

the third technical committee meeting of the high-speed railway laboratory, to further specify the development direction and construction ideas of the high-speed railway laboratory. Around the key core technologies in the construction industry, the Company carries out scientific researches. Relying on Yangtze River bridges of Changtai, Maanshan, etc., Huangmaohai cross-sea channel project, Qiongzhou Strait cross-sea channel and other important and difficult projects, the Company carries out technology researches on theory and methods of bridge survey and design, new structures and new materials of bridge, bridge intelligent construction technology and equipment; relying on a number of plateau projects such as the Dadu River Bridge, the Company launches research of topics including the plateau canyon kilometer-level span railroad suspension bridge key technology, drill-and-blast construction technology for high-altitude deep-buried complex geological and environmental tunnels.

In 2021, the Company won a total of 6 National Prizes for Progress in Science and Technology, 1 Technological Invention Award, 1 Gold, 1 Silver and 7 Excellence China Patent Awards, 15 Zhan Tianyou Civil Engineering Prizes; the Company was granted 7,170 patents, including 1,176 invention patents and 110 PCT patents, and 835 construction methods received provincial and ministerial level recognition.

The Technology of High Manganese Steel Used for Railway Tracks to Resist Ultra-High Stress Fatigue and Wear and Its Application completed by the Company's subsidiaries won the second prize of the 2021 National Science and Technology Invention Award, and six achievements including Shield Tunnel Structure with Large Deepwater Section/Functional Material Preparation and Engineering Application of Complete Sets of Technology won the second prize of the 2021 National Science and Technology Progress Award.

As of the end of the reporting period, the Company had three national laboratories including "State Engineering Research Center of High-Speed Railway Construction Technology", "State Key Laboratory of Shield and Tunneling Technology", "State Key Laboratory of Bridge Structure Health and Safety" and 10 post-doctoral workstations, 1 national local joint research center (a national and local joint engineering research center for digital rail transit technology research and application), 44 provincial and ministerial-level R&D centers (laboratories) (8 new ones), 19 nationally recognized enterprise technology centers and 120 provincially recognized enterprise technology centers (13 new ones); and the Company set up 20 professional R&D centers.

As of the end of the reporting period, the Company won a total of 127 National Science and Technology Progress and Invention Awards, including 5 Special Awards and 16 First Prizes, 167 Zhan Tianyou Civil Engineering Prizes, and 4,253 Provincial and Ministerial-Level Science and Technology Progress Awards (including nationally recognized awards established by social forces). The Company had 24,973 patents, including 5,157 invention patents and 157 PCT patents. The Company had 166 national-level construction methods and 4,609 provincial and ministerial-level construction methods.

2021年国家科技奖励获奖情况  
National Science and Technology Awards in 2021

序号 S/N	项目名称 Name of Project	奖种 Type of Award	获奖等级 Grade of Award
1	铁路轨道用高锰钢抗超高应力疲劳和磨损技术及应用 Technology of high manganese steel used for railway tracks to resist ultra-high stress fatigue and wear and its application	技术发明奖 Technical Invention Award	二等 Second Prize
2	深水大断面盾构隧道结构/功能材料制备与工程应用成套技术 Shield tunnel structure with large deepwater section/functional material preparation and engineering application of complete sets of technology	科技进步奖 Science & Technology Progress Award	二等 Second Prize
3	深部复合地层隧(巷)道TBM安全高效掘进控制关键技术 Key technology of safe and efficient tunneling control of TBMs for tunnels (lanes) under deep composite strata	科技进步奖 Science & Technology Progress Award	二等 Second Prize
4	高速铁路Ⅲ型板式无砟轨道系统技术及应用 Technology of model III plate-type ballastless track systems for high-speed railways and its application	科技进步奖 Science & Technology Progress Award	二等 Second Prize
5	高速铁路用高强高导接触网导线关键技术及应用 Key technology of high-strength and high-conductivity contact network wire for high-speed railways and its application	科技进步奖 Science & Technology Progress Award	二等 Second Prize
6	轨道交通大型工程机械施工安全关键技术及应用 Key technology for construction safety of large engineering machinery for rail transit and its application	科技进步奖 Science & Technology Progress Award	二等 Second Prize
7	重大工程黄土灾害机理、感知识别及防控关键技术 Key technology of mechanism, perception, identification, prevention, and control of loess disasters in major projects	科技进步奖 Science & Technology Progress Award	二等 Second Prize

## 全面创新发展

### Comprehensive innovation and development

公司制定了《关于进一步贯彻落实习近平总书记“三个转变”重要指示精神推动企业创新发展的意见》，以科技创新为突破，以管理创新为保障，以质量提升为根本，以品牌塑造为目标，全力推动质量变革、效率变革、动力变革，努力打造世界一流的中国创造、中国质量、中国品牌。组建了中铁“三个转变”研究院，开展推动“三个转变”的路径和方法的理论研究和实践探索，加快企业在产业转型、技术创新、质量提升、品牌建设等方面的突破。2021年，公司积极开展管理创新成果评选，共产生优秀成果108项，其中10项被评为第二十八届全国企业管理现代化管理创新成果。同时，公司作为主要起草者之一，与中国企业改革发展研究会、国家发改委经济体制与管理研究所、中国标准化研究院等共同起草的《企业高质量发展评价指标》团体标准，填补了中国企业高质量发展标准领域的空白。

The Company formulates the Opinions on Further Implementing the Spirit of the Important Instructions of General Secretary Xi Jinping's "Three Transformations" to Promote Enterprise Innovation and Development (《关于进一步贯彻落实习近平总书记“三个转变”重要指示精神推动企业创新发展的意见》). By taking technological innovation as a breakthrough point, innovation management as a guarantee, quality improvement as the fundamental and brand-building as the goal, the Company goes all out to promote quality change, efficiency change and power change, and strives to create a world-class brand with Chinese quality. CREC establishes a research institute on "Three Transformations" to carry out theoretical research on and explore the path and method of promoting "Three Transformations", while speeding up breakthroughs in industrial transformation, technological innovation, quality improvement and brand building. In 2021, the Company actively carried out the appraisal and election of management innovation results. The Company appraised and selected 108 outstanding results, 10 of which won the 28th National Enterprise Management Modernization and Innovation Award. Meanwhile, as one of the main drafters, the Company, together with the China Enterprise Reform and Development Society, Institute of Economic System and Management of National Development and Reform Commission and the China National Institute of Standardization, drafted the group standard of Enterprise High Quality Development Evaluation Index (《企业高质量发展评价指标》), which fills the gap in the field of quality development standards for Chinese enterprises.

## 推动中国速度向中国质量转变

### Promoting the Transformation from Chinese Speed to Chinese Quality

#### 着力质量提升，推进品质革命

##### Focusing on quality improvement and advancing the quality revolution

公司不断加强质量精细化管理，分层次、分行业实施全面质量管理(TQM)，积极推动企业ISO9001质量管理体系换版升级。积极引入卓越绩效管理先进质量管理方式，开展标准化技术和工艺改造，建立工艺参数及质量在线监控系统。同时开展与国内外优质产品的质量比对，鼓励以用户为中心的微创新，改善用户体验，激发消费潜能，满足绿色环保、可持续发展、消费友好等需求。

The Company continuously strengthens quality precision management, implements TQM at different levels and industries, and actively promotes the upgrade of the Company's ISO9001 quality management system. We actively introduce advanced quality management methods such as superior performance management, carry out standardized technology and process transformation, and establish process parameter and online quality monitoring systems. At the same time, we carry out quality comparisons with high-quality products from home and abroad, encourage user-centered micro-innovation, improve user experience, and stimulate consumer potential, to satisfy the needs of green environmental protection, sustainable development, and friendly consumption.

#### 保证产品质量，建设精品工程

##### Ensuring product quality and building quality projects

2021年，公司参建的北京冬奥会重要配套工程京张高铁、跳台滑雪场地“雪如意”等一大批重点项目开通运营或顺利竣工，习近平总书记视察京张高铁、“雪如意”等冬奥项目并作出重要指示，让我们备受鼓舞。我们将继续砥砺前行，推动中国速度向中国质量转变。

In 2021, a number of key projects such as the Beijing-Zhangjiakou High-Speed Rail and “Snow Ruyi” at the ski jumping center, as important supporting projects for the Beijing Winter Olympics, were put into operation or successfully completed. We are encouraged by General Secretary Xi Jinping's inspection and important instructions on the operation of the Winter Olympics projects such as Beijing-Zhangjiakou High-Speed Rail and “Snow Ruyi”. We will continue to forge ahead and promote the transformation from China's Speed to China's Quality.

#### 案例 Case

2021年5月10日，中国中铁与国务院国资委在北京共同举办了“中国智造品牌论坛暨中央企业高端装备制造创新成就展”，科技部、工信部、中央网信办、国资委有关领导以及部分中央企业相关人员参加论坛，22家中央企业的30余套模型和实物参加成就展，展示了中国高端装备与智能制造的最新成果。

On 10 May 2021, CREC and the SASAC of the State Council jointly organized China Intelligent Manufacturing Brand Forum and Innovation Exhibition of High-end Assembly Manufacturing of Central Enterprises in Beijing. The relevant leaders of the Ministry of Science and Technology, the Ministry of Industry and Information Technology, the Office of the Central Cyberspace Affairs Commission, the SASAC and relevant personnel of some central enterprises participated in the forum, and more than 30 sets of models and objects of 22 central enterprises participated in the achievement exhibition, demonstrating the latest achievements of China's high-end equipment and intelligent manufacturing.

## 推动中国产品向中国品牌转变

### Promoting the Transformation from Chinese Products to Chinese Brands

#### 品牌建设体系

##### Brand building system

2021年，公司在践行“三个转变”、发展品牌经济、寻求品牌高质量发展过程中，进一步提升企业品牌运营能力，向品牌价值增值的品牌规范化管理、品牌资产专业化运营和子（产品）品牌整合营销等中高级品牌运营管理阶段扎实推进。编制《品牌建设“十四五”规划》，从品牌管理体系、品牌发展基础、品牌传播水平、品牌资产管理、国际化品牌建设、品牌文化内涵几方面，明晰了“中国产品向中国品牌转变”的发展路径，推动品牌建设向运营管理阶段迈进，逐步打造科学规范、运转高效的 brand 管理制度与运营机制，为塑造卓越品牌形象提供有力支持。

In 2021, in the process of implementing the “three transformations”, developing the brand economy, and seeking high-quality brand development, the Company further enhanced the enterprise’s brand operation capabilities, and solidly advanced toward middle and high level brand operation and management stages of brand value appreciation, such as standardized brand management, professional operation of brand assets, and subsidiary (product) brand integrated marketing. The Company compiled the 14th Five-Year Plan for Brand Building (《品牌建设“十四五”规划》), which clarified the development path, “transition of Chinese products to Chinese brands”, from the aspects of brand management system, brand development foundation, brand communication level, brand asset management, international brand building, and brand cultural connotation. The Company promoted brand building to the stage of operation and management, gradually built a scientific, standardized, and efficient brand management system and operation mechanism, and provided strong support for building an excellent brand image.

#### 诚信经营

##### Business integrity

公司始终重视企业信用管理，全面兑现了各项合同承诺，把诚信履约贯穿于企业生产经营活动始终，无不良经营行为。

The Company always attaches great importance to the corporate credit management and fully fulfills all the contractual commitments. It always implements the principle of integrity performance throughout the production and operation activities without bad business practices.

2021年，所属中铁五局被中国施工企业协会评为年度工程建设诚信典型企业，中铁八局获评中国建筑行业协会AAA级企业信用等级证书，中铁六院被中国建设工程造价管理协会评为工程造价咨询AAA级信用企业。

In 2021, China Railway No. 5 Engineering was rated as integrity model enterprise of annual engineering construction by the China Construction Enterprise Association, and China Railway No. 8 Engineering an AAA-level enterprise credit rating certificate by the China Construction Industry Association, China Railway No. 6 Engineering an AAA-level credit enterprise for engineering cost consulting by China Construction Engineering Cost Management Association.

2021年，全公司如期保证了京哈高铁、张吉怀高铁、拉林铁路、北京冬奥会场馆、青山长江大桥等一批重点工程如期建成。

In 2021, the Company assured the completion of a number of key projects such as the Beijing-Harbin High-speed Railway, the Zhangjiajie-Jishou-Huaihua High-speed Railway, the Lhasa-Nyingchi Railway, the Beijing Winter Olympics venue, and the Qingshan Yangtze River Bridge as scheduled.

## 投资者沟通

### Investor communication

公司高度重视与投资者的沟通。自2007年在上海证券交易所和香港联合交易所上市以来，中国中铁坚持以信息披露为核心，合规率始终保持100%。制定了《投资者关系管理制度》《A股信息披露管理制度》等10余项投资者关系管理制度，并建立临时报告、定期报告、业绩发布会、投资者接待、资本市场危机处理等工作流程。

公司持续探索并树立了“大投关”“立体投关”理念，管理层定期参加业绩推介会、股东大会、现金分红说明会、投资者教育保护等活动。构建了主责部门牵头，相关业务部门与下属企业积极参与的全方位、专业化、立体式的投资者沟通交流格局。

报告期内，累计召开96场视频电话及现场会议，与2,095家机构交流，接听投资者热线电话1,228次，回复上交所E互动平台投资者问题189个，处理IR邮箱邮件1,327封；邀请公司股东、投资者、分析师等赴公司旗下银川水务公司开展“绿色环保水务”主题调研，增进了投资者对公司水务环保、生态环境、智慧城市建设等绿色可持续发展方面业务情况的进一步了解。

自上海证券交易所开展信息披露评价工作以来，公司连续8年荣获A类评价；年内荣获《新财富》“最佳IR港股公司”、天马奖—“中国主板上市公司投资者关系最佳董事会奖”、证券时报“A股公司ESG百强”、金紫荆“十四五最具投资价值上市公司”等多个奖；荣获中国上市公司协会以及北京上市公司协会“业绩说明会优秀实践案例”“上市公司ESG优秀实践案例”“‘一带一路’优秀实践案例”等奖项，进一步树立了公司在资本市场的良好形象。

The Company attaches great importance to the communication with investors. Since listing on the Shanghai Stock Exchange and the Stock Exchange of Hong Kong in 2007, CREC has put disclosure at the core of compliance and maintained a compliance rate of 100%. The Company has formulated more than 10 systems for managing investor relations including the System for the Management of Investor Relations (《投资者关系管理制度》) and the System for the Management of A-share Information Disclosure (《A股信息披露管理制度》) and established work processes of interim reports, periodic reports, performance briefing, investor reception and handling of capital market crises.

The Company continues to explore and establish the concepts of “major investment relations” and “three-dimensional investment relations”, and the management participates in performance promotion meeting, general meeting, cash bonus presentation, investor education protection and other activities on a regular basis. The Company has created an all-round, professional, three-dimensional landscape of investor communication, where principal departments in charge take the lead in and related business departments and subordinate enterprises actively participate in the communication with investors.

During the reporting period, the Company totally held 96 teleconferences and on-site meetings, exchanged views with 2,095 institutions, answered the investor hotline 1,228 times; answered 189 questions from investors on the E interactive platform of the Shanghai Stock Exchange and handled 1,327 IR emails; and invited shareholders, investors and analysts to visit the Company's Yinchuan Water Company and conduct research on the theme of “green and environmental protection water affairs”, which enhanced investors' further understanding of the Company's green and sustainable development business conditions such as water environmental protection, ecological environment, and smart city construction.

Since the Shanghai Stock Exchange carried out the evaluation of information disclosure, the Company has won the Class A evaluation for 8 consecutive years; during the year, the Company won the “Best IR Hong Kong Listed Company” by New Fortune, Tianma Award — “Best Board of Directors Award for Investor Relations of Chinese Main Board Listed Companies”, “Top 100 ESG Companies in A-Shares” of Securities Times, “Listed Company with the Most Investment Value in the 14th Five-Year Plan” of Golden Bauhinia and many other awards; and won awards by China Association of Listed Companies and Beijing Association of Listed Companies Awards such as “Excellent Practice Case of Performance Briefing Conference”, “Listed Company ESG Excellent Practice Cases” and “Belt and Road’ Excellent Practice Cases”, further establishing the Company's good image in the capital market.

## 专题二： 巩固拓展脱贫攻坚成果， 开启乡村振兴新篇章

Topic 2:  
Consolidate and Expand Poverty Alleviation Results  
and Open a New Chapter in Rural Revitalization

定点帮扶规划

Targeted Poverty Alleviation Planning

定点帮扶概要

Summary of Targeted Poverty Alleviation

定点帮扶成效

Effectiveness of Targeted Poverty Alleviation Efforts

定点帮扶计划

Targeted Poverty Alleviation Plan



2021年，中国中铁深入学习贯彻习近平总书记关于巩固拓展脱贫攻坚成果同乡村振兴有效衔接的重要指示批示精神，按照党中央、国务院和国资委有关部署要求，切实履行企业社会责任，充分发挥自身优势，努力为乡村振兴战略落地开花贡献中国中铁力量。

In 2021, CREC thoroughly studied and implemented the spirit of General Secretary Xi Jinping's important instructions on consolidating and expanding poverty alleviation results and linking poverty alleviation with rural revitalization. In accordance with the relevant deployment requirements of the Party Central Committee, the State Council and SASAC, the Company earnestly fulfilled its corporate social responsibility, gave full play to its own advantages, and industriously contributed to the implementation of the rural revitalization strategy with the strength of CREC.

## 定点帮扶规划

### Targeted Poverty Alleviation Planning

公司成立了由主要领导任组长，党委副书记、总会计师、纪委书记任副组长，人力资源部等13个部门负责人为成员的定点帮扶工作领导小组。2021年，定点帮扶工作领导小组先后召开两次专题会议，研究部署了干部选派、帮扶计划、重点帮扶项目实施等事宜，确保定点帮扶工作更具针对性、科学性和实效性。

公司审议通过了《2021年定点帮扶工作计划》，明确了年度帮扶计划任务，把巩固拓展脱贫攻坚成果、防止出现规模性返贫作为首要任务。公司审议通过了《脱贫攻坚总结表彰实施方案》，评选表彰了10名脱贫攻坚先进个人和5家脱贫攻坚先进企业。

The Company established a targeted assistance work leading group with the main leader as the group leader, the Deputy Secretary of the Party Committee, the Chief Accountant, and the Secretary of the Discipline Inspection Commission as the deputy team leaders, and the heads of 13 departments including the Human Resources Department as members. In 2021, the leading group of targeted assistance work held two special meetings successively and studied and deployed matters including cadre selection, assistance plans and implementation of key assistance projects to ensure that the targeted assistance work is more targeted, scientific and effective.

The Company considered and adopted the 2021 Targeted Assistance Work Plan (《2021年定点帮扶工作计划》), which clarified the tasks of the annual assistance plan, prioritized consolidating and expanding the achievements of poverty alleviation and prevented large-scale return to poverty. The Company considered and adopted the Implementation Plan of Poverty Alleviation Summary and Commendation (《脱贫攻坚总结表彰实施方案》), and selected and commended 10 advanced individuals and 5 advanced enterprises in poverty alleviation.



公司主要领导积极开展政府对接和实地调研。2021年9月8日，公司党委书记、董事长拜会中央农办副主任，国家乡村振兴局党组书记、局长王正谱，双方就巩固拓展脱贫攻坚成果和全面推进乡村振兴工作进行了会谈；10月25日-26日，公司总裁陈文健赴山西保德县调研考察，举行了重点援建项目签约仪式、走访慰问了建档立卡贫困户、与县委县政府召开了巩固脱贫攻坚成果及乡村振兴工作座谈会，就做好巩固脱贫攻坚成果、有效衔接乡村振兴与当地进行了深入交流。11月10日-12日，公司党委副书记、工会主席、执行董事王士奇带队到湖南汝城县、桂东县调研考察，了解巩固脱贫攻坚成果及乡村振兴工作情况，针对就业难、产业发展相对单一等问题，提出切实解决方案。

The main leaders of the Company actively carried out government docking and field research. On 8 September 2021, the Company's party Secretary and Chairman met with Wang Zhengpu, Deputy Director of the Central Agricultural Office, Party Secretary and Director of the National Rural Revitalization Bureau, and the two parties held talks on consolidating and expanding the achievements of poverty alleviation and comprehensively promoting rural revitalization; from 25 to 26 October, the Company's President Chen Wenjian went to Baode County, Shanxi Province for investigation and supervision, held the signing ceremony of key aided construction projects, and visited and extended its regards to registered impoverished households, and held a work symposium about consolidating the achievements of poverty alleviation and rural revitalization with the County Party Committee and County Government, and conducted in-depth exchanges with the local government on consolidating the achievements of poverty alleviation and effectively connecting rural revitalization. From 10 to 12 November, Wang Shiqi, Deputy Secretary of the Company's Party Committee, Chairman of the Labor Union and Executive Director, led a team to investigate and inspect Rucheng County and Guidong County in Hunan to learn about the consolidation of poverty alleviation achievements and rural revitalization work, and proposed practical solutions to problems, such as employment difficulties and relatively single industrial development.



中国中铁驻村扶贫工作队干部刘峰下乡走访查看水稻种植情况

Liu Feng, a cadre of village-based poverty alleviation team of CREC, visited the countryside to check how the rice planting is



## 定点帮扶概要

### Summary of Targeted Poverty Alleviation

公司坚持教育帮扶“拔穷根”，打造乡村振兴硬核支撑。在桂东县投入帮扶资金2,000万元，捐建寨前镇希望学校二期项目，进一步改善办学条件；在汝城县投入帮扶资金2,000万元，捐建汝城职中体艺馆项目，有效解决学生体育活动场所较少、活动面积不足的情况；在保德县投入帮扶资金2,000万元，捐建保德县第十一小学宿舍楼项目，解决偏远乡村儿童入校住宿问题。在汝城县职中，持续投入资金改善办学设施，不断提高师资水平，先后邀请公司技能人才代表，党的十九大代表、全国劳模、央企楷模白芝勇担任客座高级讲师，全国青年岗位能手、技能大师张慧到校授课，汝城职中成为湖南省最好中职院校之一。

公司坚持就业帮扶“增收入”，打造乡村振兴特色品牌。在桂东县投入2,250万元捐建的桂东工业园区大塘片区三栋标准厂房正式投入使用，已有6家企业入驻，解决了300余名易地搬迁群众就业问题。所属企业在汝城项目部聘用当地劳务人员100余人。开展“人人有技能”培养工程，2021年直接投入35万元，实施湘菜特色厨师培训、科技特派员实用技术培训10期，共培训605人。开展“1+X”技能培训试点，全面提升基层干部、农技人员和致富带头人专业技能。汝城县“人人有技能”培养工程被评为全国“终身教育学习品牌项目”。在保德县累计投入320余万元（2021年：20.08万元），采取奖补学费的方式，打造“保德好司机”就业培训。

公司坚持产业帮扶“活源头”，打造乡村振兴多重引擎。在桂东县，联合县旅游民宿协会开办民宿业务培训班，助力当地民宿产业做大做强做优；投入20万元物资材料与沅江镇光明村共同建设山间林道，助力该村楠竹产业发展；帮助当地打造桂东茶叶品牌，推广桂东手工茶非遗文化，投入35万元在茶叶重镇清泉镇建设了一座占地240平方米的“非遗茶史馆”。在保德县，引入所属中铁第一太平物业公司，与县政府合作打造“保德好物业”劳务品牌，解决易地搬迁户转业就业难题。

The Company insists on “pulling out the roots of poverty” through education and assistance, and builds hard-core support for rural revitalization. The Company invested RMB20 million as assistance funds in Guidong County for the construction of the second phase project of Zhaiqian Town Hope School to further improve school conditions; the Company invested RMB20 million as assistance funds in Rucheng County for the construction of Rucheng Vocational Middle School Sports and Art Center project, which effectively solved the problem of lack of students’ sports activities venues and activity area; the Company invested RMB20 million as assistance funds in Baode County for the construction of the dormitory building project of the No. 11 Primary School in Baode County to solve the problem of accommodation of children from remote towns and villages. In Rucheng Vocational Middle School, we continued to invest funds to improve school facilities and the level of teachers. We have successively invited Bai Zhiyong, the representative of the Company’s skilled talents, the representative of the 19th National Congress of the Communist Party of China, national model worker, and model of central enterprises as guest senior lecturers, and Zhang Hui, national youth post expert and skills master to come to the school and teach. As a result, Rucheng Vocational Middle School has become one of the best secondary vocational schools in Hunan Province.

The Company insists on “increasing income” through employment assistance, and builds a characteristic brand of rural revitalization. The three standard workshops in the Datang area of Guidong Industrial Park in Guidong County, which received donation for RMB22.5 million, have been officially put into use, and 6 enterprises have settled in, solving the employment problem of more than 300 relocated people. The affiliated enterprise of the Company employed more than 100 local laborers in the Rucheng project department, carried out the “everyone has skills” training project, directly invested RMB350,000 in 2021 to implement specialty chef training of Hunan cuisine and practical technical training for science and technology commissioners for 10 sessions, training a total of 605 people. The Company carried out the “1+X” skills training pilot to comprehensively improve the professional skills of grass-roots cadres, agricultural technicians and those who took the lead in becoming prosperous. Rucheng County’s “everyone has skills” training project was rated as a national “Lifelong Education Learning Brand Project”. A total of more than RMB3.2 million (2021: RMB200,800) was invested in Baode County to create “Baode Good Drivers” employment training by rewarding and subsidizing tuition fees.

The Company adheres to the “living source” of industrial assistance and creates multiple engines for rural revitalization. In Guidong County, together with County Tourism and Homestay Association, the Company held a homestay business training class to help the local homestay industry become bigger, stronger and better; the Company invested RMB200,000 in materials and jointly built mountain forest roads with Guangming Village, Oujiang Town, to help the village’s industrial development of phyllostachys pubescens; the Company invested RMB350,000 million to build a 240-square-meter “Intangible Cultural Heritage Tea History Museum” in Qingquan Town, an important tea town to help the local to build the brand of Guidong tea and promote the intangible cultural heritage of Guidong handmade tea. In Baode County, the First Pacific Property Company affiliated to CREC was introduced to cooperate with the county government to create the labor service brand of “Baode Good Property” to solve the problem of changing jobs and employment of relocated households.

公司坚持消费帮扶“促致富”，打造乡村振兴长效机制。在企业电商平台开设专区长期展示销售定点帮扶县农产品。加大消费帮扶工作力度，鼓励各级工会发挥自身优势，有力推动定点帮扶县农产品销售。同时，挂职干部积极想方设法，有的化身网络主播、有的采取认购模式，带动当地农产品销售。组织当地农业企业多次到公司所属企业推介推广，上线央企帮扶网、中铁慧园、中铁鲁班网、汝味真湘微信小程序等购物平台，切实让老百姓信心立起来、腰包鼓起来。2021年，全公司共购买定点帮扶县农产品911.41万元，其他贫困县农产品574.34万元，合计1,485.75万元。

公司建好文化帮扶“塑新风”，打造乡村振兴美丽画卷。在保德县推动开展农村人居环境“六乱”整治行动，立足当地村容村貌实际，集中力量帮助整治村内道路、农户庭院、田间地头等重点区域，人居环境得到明显改观。丰富村民精神文化生活需求，邀请保德县文化馆文艺小分队走进獭窝村开展“我们的中国梦”文化进万家惠民演出，倡导乡风文明，助力乡村振兴。在汝城县开展美化人居环境行动，设置竹篱笆围挡，增设绿化带，实行分片家禽集中圈养；所属中铁广州局带人带机械帮扶拆除危旧房6处，旱厕3间，清理建渣500多方，平整拓宽进组路800多米，为打造美丽乡村奠定了坚实基础。

The Company insists on “promoting wealth” through consumption assistance, and creates a long-term mechanism for rural revitalization. The Company set up a special area on the enterprise e-commerce platform to display and sells the agricultural products from targeted poverty alleviation counties for a long time. The Company intensified the efforts to support consumption assistance and encouraged trade unions at all levels to give full play to their own advantages, which vigorously promoted the sales of agricultural products in designated assistance counties. At the same time, the cadres assuming a temporary post actively tried every means to promote the sale of local agricultural products, such as acting as network anchors and adopting the subscription model. The Company organized local agricultural enterprises to come to the companies many times that they affiliated with to promote their products and sold their products online, such as the Central Enterprise Assistance Network, CREC Huiyuan, CREC Luban.com, Ruwei Zhenxiang WeChat Mini Program, which effectively made the people’s confidence stand up and their pockets grew. In 2021, the whole company purchased a total of RMB9.1141 million of agricultural products from designated assistance counties and RMB5.7434 million of agricultural products from other poverty-stricken counties, totaling RMB14.8575 million.

The Company builds a sub-culture to help “shape new trends” to create a beautiful picture of rural revitalization. In Baode County, the Company promoted the rectification of “six chaos” of the rural living environment. Based on the actual appearance of the local village, the Company concentrated the efforts to help rectify key areas such as village roads, farmers’ courtyards, and fields in the village, so that the living environment had been significantly improved. To enrich the spiritual and cultural life needs of the villagers, the literary and art team of Baode County Cultural Center was invited to enter Tuanwo village to carry out the performance of “Our Chinese Dream”, the performance of culture into thousands of homes, to advocate rural customs of civilization and help rural revitalization. The Company carried out the actions of beautifying the living environment in Rucheng County, set up bamboo fences, added green belts, and implemented concentrated poultry farming in separate sections; Guangzhou Bureau Subordinated to CREC arranged people with machinery to help demolish 6 dilapidated and old houses, 3 dry toilets, cleaned more than 500 square meters of construction slags, and leveled and widened more than 800 meters of roads into the group, which laid a solid foundation for building a beautiful countryside.



中国中铁在定点帮扶的桂东县建立乡村梦想教室  
CREC established a rural dream classroom in Guidong County, a designated county for help

## 定点帮扶成效 Effectiveness of Targeted Poverty Alleviation Efforts

2021年，中国中铁新选派挂职干部6名，直接投入帮扶资金6,490万元，引进帮扶资金327.2万元，培训基层干部184人次，培训乡村振兴带头人42人次，培训专业技术人员719人次，购买农产品911.41万元，帮助销售农产品60.4万元，超额完成年度工作计划各项任务。

In 2021, CREC newly selected 6 cadres assuming temporary posts, directly invested RMB64.9 million in assistance funds, attracted RMB3.272 million of assistance funds, trained 184 grass-roots cadres, 42 rural revitalization leaders, and 719 professional and technical personnel. The Company purchased RMB9.1141 million of agricultural products and helped sell RMB604,000 of agricultural products, surpassing the tasks as set forth in the annual work plan.



中国中铁援建保德县第十一小学校1X宿舍楼奠基仪式  
Groundbreaking Ceremony for the Construction of 1X Dormitory of No. 11 Primary School in Baode County built with the help of CREC



中铁桂东县振兴大道交付仪式  
Delivery Ceremony of Zhenxing Avenue, Guidong County, completed by CREC

## 定点帮扶计划 Targeted Poverty Alleviation Plan

2022年，中国中铁将深入学习贯彻习近平总书记关于巩固拓展脱贫攻坚成果同乡村振兴有效衔接的重要指示批示精神，按照党中央、国务院和国资委部署要求，在过渡期内保持帮扶政策和力度总体稳定不掉线、不断档，积极创新帮扶举措，接续推进巩固拓展脱贫攻坚成果同乡村振兴有效衔接。

- 召开定点帮扶工作领导小组会议，全面系统总结前期帮扶工作成绩，总结典型经验，打造帮扶品牌，并根据中央帮扶工作新精神，研究制定公司年度帮扶工作重点计划，安排部署全年帮扶工作任务。

In 2022, CREC will thoroughly study and implement the spirit of General Secretary Xi Jinping's important instructions on consolidating and expanding poverty alleviation results and linking poverty alleviation with rural revitalization. And in accordance with the deployment requirements of the Party Central Committee, the State Council and SASAC, the Company will maintain the overall stability of the policy and level of support without dropping in the period of transition. The Company will actively innovate support measures, and continue to promote consolidating and expanding poverty alleviation results and linking poverty alleviation with rural revitalization.

- The Company will convene the meeting of the leading group for targeted assistance work, comprehensively and systematically summarize the results of previous assistance work and typical experience, build an assistance brand, and research and formulate the Company's key plan of annual assistance work according to the new spirit of the assistance work of the Party Central Committee to arrange and deploy all annual assistance tasks.

- 加强重点项目审计检查，确保帮扶资金专款专用。2022年将继续聘请社会第三方审计机构，对公司2021年援建的重点帮扶基建项目进行独立审计，确保帮扶项目经得起群众、历史和实践的检验。同时，将联合公司纪检组织、生产监管中心等部门对在建项目进行专项检查，通过对政策落实、工作作风、援建项目资金及成效等方面的检查，将相关问题清单，及时向县委、县政府、施工企业及挂职干部进行面对面地反馈。
- 全面贯彻落实中央要求，扎实推进重点帮扶工作。深入研究论证定点帮扶工作的新思路、新途径，在持续开展教育帮扶、消费帮扶、就业帮扶等重点帮扶工作基础上，进一步拓展思路、创新举措，全面巩固拓展脱贫攻坚成果，打造乡村振兴建设美丽画卷。
- 接续做好西藏昌都市卡若区定点帮扶工作。2022年，公司将新增对口支援西藏自治区昌都市卡若区帮扶任务，根据当地实际需求提出帮扶方案，投入帮扶资金不低于现有三个定点帮扶县，并从公司中青年干部中选派优秀干部挂职帮扶；接续完成好小康示范村建设工作，确保中铝新村项目按时保质保量完成；继续开展乡村振兴美丽乡村示范点建设，实施集中供水保障工程，以实际行动支援昌都市卡若区经济社会发展，助力当地乡村振兴。

中国中铁将以强烈的责任感和使命感，持续强化责任担当，善始善终，善作善成，为全面实施乡村振兴战略作出新的更大贡献。

- The Company will strengthen the audit and inspection of key projects to ensure that the special funds for assistance are used exclusively. In 2022, the Company will continue to hire a third-party audit institution to conduct independent audits on the key assistance infrastructure projects in 2021 to ensure that the projects can stand the test of the masses, history and practice. At the same time, together with Discipline Inspection Organization, Production Supervision Center and other departments, the Company will conduct special inspections on projects under construction. Through inspections on policy implementation, work style, funding and effectiveness of aided projects, etc., a list of relevant issues will be sent to the County Party Committee and the County Government, construction companies and the cadres assuming a temporary post for face-to-face feedback in a timely manner.
- The Company will fully implement the requirements of the Party Central Committee and solidly promote key assistance work. The Company will research and argue in depth about new ideas and approaches for targeted assistance work and on the basis of continuing to carry out key assistance work such as education assistance, consumption assistance, and employment assistance, further expand ideas and innovate measures to comprehensively consolidate and expand poverty alleviation results and create a beautiful picture of the construction of rural revitalization.
- The Company will continue to do well in the targeted assistance work in Karuo District, Qamdo City, Tibet. In 2022, the Company will provide pairing-assistance for the Karuo District, Chamdo Prefecture, Tibet Autonomous Region, where the Company has never assisted before. According to local actual demand, the Company will propose assistance plans, invest assistance funds in no less than the existing three designated counties, dispatch outstanding cadres assuming a temporary post from youth cadres of the Company and provide assistance there; the Company will continue to complete the construction of a well-off demonstration village to ensure that the Zhonglv New Village project is completed on time with high quality and quantity; the Company will continue to carry out the construction of beautiful rural demonstration sites of rural revitalization, implement guarantee projects of centralized water supply to supports Karo district, Qamdo City with practical actions and help the revitalization of local villages.

With a strong sense of responsibility and mission, CREC will continue to strengthen its responsibility, make good start with good end and make good implementation with good achievements, so as to make new and greater contributions to the full implementation of the rural revitalization strategy.



# 专题三： 高质量共建“一带一路”

## Topic 3: Joint Construction of the "Belt and Road" with High Quality

秉持共商共建共享原则

Upholding the Principles of Joint Consultation, Construction and Sharing

坚持开放、绿色、廉洁理念

Adhering to the Philosophy of Openness, Greenness and Integrity

实现高标准、惠民生、可持续目标

Achieving Targets of High Standard, Sustainable Development, and Benefiting People's Livelihood



2021年，中国中铁积极参与“一带一路”建设、基础设施互联互通、国际产能和装备制造合作，全力推动中国铁路“走出去”。公司国际业务实现新签合同额233.46亿美元，先后签约菲律宾南线铁路、几内亚西芒杜矿区铁路、所罗门金矿、泰国体育公园、肯尼亚卡卡梅加-奔戈马大型供水卫生等项目。在ENR全球承包商250强排名第2位。

In 2021, CREC actively participated in the joint construction of the "Belt and Road" construction, infrastructure interconnection, international production capacity and equipment manufacturing cooperation, and gave all-out support for Chinese railways "going global". The Company's international business achieved a new contract amount of US\$23,346.0 million, and successively signed contracts for a number of projects such as Philippines Southern Railway, Guinea's Simandou Mining Railway, Solomon Gold Mine, Thailand Sports Park, and Kenya's Kakamega-Bengoma Large-scale Water Supply and Sanitation projects. CREC ranked second on the list of "Top 250 Global Contractors of ENR".

## 秉持共商共建共享原则

### Upholding the Principles of Joint Consultation, Construction and Sharing

#### 深化国际合作

#### Furtherance of international cooperation

2021年，公司主动服务国家对外合作大局，扎实开展国际交流合作，积极参加第二届联合国全球可持续交通大会、第12届国际基础设施投资与建设高峰论坛、中国国际服务贸易交易会、第四届中国国际进口博览会、第二届中非经贸博览会、世界经济论坛全球企业家特别对话会、香港第六届“一带一路”高峰论坛、2021年“一带一路”贸易投资论坛、2021年金砖国家基础设施工作组理事会会议、B20意大利金融与基础设施组系列会议等活动，与相关各方形成合力，达成多项共识。

In 2021, the Company actively served the overall situation of the country's foreign cooperation, carried out solid international exchanges and cooperation, actively participated in activities, such as the Second Global Sustainable Transport Conference, the 12th International Infrastructure Investment and Construction Forum, the China International Fair for Trade in Services, the Fourth China International Import Expo, the second China-Africa Economic and Trade Expo, the Special Virtual Dialogue with Global Business Leaders, the 6th "Belt and Road" Summit Forum in Hong Kong, the 2021 "Belt and Road" Trade and Investment Forum, the 2021 BRICs Infrastructure Working Group Board Meeting, and the B20 Italian Finance and Infrastructure Group Meetings, and formed synergy with relevant parties and reached a number of consensuses.



第十三届中国-东北亚博览会开幕式暨第十一届东北亚合作高层论坛中国中铁参展展厅  
CREC Exhibition Hall at the opening ceremony of the 13th China-Northeast Asia Expo and the 11th Northeast Asia Cooperation High-level Forum



中国中铁在2021年《财富》世界500强中排名第35位  
CREC ranked 35th among the Fortune Global 500 in "Fortune" in 2021

## 属地化经营

### Territorial operation

公司持续推进海外体制机制改革，规划在全球设立23个境外区域总部。遵循“整体规划、分批设立、试点先行”的原则，2021年先后完成孟加拉国区域总部、匈牙利区域总部、南亚区域总部等22个境外区域总部的设立。

The Company continues to promote the reform of systems and mechanisms of overseas operations, and plans to set up 23 overseas regional headquarters around the world. Based on the principle of “overall planning, establishment in batches, and pilot at first”, the Company has successively established 22 overseas regional headquarters, including the regional headquarters in Bangladesh, Hungary, and South Asia in 2021.

## 文化交流沟通

### Cultural exchange and communication

中国中铁尊重当地文化和民俗民情，注重与当地民众融合，努力增加本土用工，关心关爱外籍员工，秉承“授人以渔，服务全球”的文化理念，与驻在国保持良好的文化沟通交流，广泛传播中国智慧和优秀文化。

CREC respects local culture and folk customs with a focus on integration with local people, strives to increase local employment, cares for foreign employees, adheres to the cultural concept of “teaching people to fish, serving the world”, and maintains good cultural communication with the host country to widely spread Chinese wisdom and excellent culture.



● 中国中铁向老挝农冰村小学捐赠文体设施和防疫用品  
CREC donated cultural and sports facilities and epidemic prevention supplies to Nongbing Village Primary School in Laos



● 中铁广州局员工在老挝乌多姆塞省梦赛汪洋村小学开展志愿服务  
Employees of China Railway Guangzhou Group Co., Ltd. carried out volunteer services at Mengsai Wangyang Village Primary School (梦赛汪洋村小学) in Oudomxay Province, Laos

### 案例 Case

2012年至2021年，中铁二院积极发挥国际培训“交流互鉴，高端经营”平台的经营价值和长期效益，累计为来自五大洲100多个国家和地区1,700余名外籍学员开展国际铁路知识专业培训。

From 2012 to 2021, China Railway Eryuan actively gave full play to the operational value and long-term benefits of the international training platform of “exchange and mutual learning, high-end operation”, and provided professional training on international railway knowledge for more than 1,700 foreign trainees from more than 100 countries and regions from five continents.

### 案例 Case

2021年1月15日，中国中铁举办了印尼雅万高铁项目“云开放日”暨《中国中铁印度尼西亚社会责任报告》发布会。活动通过视频形式，带领观众“云游”印尼雅万高铁项目建设现场，多角度、全方位、立体化展示公司投身印尼雅万高铁建设、助力抗击疫情、充分履行社会责任的奋斗历程。

On 15 January 2021, CREC held the conference for “Cloud Open Day” and “CREC Indonesia Social Responsibility Report of the Jakarta-Bandung High-speed Railway in Indonesia project”. The event leded the audience to “tour” the construction site of the Jakarta-Bandung high-speed railway project in Indonesia in the form of video, showed the Company’s struggle in the construction of the Jakarta-Bandung high-speed railway in Indonesia and helping to fight the COVID-19, and the fully fulfilling of its social responsibilities by a multi-angle, all-round and three-dimensional way.

## 坚持开放、绿色、廉洁理念

### Adhering to the Philosophy of Openness, Greenness and Integrity

#### 推动绿色基础设施建设

##### Promoting construction of green infrastructure

2021年，公司境外在建项目严格遵守驻在国相关环保法律法规，办理各类环保资质，积极采取有效措施推进绿色工程建设。项目部严格执行周、月、季度的现场巡视检查与整改落实，闭环管理，确保当地生态环境不被破坏；健全环保制度，重视项目环保的整体策划与环保措施的落地实施；强化环保教育，定期开展环保业务培训，树立全员环保意识；强化应急管理和应急演练，根据环境污染事件的应急处理预案组织演练。

In 2021, the Company's overseas projects under construction strictly abided by the environmental protection laws and regulations of the countries where they are located when handling various environmental qualifications, and the Company actively took effective measures to promote green construction. The Project Department strictly implemented weekly, monthly and quarterly on-site inspections and rectification implementation, closed-loop management, to prevent the local ecological environment from being damaged; the Company improved the environmental protection system, pay attention to the overall planning of environmental protection of project and the implementation of environmental protection measures; the Company strengthened environmental protection education, provided trainings on environmental protection businesses, fostered environmental protection awareness for all employees; and the Company strengthened emergency management and emergency drills, and organized drills according to the emergency response plan for environmental pollution incidents.

#### 案例 Case

2021年，中国中铁新加坡C885项目在新加坡陆交举办的第23届年度“安全、健康和环境颁奖典礼”（ASAC）上荣获施工安全优秀奖；圣伊西德罗矿山和阿尔塔米拉矿山荣获委内瑞拉CVG Ferrominera Orinoco C.A.玻利瓦尔州安格斯都拉市“安全、环境荣誉”奖项。

In 2021, CREC Singapore C885 Project won the Construction Safety Excellence Award at the 23rd Annual "Safety, Health and Environment Awards Ceremony" (ASAC) held by Singapore Land Transportation; San Ysidro Mine and Altami La Mine won the "Safety and Environment Honor" award from CVG Ferrominera Orinoco CA, Angus Dura, Bolivar State, Venezuela.

#### 案例 Case

雅万高铁项目梁场的驻地均设置标准垃圾池及排污系统，搅拌站设置沉淀池及污水处理系统，主动邀请地方环保部门进行验收把关，不但有效保护了作业人员的身体健康，还大幅减小了对自然水体的污染。

Standard garbage ponds and sewage systems were installed at the Liangchang site of the Jakarta-Bandung High-speed Railway Project, and sedimentation ponds and sewage treatment systems were installed in the mixing station. Local environmental protection departments were actively invited to conduct acceptance checks, which not only effectively protected the health of operators, but also greatly reduced the pollution to natural water.

## 强化依法合规管理

### Strengthening management in compliance with laws and regulations

2021年，公司召开境外合规工作会议暨境外业务合规培训会，全系统5,700余人参会并接受培训。组织全系统境外从业人员签订了合规承诺书。积极推动合规管理信息化，完成海外合规管理子系统的开发，并组织开展上线试运行。开展境外劳工领域风险专项排查、内控、合规及风险管理评价检查等专项排查工作，全面排查各类境外经营合规风险。利用公司海外合规公众号积极开展合规文化宣贯。

In 2021, the Company convened an overseas compliance work meeting and an overseas business compliance training session with more than 5,700 people from the whole system attending the meeting and receiving training. The Company organized overseas employees to sign the Compliance Commitment Letter. The Company actively promoted the informatization of compliance management, completed the development of the overseas compliance management subsystem, and organized the online trial operation. The Company carried out special investigations, including the special investigations on risks in the field of overseas labor, internal control, compliance and risk management evaluation inspection and comprehensive investigations of various types of compliance risks in overseas operation. The Company used the Company's overseas compliance official account to actively carry out compliance culture promotion.

## 保障海外项目安全

### Ensuring the safe operation of overseas projects

2021年，公司海外项目坚持生命至上、安全第一，树牢安全发展理念，强化红线意识和底线思维，坚持问题导向，坚持标本兼治，保障安全投入，通过全公司共同努力，确保了公司海外项目安全生产状况保持稳定。

In 2021, the Company adhered to the policy of supremacy of life and safety first for its overseas projects. Bearing in mind the safe development philosophy, the Company strengthened red line awareness and bottom-line thinking and maintained problem-oriented solutions to both symptoms and root causes, to guarantee safe investment. Through concerted effort of the whole Company, the stable and safe production of overseas projects were realized.

公司严格落实安全生产责任制，实施风险分级管控，加强安全生产工作监管和安全生产管理体系建设，完善安全生产规章制度。组织中方管理人员和当地作业人员进行安全教育培训。通过风险管控、隐患排查、专项检查等各类安全生产活动，及时发现项目管理过程中存在的薄弱环节。针对发现的问题坚持监督整改闭合，确保消除安全隐患。推进科技产品和信息化手段在项目安全生产管理中的应用，进一步提升对项目生产一线人员的安全保障。

The Company strictly implemented the safe production responsibility system, implemented hierarchical risk control, strengthened supervision over safe production and the building of the safe production management system, and improved rules and regulations concerning safe production. The Company organized Chinese managerial personnel and local operators to participate in safety education and training. By carrying out various safe production activities such as risk control, hidden danger investigation, and special inspections, the Company identified weak links in the project management process. The Company insisted on supervising and fixing the problems identified, to eliminate potential safety hazards. The Company promoted the application of scientific and technological products and informatization means in project safety production management to further improve the safety guarantee for the front-line personnel of project production.



● 中铁隧道局国际事业部以色列分公司开展“春苗行动”  
International Business Department Israel Branch of China Railway Tunnel Group Co., Ltd. launched “Spring Plants Action (春苗行动)”



● 在中国驻刚果（金）大使馆“春苗行动”表彰大会上，中铁八局金沙萨区域项目部获“优秀集体”荣誉，杨亚琼被授予“最美志愿者”荣誉  
At the “Spring Plants Action (春苗行动)” commendation ceremony of the Chinese Embassy in the Democratic Republic of the Congo, the Kinshasa Regional Project Department of v was awarded the title of “Excellent Collective”, and Yang Yaqiong was awarded the title of “Most Beautiful Volunteer”

遵守项目所在地职业病有关法律法规，坚持依法依规做好职业健康工作，本着以人为本、健康工作的原则，落实建设项目职业病危害预评价、办理工伤保险、全员职业健康教育培训、职业危害因素告知、完善健康体检档案，对当地工人进行艾滋病检测 and 常规体检、配备合格劳动保护用品。

CREC complied with the relevant laws and regulations on occupational diseases of the countries where the projects are located, and was committed to undertaking the task of occupational health according to laws and regulations. On the people-oriented and healthy work principle, the Company implemented pre-evaluation of occupational disease hazards for construction projects, purchased work-related injury insurance, provided occupational health education and training for all employees, kept them informed of factors of occupational hazards, enriched archives of health inspection, conducted AIDS testing and regular checkups for local workers, and equipped them with qualified labor protection supplies.

#### ○ 案例 Case

公司瑞典斯德哥尔摩地铁蓝线延长线项目，为每个进入隧道人员和设备均安装了设备定位系统，隧道内的人员及设备均携带一枚芯片，后方管理系统可实时查看隧道内人员及设备数量，一旦发生事故，可以及时安排营救。

For the extension project of the Blue Line of the Stockholm Metro in Sweden, the Company installed the equipment positioning system for each person and equipment entering the tunnel. All personnel and equipment in the tunnel carry a chip, and the rear management system can check the number of personnel and equipment in the tunnel in real time. In the event of an accident, rescue can be arranged in time.

#### ○ 案例 Case

公司雅万高铁项目加强对属地员工的教育培训，组织编制和翻译隧道作业安全注意事项宣传册，刊印1,400份下发至印尼籍作业员工及管理人员，确保人手一册，提升印尼员工安全技能及安全意识。

The Company's Jakarta-Bandung High-speed Railway project strengthened the education and training of local employees, organized the compilation and translation of brochures on safety precautions for tunnel operations, printed 1,400 copies and distributed them to Indonesian operating employees and managers, ensuring each employee with one manual, so as to improve Indonesian employees' safety skills and awareness.

#### ○ 案例 Case

中国中铁匈牙利公司聘请当地铁路医疗中心医生开展职业健康管理工作，根据合同内容提供各项医疗服务。

CREC Hungary Company hired doctors from the local railway medical center to carry out occupational health management and provide various medical services according to the contract.

## 实现高标准、惠民生、可持续目标

### Achieving Targets of High Standard, Sustainable Development, and Benefiting People's Livelihood

#### 中国技术带动当地发展

#### Chinese technologies driving local development

中国中铁充分发挥全产业链优势，采用设计、采购、施工加融资的EPC+F模式，为业主提供从投资、勘察设计、施工建设到运营维护全周期的服务。公司通过“卓越国际教育培训中心”平台，依托公司在全球轨道交通领域的勘察设计、工程咨询、工程总承包项目，积极开展培训。

CREC takes full advantage of the whole industry chain and adopts the EPC+F model of design, procurement, construction and financing to provide owners with full-cycle services from investment, survey and design, construction to operation and maintenance. Through the platform of "China Beststudy Education Group", the Company actively carries out training relying on the Company's survey and design, engineering consulting, and general engineering contracting projects in the field of global rail transit.

#### 案例 Case

公司孟加拉帕德玛大桥铁路连接线项目，采用中国标准和设备建立起一个全自动流水线作业的全封闭轨枕生产厂，日产能500根，是孟加拉国目前规模最大、设备最先进、标准化程度最高的轨枕厂，有效带动了当地就业和经济发展。

For the railway connection project of the Padma Bridge in Bangladesh, the Company established a fully enclosed sleeper production plant with fully automatic assembly line operation using Chinese standards and equipment and a daily production capacity of 500 pieces. In Bangladesh, it is a sleeper factory with the largest scale, the most advanced equipment and the highest degree of standardization at present, which has effectively driven local employment and economic development.

## 优质工程助推当地经济

### Quality projects boosting local economy

中国中铁依托境外重点工程，努力打造出企业与项目所在国之间的发展之路、绿色之路、廉洁之路、友谊之路、幸福之路，为高质量推动“一带一路”建设做贡献。

公司雇佣当地人员5万余人，侧重于在当地采购材料，助推当地经济发展。

Relying on its key overseas projects, CREC is striving for the construction of the road to development, greenness, integrity, friendship and happiness between the Company and the countries where the projects are located, contributing to the high-quality promotion of the “Belt and Road” construction.

The Company employs over 50,000 local people and focuses on purchasing the local materials to boost local economic development.

#### 案例 Case

2021年，公司孟加拉帕德玛大桥铁路连接线项目为当地提供就业岗位4,854个。

In 2021, the Company's Bangladesh Padma Bridge Railway Connection project provided 4,854 local jobs.

#### 案例 Case

2021年，公司亚吉铁路运维项目通过科学合理组织，在疫情期间保证了亚吉铁路持续运营，完成34名当地火车司机的培训，服务当地经济发展。

In 2021, the Company's Asia-Djibouti Railway Operation and Maintenance project had been organized scientifically and reasonably to ensure the continuous operation of the Asia-Djibouti railway during the epidemic, and completed the training of 34 local train drivers to serve the local economic development.



## 公益事业惠及当地人民

### Public welfare undertakings benefit the local people

中国中铁作为“一带一路”建设的主力军，在项目建设过程中，积极履行企业社会责任，主动融入当地社会，通过扶贫济困、公益慈善、抗议抢险等多种方式，搭建起一座座民心相通的友谊桥梁。

As the main force of the “Belt and Road” construction, CREC actively fulfills its corporate social responsibility, actively integrates into the local society and builds a bridge of friendship between peoples through various means such as poverty alleviation, public welfare charity, protest and emergency rescue, etc.

#### 案例 Case

2021年10月8日，公司中老铁路指挥部在老挝万象市中老友好农冰村小学举行捐赠仪式，向农村冰小学移交了新建的藤球场，赠送了乒乓球桌等成套体育设施和相关防疫物资。中国中铁将继续努力为当地学生营造更加美好的校园环境，让其成为中老友谊的见证者和传承者。

On 8 October 2021, the Company's China-Laos Railway Headquarters held a donation ceremony at the China-Laos Friendship Rural Bing Primary School in Vientiane, Laos, and presented complete sets of sports facilities such as table tennis tables and related epidemic prevention materials. CREC will continue to strive to create a better campus environment for local students, so that they can become witnesses and inheritors of China-Laos friendship.



## 展望 Outlook

2022年，中国中铁将以习近平新时代中国特色社会主义思想为指导，完全、准确、全面贯彻新发展理念，服务构建新发展格局，聚焦高质量发展主题，纵深推进深化改革、强化科技创新驱动、着力夯实基础管理、防范化解重大风险，不断增强企业竞争力、创新力、控制力、影响力、抗风险能力，推动企业向更高质量、更有效率、更有活力、更可持续、更为安全的发展迈进，为加快建成具有全球竞争力的世界一流企业而不懈奋斗。

2022年，中国中铁将进一步发挥行业龙头企业履行社会责任的表率作用，全面深化社会责任管理，拓展社会责任领域，丰富社会责任内容，提升社会责任实践水平，与利益相关方共同携手，为推动全社会的发展进步而不懈努力！

In 2022, CREC will take Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era as guidance to fully, accurately and comprehensively carry out the new development ideas to build a new development layout. Focusing on the theme of high-quality development, we will deepen reforms, strengthen the drive for technological innovation, put efforts into consolidating basic management, and prevent and resolve major risks. To become a top enterprise with global influence as soon as possible, we will keep enhancing our capabilities in competition, innovation, control, brand and risk response and promote enterprises to become closer to higher quality, more efficient, more dynamic and more sustainable with safer development.

In 2022, CREC will further play an exemplary role of an industry leading enterprise to fulfill social responsibilities, comprehensively deepen the social responsibility management, expand the social responsibility field, enrich the social responsibility content, enhance the social responsibility practices, and cooperate with its stakeholders to make unremitting efforts in order to promote the development and progress of the whole society!



## 意见反馈 Feedback

感谢您在百忙之中阅读中国中铁股份有限公司2021年度环境、社会与管治报告暨社会责任报告。

报告在编写过程中难免存在瑕疵和疏漏之处，我们十分愿意倾听您的意见和建议，如英文报告与中文报告有不符之处，以中文报告为准。

再一次向您对本公司的支持和帮助表示衷心感谢。

Thank you for taking time out of your busy schedule to read the 2021 Environmental, Social and Governance Report of China Railway Group Limited in your busy schedule.

There are inevitable flaws and omissions in the compilation process of the report. We are very willing to listen to your comments and suggestions. If there is any discrepancy between the English report and the Chinese report, the Chinese report shall prevail.

We express our sincere thanks for your support and help for the Company once again.





**中国中铁股份有限公司**  
CHINA RAILWAY GROUP LIMITED



中国中铁官方微信



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