



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

永远的开路先锋



2022年度

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

2022年度

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and Social Responsibility Report of CREC  
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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15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2022年1月1  
日至12月31日，适当关注了2022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。

#### 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。

#### Reporting scope

This is CREC's 15th 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 2022, this report pays due attention to how the CREC fulfilled its social responsibility before 2022.

#### 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.

#### Title description

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



## 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。

**重要性原则：**我们按照香港联合交易所《环境、社会及管治报告指引》要求，已开展利益相关方参与及重要议题识别，并参考识别结果界定报告内容与范围。具体内容参见本报告“利益相关方沟通和关键议题重要性评估”。

**平衡性原则：**本报告客观披露正面与负面信息，确保内容不偏不倚地呈报本报告期内公司的ESG表现。

**一致性原则：**除另有注明外，本报告与公司往年ESG报告披露范围一致，所使用的披露统计方法与往年一致。

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ESG各主要议题的绩效及履行企业社会责任进行汇报。

本报告增设了“践行‘三个转变’重要指示”“助力乡村振兴”“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 and 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。

## 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.

**Materiality:** In accordance with the requirements of the Environmental, Social and Governance Reporting Guidelines of the Stock Exchange of Hong Kong, we have conducted stakeholder engagement and identification of key issues, and defined the content and scope of the report with reference to the results of the identification. For details, please refer to “Communication with stakeholders and materiality evaluation” in this report.

**Balance:** This report objectively discloses both positive and negative information to ensure that it presents the ESG performance of the Company during the Reporting Period in an unbiased manner.

**Consistency:** Unless otherwise stated, the scope of disclosure in this report is consistent with that of previous ESG reports, and the statistical methods used are consistent with those used in previous years.

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 performance of major ESG topics and the Company’s corporate social responsibility.

Three special sections are added in this report, i.e., “Implementing the important instructions of ‘Three Transformations’”, “Help 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



2022年，是中国中铁发展史上非凡和难忘的一年。一年来，我们以习近平新时代中国特色社会主义思想为指导，认真学习贯彻党的二十大精神，全面落实党中央、国务院决策部署及国资委工作要求，坚持以企业“十四五”规划为引领，突出高质量发展主题，聚焦效益提升和价值创造，各项经济指标均创历史最好水平，开创了公司加快建设世界一流企业的新局面。

这一年，我们高举中国中铁“开路先锋”大旗，在服务国家重大战略中优化市场布局，建成了郑渝高铁、新成昆铁路、北京丰台站、鄂州花湖机场等一大批重点工程，中国中铁产业集群疏解雄安新区正式启动；中国高铁全产业链走出国门“第一单”印尼雅万高铁，在两国领导人见证下试运行成功，

2022 is an extraordinary and unforgettable year in the development history of CREC. Over the past year, we, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, strictly studied and implemented the spirit of the Party's 20th National Congress, fully implemented the decisions and arrangements of the Party's Central Committee and the State Council, as well as the requirements of the State-owned Assets Supervision and Administration Commission, followed the blueprint set out in our 14th Five-Year Plan, emphasized the direction of high-quality development, and focused on efficiency improvement and value creation, with all economic indicators scoring the best ever records, and new advances made to accelerate the building of the Company into a world-class enterprise.

Over the past year, holding high the banner of “industry pioneer” of CREC and by optimizing market layout in serving major national strategies, we have completed a large number of key projects, such as the Zhengzhou-Chongqing High-speed Railway, new Chengdu-Kunming Railway, Beijing Fengtai Station and Ezhou Huahu Airport, and started to relocate multiple subordinate companies to Xiong'an New Area. The Jakarta-Bandung high-speed railway in Indonesia, the first overseas construction project of China's high-speed railway with a whole industry chain, successfully finished its test

孟加拉帕德玛大桥、埃及斋月十日城轻轨铁路等一批“一带一路”标志性工程建成通车；攻克一大批“高大难新”工程建造关键核心技术，打造了世界首台桩梁一体架桥机“共工号”、世界首台矿用机动型TBM“凉都号”、世界首条永磁磁浮轨道交通系统“红轨”等大国重器；认真落实“绿水青山就是金山银山”理念，致力服务人民美好生活，在长江大保护、黄河流域生态保护、推广绿色建筑等方面作出积极贡献；积极助力乡村振兴，通过产业振兴、交通振兴、干部帮扶、消费帮扶、特色旅游等，进一步提高帮扶实效；调动优势资源投身多地抗震抗汛救灾，广泛参与社会公益，充分体现央企担当。

2022年，中国中铁在世界500强排名34位，获中国专利奖6项（银奖2项）、新增专利9,256项。

2023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  
2023年3月

run in the presence of the leaders of the two countries. A number of landmark projects of the Belt and Road Initiative, such as the Padma Bridge in Bangladesh and 10th of Ramadan Light Rail Transit, were opened to traffic. We made breakthroughs in advanced key core technologies for a number of engineering construction projects, and developed several tools with great significance to the country, such as the world's first pile-beam integrated bridge erecting machine "Gonggong", the world's first motorized hard rock tunnel boring machine (TBM) "Liangdu", and the world's first permanent magnet maglev rail transportation project "Red Rail". By faithfully implementing the belief that clear waters and green mountains are as good as mountains of gold and silver, and focusing our efforts on the aspirations of the people to live a better life, we made active contribution to the protection of the Yangtze River, the conservation of the ecology of the Yellow River Basin, and promotion of green buildings. We actively helped revitalize the countryside and further improved the effectiveness of poverty alleviation by revitalizing industries, improving transportation, assistance of cadres in villages, consumption-based assistance, featured tourism, etc. We mobilized advantageous resources to participate in earthquake and flood relief in various places, and widely engaged in social welfare activities, fully embodying our corporate role as a centrally-administered State-owned enterprises.

In 2022, CREC ranked 34th among the Fortune Global 500, and brought home 6 China Patent Awards (including 2 silver awards) and 9,256 new patents.

In 2023, 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 2023



## 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，19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。公司资产总额16,131.66亿元，净资产4,230.59亿元。

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 19 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 RMB1,613.166 billion and net assets of RMB423.059 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



企业使命  
Corporate Mission

中国建造 铁肩担当  
China Build and Iron Shouldering

企业愿景  
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

企业核心价值观  
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	管理理念 Management philosophy	安全理念 Safety philosophy	质量理念 Quality philosophy	环保理念 Environmental philosophy	人才理念 Talent philosophy	廉洁理念 Integrity philosophy	品牌理念 Brand philosophy
合和共赢 诚信为本 Honesty-based and win-win situation	效益优先 协同高效 Synergism and priority to efficiency	安全第一 生命至上 Supremacy of life and safety first	精心建造 匠心品质 Elaborate construction with the spirit of originality	绿色发展 勤俭节约 Industry and economy Green development	奋斗圆梦 以人为本 Be people-oriented Struggle to realize dreams	业兴人和 风清气正 Be clean and upright Prosperity and harmony	基业长青 创造价值 Create value Solid foundation

## 社会评价

Assessment by the society

连续**17**年进入《财富》  
**世界500强**排名，列第**34**位

《工程新闻记录》(ENR)

**“全球承包商250强”** 排名，列第**2**位

**“中国企业500强”** 排名  
列第**10**位

中国上市公司信用**500强**

连续**9**年

被国务院国资委评定为业绩考核**A**类企业

连续**9**年

获上交所信息披露工作评价**A**级

连续**4**年蝉联《新财富》

**“最佳IR港股公司”**

入选

**2022福布斯中国ESG50强榜单**

入选国务院国资委

**“央企ESG·先锋50指数”**

《新财富》

**“最佳ESG信披奖”**（中国建筑行业唯一代表）

《证券时报》

**“中国上市公司ESG100强”**

金紫荆

**“最佳投资者关系管理上市公司”**

金圆桌

**“优秀董事会”**

证券之星

**“年度最具社会责任上市公司”**

中国上市公司协会以及北京上市公司协会

**“上市公司ESG最佳实践”**

**“年报业绩说明会最佳实践”**

Being named in “Fortune” for 17 consecutive years, ranked 34th among the Fortune Global 500

Ranked No.2 among ENR’s “Top 250”

Ranked No.10 among Top 500 Enterprises of China

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

Accredited class A enterprises for performance appraisal by the SASAC of the State Council for 9 consecutive years

Accredited class A enterprises for evaluation of information disclosure by SSE for 9 consecutive years

Being the “Best IR Hong Kong Listed Company” by New Fortune for four consecutive years

On the “2022 China ESG 50” list of Forbes China

Selected in the “State-owned Enterprises ESG Pioneer 50 Index” by the SASAC of the State Council

Being the “Best ESG Information Disclosure Award” by New Fortune (the only representative enterprise in the Chinese construction industry)

Won the Securities Times – “Top 100 ESG Listed Companies”

Won the Golden Bauhinia as the “Best Investor Relations Management Listed Company”

Won the “Excellent Board of Directors” Award of Golden Round Table

“Most Socially Responsible Listed Company of the Year” of Securities Star

Won the “ESG Best Practice Cases of Listed Companies” and “Best Practice Cases of Performance Presentation of Annual Report” of the China Association for Public Companies (CAPCO) and the Listed Companies Association of Beijing (LCAB)





## 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，将绿色低碳高质量发展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、社会和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、社会和管治议题、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、社会和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，及是否涵盖重大环境、社会和管治问题的主要控制措施。同时，有效

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 Committee and Safety, Health and Environmental Committee of the Board



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。

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2次，审议通过了与定期报告、利润分配等相关的23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。董事会下设战略与投资、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，其中战略与投资委员会、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10次，审议通过议案及报告事项130项，作出决议100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。其中董事会战略与投资委员会召开会议4次，针对16项议案进行审议并提出意见建议，尤其是在公司工程建造、设计咨询、装备制造、金融业务、房地产业务等8个“十四五”专项业务发展规划编制方面发挥了积极作用；董事会审计与风险管理委员会充分发挥监督作用，召开会议6次，针对34项议案进行审议并提出意见建议，并重点对基础设施投资风险、房地产业务风险、毛利率下降、带息负债规模

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 2 general meetings and considered and adopted 23 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 and investment, 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 strategy and investment committee, 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 10 Board meetings, considered and adopted 130 proposals and reports, and made 100 resolutions. The special committees provide intellectual support and decision-making counsel to the Board of Directors through deliberations on professional issues. The Strategy and Investment Committee of the Board of Directors held 4 meetings and considered 16 proposals, and provided suggestions and opinions thereon, especially playing an active role in preparing 8 special business development sections of the 14th Five-Year Plan, such as engineering construction, design consulting, equipment manufacturing, financial business, and real estate business. The Audit and Risk Management Committee of the Board of Directors held 6 meetings and considered 34 proposals, and provided suggestions and opinions thereon to play its supervisory role, especially the suggestions and opinions on issues related to infrastructure investment risk, real estate business risk, decrease in gross



较大、“两金”管控压力大、经营性现金流流出较多等问题提出了意见建议，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员会召开会议8次，针对13项议案进行审议并提出意见建议，并重点对高管绩效考核方案、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，针对2项议案进行审议并提出意见建议，在公司依法合规履行董事选任与高管聘任程序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3次，针对4项议案进行审议并提出意见建议，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。

profit margin, burden of interest-bearing debts, pressure of accounts receivable and inventory control, exerting an active role in strengthening the Company's finance and risk management. The Remuneration and Assessment Committee of the Board of Directors held 8 meetings and considered 13 proposals, and provided suggestions and opinions thereon, especially the suggestions and opinions on executive performance evaluation plan, and implementation of restricted stock incentives, playing an active role in strengthening the Company's compensation management and performance evaluation. The Nomination Committee of the Board of Directors held 2 meetings and considered 2 proposals, and provided suggestions and opinions thereon, playing an active role in the Company's compliance with laws and procedures for the selection and appointment of directors and senior management. The safety, health and environment committee of the Board of Directors held 3 meetings and considered 4 proposals, and provided suggestions and opinions thereon, playing an active role in strengthening the Company's performance in safety, quality, occupational health and environmental protection.



2022年6月22日，中国中铁召开2021年度股东大会，审议通过了年度利润分配方案、董事会工作报告等议案  
On 22 June 2022, CREC held its 2021 Annual General Meeting and considered and approved the annual profit distribution plan, the report on the work of the Board and other proposals





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8次，审议通过了与定期报告、内部控制、利润分配等相关的57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，公司设总裁1名、副总裁5名、总会计师1名、总工程师1名（由副总裁兼任）、总经济师1名、总经理助理1名。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 8 meetings, and considered and adopted 57 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 has 1 president, 5 vice presidents, 1 general accountant, 1 chief engineer (concurrently serving as the Company's vice president), 1 chief economist, and 1 assistant to general manager. 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，董事会连续两年获评国资委“中央企业优秀董事会”。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》《董事会战略与投资委员会议事规则》《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，对《公司章程》进行第16次修订，将国资证券监管最新要求和国企改革三年行动重点内容纳入其中；修订董事会及相关治理主体议事规则等8项制度，确保会议审议程序依法合规，决策流程科学规范；修订了《重大事项决策权责清单》《董事会向经理层授权权限清单》，进一步厘清党委、董事会、经理层权责边界，提升决策效率。

## 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 and the Board to be awarded as Excellent Board of Central Enterprises by the SASAC for two consecutive years. 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 the Strategy and Investment Committee of the Board (《董事会战略与投资委员会议事规则》), 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 made the 16th amendment to the Articles of Association in accordance with laws and regulations, regulatory requirements, and based on the actual situation of the Company, incorporating the latest requirements for the supervision of state-owned assets and securities and key contents of the three-year action plan for state-owned enterprise reform; revised 8 policies such as the rules for procedures of the Board of Directors and related governance organs to ensure that the meeting consideration procedures are in compliance with relevant laws and regulations, and the decision-making process is scientific and standardized; revised the List of Authority and Responsibility for Decision-Making on Major Issues (《重大事项决策权责清单》) 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 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

公司以“法治中铁、合规中铁”建设为目标，扎实推进企业合规管理体系建设。2022年公司开展“合规管理强化年”专项行动，聚焦加强制度建设、完善运行机制、落实合规管理责任、强化境外合规、完善组织体系、培育合规文化等方面，持续完善合规管理体系和运行机制，突出抓好重点领域合规风险防范，加快高素质合规人才培养，不断提升合规管理体系和管理能力现代化水平，为实现公司“四强五优”“世界一流”的战略目标提供支撑保障。

2022年，公司将制度建设作为强化合规管理、推动治理现代化的基础性工作，优化制度评审范围和流程，全面加强对制度的合规性、体系性和规范性的审核把关。按照相关法律法规要求，研究制定了《合规管理实施办法》，着重从强化业务部门的合规管理职责、强化基层一线的合规管理以及强化合规流程管控等方面作出制度安排，确保合规管理工作“纵向到底、横向到边、上下贯通、一体联动、协同运转”。针对工程建设、财务金融、境外业务等重点领域，研究制定和完善了工程分包、投资、安全生产、境外反腐败等方面的专项合规制度。

2022年，公司召开了全系统合规管理工作会。公司党委书记、董事长陈云向全公司发起合规倡议，提出“七着力七增强”的目标要求：着力提升政治站位，增强做好合规管理的思想自觉、行动自觉；着力完善合规管理体系，增强合规管理基础；着力聚焦突出问题，增强合规管理的针对性；着力加强执行力建设，增强合规管理成效；着力深化“四位一体”大监督格局，增强合规监督的协同性；着力加大违规问责力度，增强合规监督的权威性；着力加强合规文化建设，增强合规管理的持久内生动力。公司党委副书记、总裁陈文健就强化合规管理提出“七完善七提升”的具体要求：完善规章制度，提升合规管理的系统性、适用性；完善组织机构，提升合规管理的支撑力；完善运行机制，提升合规管理运行效率；完善重点领域、关键环节合规风险防范措施，提升合规管理效能；完善应对机制，提升合规风险事件处置能力；完善评价机制，提升合规管理持续改进能力；完善法商融合机制，提升合规管理价值创造力。

The Company pushed forward the construction of corporate compliance management system towards the goal of “rule by law, governance by regulation”. In 2022, the Company carried out a special campaign named “Compliance Management Enhancement Year”, focusing on system development acceleration, operation mechanism improvement, implementation of compliance management responsibilities, overseas compliance intensification, organizational system improvement, compliance culture cultivation, and so on to continuously improve the compliance management system and operation mechanism. The campaign also emphasized prevention of compliance risks in key areas, acceleration of the training of high-quality compliance personnel, and constant improvement of the modern level of compliance management system and management capabilities. This will provide support and guarantee for achieving the strategic goal of “four strong capabilities and five excellent aspects” and “world class”.

In 2022, the Company regarded system establishment as a fundamental task to strengthen compliance management and promote modernization of governance. We optimized the scope and process of system review to comprehensively strengthen the audit and control of systems in terms of compliance, systematicness and standardization. In accordance with relevant laws and regulations, the Company studied and formulated the Implementation Measures for Compliance Management, which makes institutional arrangements with focus on strengthening the compliance management responsibilities of business departments, strengthening the compliance management at the grassroots level and strengthening the compliance process control, so as to ensure a consistent and synergistic implementation of compliance management in all respects. In terms of key areas such as engineering construction, finance and overseas business, we studied and developed and improved special compliance systems for engineering subcontracting, investment, production safety, and foreign corrupt practices.

In 2022, the Company held a company-wide compliance management meeting. Chen Yun, the Secretary of the Party Committee and Chairman of the Board of Directors, made a compliance proposal and put forward the requirements in terms of seven aspects across the Company: efforts should be made to raise political stance and strengthen the ideological and operational consciousness of compliance management; efforts should be made to improve the compliance management system and enhance its foundation; efforts should be focused on prominent issues and enhance targeted compliance management; efforts should be made to strengthen executive force development and enhance effectiveness of compliance management; efforts should be made to deepen the “four-pronged” supervision pattern and enhance the synergy of compliance supervision; efforts should be made to increase accountability for violations and enhance the authority of compliance supervision; efforts should be made to strengthen the cultivation of compliance culture and enhance sustainable endogenous momentum for compliance management. Chen Wenjian, the Deputy Secretary of the Party Committee and President of the Company, put forward specific requirements in terms of seven aspects to strengthen compliance management: improvements should be made to rules and regulations to enhance the systematicness and applicability of compliance management; improvements should be made to organizational structure to enhance the support for compliance management; improvements should be made to operation mechanisms to enhance the efficiency of compliance management; improvements should be made to risk prevention measures for key areas and crucial parts of compliance to enhance the efficiency of compliance management; improvements should be made to response mechanisms to enhance the ability to deal with compliance risks and incidents; improvements should be made to evaluation mechanisms to enhance the ability of continuous advancement of compliance management; improvements should be made to law-business integration mechanism to enhance the capability of compliance management to create value.



## 反腐倡廉 Anti-corruption



中国中铁召开2022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 2022 meeting on improving Party conduct, anti-corruption and warning education

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。公司制定有《纪检组织处理信访举报和案件监督管理工作实施办法》，坚决做到依规依纪依法处理信访举报和开展案件监督管理工作。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处理。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 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》) to handle complaints and reports and supervise cases of violations in accordance with rules and regulations resolutely. 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。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，落实职能部门责任。制定了《领导人员廉洁从业若干规定实施细则》，持续规范领导干部的廉洁从业行为；制定了《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》；制定了《关于进一步精简文件会议和规范出差管理的通知》，提出关于做好整治形式主义为基层减负工作要求；制定了《对内部违规吃请送礼等问题加强监督问责的九条措施》，不断压实各级纪检组织监督责任；制定了《领导人员操办婚丧喜庆事宜若干规定实施细则》，强化领导干部带头作用，弘扬新风正气。结合企业实际制定工程建设领域“行贿人”黑名单制度，加大对行贿人的问责惩处力度，进一步营造风清气正的营商环境。

## 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。2022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《领导干部配偶、子女及其配偶经商办企业管理规定》，推动权力运行更加规范、透明、高效。积极构建党委巡视、纪委监督、审计监督、法律合规监督贯通协同“四位一体”大监督格局，扎紧“不能腐”的笼子。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，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。2022年，地方纪委监委审结所属企业相关人员贪污案件3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. The Company holds meetings of the anti-corruption coordination group once a quarter to facilitate regular consultations and implement the responsibilities of functional departments. The Company formulated 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 continuously regulate the integrity of the leadership team. It also formulated 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》). The Company announced the Notice on Further Streamlining Documentation and Meetings and Standardizing Travel Management, proposing working requirements for rectification of formalism to reduce the burden on the grassroots; drew up Nine Measures for Strengthening Supervision and Accountability for Accepting and Giving Banquets and Gifts in Violation of Internal Regulations to constantly strengthen the supervisory responsibilities of disciplinary inspection organizations at all levels; formulated the Detailed Rules for Implementing the Several Provisions on Leaders' Marriage, Funeral and Other Celebratory Activities to emphasize the leading role of cadres and promote new healthy trends. We tailored a black list system of bribers in engineering construction to further strengthen the accountability and punishment against bribers and foster a healthy and fair business environment.

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 2022, the Company issued timely supervision proposals to relevant enterprises and functional departments based on the problems found, and made supervision recommendations. The Company revised the Regulations on Management of Business Conduct of Officials and Their Spouses and Children and Children's Spouses to promote more standardized, transparent and efficient operation of power. We actively built a big coordinated "four-pronged" supervision pattern comprising inspection by Party Committee, supervision by Commission for Discipline Inspection, audit-based oversight and legal compliance supervision to strengthen the cage of institutions that prevents corruption. 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, 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 2022, the local commission for Discipline Inspection and Supervision concluded three cases of corruption by the personnel of affiliated enterprises, and the relevant personnel were held criminally responsible according to the law.

公司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。

2022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。公司编印了《中国中铁领导人员廉洁从业若干规定实施细则》“口袋书”，向公司总部、45家二级企业领导人员发放900余册；收集近两年来违反中央八项规定精神和党的六大纪律、违法犯罪典型案例44个，编辑廉洁教育读本《鉴戒(2022)》，发放32,000余册。公司各级纪检组织认真落实《关于加强新时代廉洁文化建设的意见》，坚持以廉洁文化建设固本培元，以案件警示教育敬畏知止，全公司廉洁文化氛围更加浓厚。

2022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13次，内容涉及反贪污反贿赂等多个方面。

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 2022, 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. The Company compiled and printed a pocket book named “Rules for the Implementation of Certain Provisions on the Integrity of Officials of CREC”, and handed out more than 900 copies to officials of the Headquarters and 45 secondary enterprises; compiled a clean education book named “Warning and Precaution (2022)” with collected 44 typical cases of violations of the eight-point decision on improving Party and government conduct, of six Party’s disciplinary regulations, and crimes over the past two years, and handed out more than 32,000 copies. The disciplinary inspection organizations of the Company at all levels conscientiously implemented the Opinions on Strengthening the Cultivation of a Clean Culture in the New Era, which advocates cultivation of a clean culture to build a strong foundation, with cases serving as warnings to educate people to have a profound respect for rules and know when to stop, thereby creating a more solid corporate culture of integrity.

In 2022, the Company organized external directors to participate in 13 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32项，包括《审计工作管理办法》等审计制度21项，《违规经营投资责任追究实施办法》等追责制度8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。

2022年，公司进一步完善责任追究工作配套制度，制定了《国有资产监督追责业务档案管理实施细则》，为科学系统的管理和利用监督追责业务档案，有效提升违规经营投资责任追究工作水平，提高工作效率，强化成果运用，提供了制度保障。

### 完善审计工作机制

#### Audit mechanism improvement

2022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，各级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；实施审计机构差异化考核，被审计对象和同级业务部门不参与对内部审计机构及其负责人的绩效考评，内部审计机构及其负责人由上级审计机构和本级审计工作领导小组共同考核。

### 持续提升审计信息化水平

#### Continuous improvement to audit informatization

公司落实科技强审要求，以智能升级赋能智慧审计，开发上线审计信息系统2.0，实现与公司财务共享、成本管理、物资管理、投资管理等信息系统的全面贯通，初步实现“多专业融合、多角度分析、多方式结合”数字化审计模式。

The Company has a total of 32 effective systems related to auditing, including 21 auditing systems such as the Administrative Measures for Auditing (《审计工作管理办法》), 8 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 2022, the Company further improved the supporting accountability system and formulated the Implementation Rules for the Management of Business Archives for State-owned Assets Supervision and Accountability, which provides institutional guarantee for the scientific and systematic management and utilization of business archives for supervision and accountability, effectively raising the level of accountability work for illegal operation and investment, improving efficiency of work and strengthening the application of results.

In 2022, 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, enterprises at all levels 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 implement differential assessment of audit agencies. The audited entities and peer business departments do not participate in the performance evaluation of the internal audit agencies and their principals. The internal audit agencies and their principals are jointly evaluated by the superior audit agency and the audit work leading group at the same level.

The Company implemented the requirements of technology-based auditing and empowered smart auditing through intelligent upgrading. The Audit Information System 2.0 were developed and launched, enabling full connection with the Company's information systems, such as financial sharing, cost management, material management and investment management, and basically realizing a digitized auditing mode that features integration of multiple professions, analysis from multiple perspectives, and use of combined methods.

## 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

### 环境管理架构

Environmental Management Structure

### 环境风险管控

Environmental Risk Management

### 排放物管理

Emission Management

### 自然资源使用及保护

Use and Protection of Natural Resources

### 环境机遇

Environmental Opportunity





## 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.

2022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 2022, 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，公司制定了《中国中铁股份有限公司碳达峰行动方案》，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在2020年的基础上下降15%。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 objectives, the Company formulated the Carbon Peak Action Plan of China Railway Group Limited, 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 15% 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。

2022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2021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。2022年，公司各主要废气污染物均在许可证排污范围内，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 carbon 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 2022, 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 2021 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 carbon 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 2022, all major waste gas pollutants of the Company were discharged up to the standard within the discharge scope of the permit.

### 案例 Case

中国中铁隧道在承建的无锡高浪路快速改造工程中，自主探索制造节能减排新工装，创新推出了文明施工管控大棚，采用“轻钢结构+隔音板”，内侧配备智能扬尘噪音监控仪及1,200个自动降尘喷雾嘴，控尘率达100%，湿度可达90%，并能起到降温养护主体结构混凝土的作用。

China Railway Tunnel Group, in its construction of the Wuxi Gaolang Road rapid transformation project, has independently explored and manufactured new energy-saving and emission-reducing tools. It has also innovatively introduced a civilized construction control shed, using "light steel structure + sound insulation board", equipped with intelligent dust and noise monitoring devices on the inside and 1,200 automatic dust suppression nozzles, achieving a dust control rate of 100% and a humidity of up to 90%, which can also reduce the temperature and maintain the structure of the main concrete.



## 废弃物管理

### Waste management

公司高度重视废弃物的综合利用。2022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99.4%，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 waste. In 2022, the Company set a goal that, with the continuous expansion of the enterprise scale, the emission per RMB ten-thousand of non-hazardous waste and hazardous waste decreased year by year, 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 99.4% 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	2022年数据 Data in 2022	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)	1,632.9429	6.7%
二氧化碳排放密度(吨/万元) CO <sub>2</sub> emission density (ton/RMB ten-thousand)	0.1502	-3.78%
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)	1,340	3.1%
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)	0.012	-5.1%
无害废弃物总量(万吨) Total amount of non-hazardous waste (ten-thousand tonnes)	508.85	3.1%
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	0

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。

2022年，公司订立了万元营业收入综合能耗在2021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》。

2022年，公司万元营业收入综合能耗（可比价）0.0429吨标煤/万元，比去年同期下降3.16%，二氧化碳排放0.1502吨/万元，比去年同期下降3.8%，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 2022, 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 2021. 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 2022, the comprehensive energy consumption (comparable price) per RMB ten-thousand operating income was 0.0429 tons of standard coal/RMB ten-thousand, down 3.16% from the same period of last year; the CO<sub>2</sub> emission was 0.1502 tons/RMB ten-thousand, down 3.8% 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2022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2022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 2022, 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 2022, 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。2022年，公司订立了单位用新水量在2021年的基础上下降10%的目标，实际用新水量46,106万吨，较去年同期增长0.02%，单位用新水量4.083吨/万元，较去年同期下降10%。

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 2022, the Company set a target to reduce the amount of new water used per unit by 10% on the basis of 2021, and actually used 461.06 million tons of new water, up 0.02% from the same period of last year, and 4.083 tons of new water per unit per RMB ten-thousand, down 10% 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

2022年，公司持续开展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。2022年，股份公司总部共召开无纸化会议147次，参会人数共计4,028人，会议用文件累计2,682份，共节省纸张997,315张，相当于1,662棵大树。

In 2022, the Company continued to carry out 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 2022, the Company's headquarters held a total of 147 paperless meetings, with a total of 4,028 attendees, and kept 2,682 meeting documents on file, which saving 997,315 paper in total, equaling to 1,662 trees.

能源及资源消耗关键绩效指标（安全质量环保监督部）

Key performance indicators for energy and resource consumption (Safety, Quality and Environmental Protection Supervision Department)

能源/资源类型 Energy/resource type	指标 Indicators	2022年数据 Data in 2022	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)	50.0052	8.5%
	汽油(吨/万元) Gasoline (ton/RMB ten-thousand)	0.0046	2.2%
	柴油(万吨) Diesel (ten-thousand tonnes)	167.5264	5.6%
	柴油(吨/万元) Diesel (ton/RMB ten-thousand)	0.015	0
	天然气(万标立方米) Natural gas (ten-thousand standard m <sup>3</sup> )	7,160.4	5.8%
	天然气(立方米/万元) Natural gas (m <sup>3</sup> /RMB ten-thousand)	0.66	-1.5%
间接能源消耗 Indirect energy consumption	电力(万千瓦时) Electricity (ten-thousand kwh)	1,130,796	8.2%
	电力(万千瓦时/万元) Electricity (ten-thousand kwh/RMB ten-thousand)	0.0104	1%
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)	482.323	7.5%
	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)	0.0429	-3.2%
	综合能源消耗(万千瓦时) Comprehensive energy consumption (ten-thousand kwh)	3,924,515	7.5%
	综合能源消耗(千瓦时/万元收入) Comprehensive energy consumption (kwh/RMB ten-thousand income)	361	0.5%
水 Water	消耗新水总量(万立方米) Total new water consumption (ten-thousand m <sup>3</sup> )	46,105.66	0.02%
	消耗新水总量(立方米/万元收入) Total new water consumption (m <sup>3</sup> /RMB ten-thousand income)	4.24	-6.6%

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及天然资源产生重大影响。公司高度重视对环境及天然资源的保护，制定并认真落实《节能减排监督管理办法》《环境保护管理办法》等制度。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。2022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。



● 中国中铁建设的国内一次性建成规模最大的污水处理厂——武汉北湖污水处理厂项目  
Wuhan Beihu Wastewater Treatment Plant – the largest domestic sewage treatment plant built by CREC at one time

As a construction enterprise, the Company's operations will not have a significant impact on the environment and natural resources. The Company attaches great importance to the protection of the environment and natural resources, and has formulated and conscientiously implemented the Measures for Supervision and Management of Energy Conservation and Emission Reduction, the Environmental Protection Management Measures and other systems. 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 2022, 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

中国中铁二院在中老铁路选线过程中，绕避各类自然保护区核心区、缓冲区和环境敏感点，通过以桥代路、以隧代路保护亚洲象。

During the route selection of the China-Laos Railway, China Railway Eryuan avoided core areas, buffer zones, and environmentally sensitive points of various nature reserves, and built bridges and tunnels instead of roads to protect the Asian elephants.



## 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.



中国中铁参建的雄安新区的中央绿心——千年秀林

Millennium Forest – the central green heart of Xiong'an New Area, the building of which attracted the participation by CREC

## 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《中国中铁股份有限公司碳达峰行动方案》，明确了中国中铁碳达峰行动目标与战略、重点任务、重大工程，将绿色、低碳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 Carbon Peak Action Plan of China Railway Group Limited which explicitly outlines the carbon peak action objectives, strategies, key tasks, and major projects of CREC and integrates the concept of green and low carbon 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.



中国中铁在鄱阳湖生态经济区建设的重点水利工程——峡江水利枢纽工程  
Xijiang water conservancy hub project - the key water conservancy project built by CREC in Poyang Lake's ecological and economic zone

### 案例 Case

中国中铁在广州铁路枢纽新建广州白云站项目屋面工程中，大量采用太阳能光伏技术，预期铺设37,000 m<sup>2</sup>光伏，电站装机容量为4,003.8kWp，年减少二氧化碳排放319.46 t；与传统现浇体系相比，预计每平米减少碳排放1.28 kg，碳排放降低23.3%。

CREC extensively used solar photovoltaic technology in the roof engineering of Guangzhou Baiyun Station project, a Guangzhou Railway Hub, with an expected installation of 37,000 square meters of photovoltaic panels and a power generation capacity of 4,003.8 kWp. This is expected to reduce carbon dioxide emissions by 319.46 tons annually. Compared with the traditional cast-in-place system, it is estimated to reduce carbon emissions by 1.28 kg per square meter, resulting in a 23.3% reduction in carbon emissions.



## 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。2022年，该公司承建了北湖污水处理厂、长江沙湖水环境提升项目等多项水处理环保项目；主导总承包了都江堰市供排水系统提升项目、萍乡主城区排水系统项目、杨山县城乡供水一体化工程项目、沈丘县城乡供水一体化工程总承包项目等水务提升项目；鹰潭市信江新区厂网河湖园一体化海绵城市建设项目、百色市中心城区污水处理系统治理一期工程、烟台市夹河河道清淤项目工程设计施工一体化项目等综合治理项目；投资研发“铁基催化剂催化臭氧氧化技术”“厨余垃圾水解产酸作污水厂碳源技术”，为绿色环保项目提供技术方案支持。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》，对危险源识别、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 2022, the Company undertook several environmental protection projects for water treatment such as the Beihu Sewage Treatment Plant and the Yangtze River Sha Lake Water Environment Improvement Project; generally contracted water improvement projects like the Dujiangyan water supply and drainage system upgrading project, Pingxiang urban area drainage system project, Dangshan County urban and rural water supply integration project, and Shenqiu County urban and rural water supply integration project. Furthermore, it contracted comprehensive treatment projects like the sponge city construction project of Yingtan Xingjiang New District integrating factories, network, rivers, lakes and parks, the first phase of the sewage treatment system treatment project in the central urban area of Baise city, and the engineering design and construction integration project of the Jiahe River dredging project in Yantai city. The Company also invested in researching and developing “oxidation technology with iron-based catalyst catalyzing ozone” and “acid production technology from hydrolytic kitchen wastes as a carbon source for sewage plants”, providing technical support for green environmental projects. 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). There are clear and standardized guidelines for danger source identification, risk analysis, prevention, 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.





中国中铁建设的石家庄城市“绿肺”——滹沱河生态修复项目

Ecological restoration project of Hutuo River – the “green lung” of Shijiazhuang, built by CREC

## 案例 Case

中国中铁积极参与雄安新区“千年秀林”建设，植树造林7.18万亩，栽植林木389万株。期间，开发完善了涵盖城市森林规划设计、建设施工、运维管理等环节的“GIS+BIM城市森林全生命周期大数据信息系统”，地上每种一棵树，系统就会生成一颗虚拟树，组成了“数字森林”。

CREC actively participated in the construction of the “Millennial Beautiful Forest” in Xiong’an New Area, planting trees on 71,800 mu and planting 3.89 million trees. During the construction, it developed and improved a “GIS+BIM Urban Forest Full Lifecycle Big Data Information System”, which includes urban forest planning, design, construction, operation, maintenance and management. Every time a tree is planted, a virtual tree is created in the system, forming a “digital forest”.



# 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。2022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。

2022年，公司新签合同额30,323.9亿元，同比增长11.1%；公司营业总收入11,543.58亿元，同比增长7.56%；实现归属母公司净利润312.76亿元，同比增长13.25%，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 2022, 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 2022, the Company recorded total value of newly-signed contracts of RMB3,032.39 billion, up 11.1% year on year; total revenues of RMB1,154.358 billion, up 7.56% year on year; realized net profit attributable to the parent company of RMB31.276 billion, up 13.25% 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。2022年，公司积极响应国务院国资委稳岗扩就业号召，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。2022年，公司共签约高校毕业生21,461人，签约人数比2021年增长20.23%，其中本科生19,614人、占比91.4%；硕士生1,819人、占比8.5%；博士生28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，并制定有《人才引进管理规定》，明确载明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、依法合规退出的管理机制。

2022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 2022, the Company actively responded to the call of the SASAC of the State Council for stabilizing jobs and expanding employment, steadily scaled up the recruitment of graduates based on its own development strategy while continuing to introduce more college graduates. Meanwhile, it increased the recruitment of scientific research personnel in key areas and key industries and urgently needed personnel majoring in carbon peak and carbon neutrality-related majors. In 2022, the Company introduced a total of 21,461 college graduates, an increase of 20.23% compares with 2021, including 19,614 undergraduates, accounting for 91.4% of the total, 1,819 postgraduate students, accounting for 8.5% and 28 PhD. 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., and formulates Talent Recruitment Management Regulations, which clearly requires resolute elimination of 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 2022, 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。

2022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、辽宁省、山西省、山东省、安徽省、江苏省、福建省、重庆市、云南省、贵州省、中国信保、国药集团、中国建研院、中信集团、中国人保、国家电投、中国联通、中国能建、中咨公司等地方政府、企业进行了高层交流，为之后的深入合作奠定了良好基础。



中国中铁与中咨公司签署战略合作协议  
CREC signed a strategic cooperation agreement with CIECC

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 2022, the Company fully utilized its advantages in funding, technology, management, and talent to engage in high-level exchanges with local governments and enterprises, including Xinjiang Uygur Autonomous Region, Liaoning Province, Shanxi Province, Shandong Province, Anhui Province, Jiangsu Province, Fujian Province, Chongqing City, Yunnan Province, Guizhou Province, China Export & Credit Insurance Corporation, Sinopharm, China Academy of Building Research, CITIC Group, PICC, State Power Investment Corporation, China Unicom, China Energy Engineering Group, and CIECC. This laid a solid foundation for in-depth cooperation in the future.



中国中铁与山东省签订战略合作协议  
CREC and Shandong Province signed a strategic cooperation agreement

## 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，配套制定有《人才引进管理规定》《国际化人才队伍建设的实施意见》《高技能人才评价实施办法》《职业经理人市场化选聘契约化管理办法》等系列制度。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. To this end, the Company formulates a series of systems, such as Talent Recruitment Management Regulations, Implementation Opinions on the Building of Internationalized Talent Team, Implementation Measures for the Evaluation of Highly Skilled Talents and Contractual Management Measures for the Market-based Selection and Recruitment of Professional Managers. 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。2022 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 97.7%，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突破。2022 年，2 个团队、6 名个人获得第十六届詹天佑铁道科学技术奖。

公司高技能人才培养成效显著。2022 年，1 人获得中华技能大奖，2 人获得全国技术能手称号，2 人入选第二批国务院国资委中央企业“大国工匠”。

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，2022 届引进“双一流”高校毕业生 4,406 人、占比 20.5%，较上年增长 1.9 个百分点。

The structure of the Company's leadership team is more optimized. In 2022, 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 97.7%. 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 2022, six individuals and two teams of CREC won the 16th Tien-yow Jeme Railway Science and Technology Award.

The Company has made remarkable achievements in the training of highly skilled personnel. In 2022, one employee won the Grand Skill Award of China and two employees won the National Technical Expert award. Two employees were included in the second list of "Great Country Craftsmen" from centrally administered State-owned enterprises under the State-owned Assets Supervision and Administration Commission 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 4,406 graduates from "Double First-rate" universities in 2022, accounting for 20.5% of the total, up 1.9 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



中国中铁召开2022年干部人才工作会议，研究部署人力资源工作战略  
CREC held the 2022 cadre and talent work conference on the implementation of human resources work strategy

## 案例 Case

中国中铁装备公司构建了“国内+国外”的高端人才协同创新机制，以全职引进、柔性引进、专家咨询等形式，相继聘请18位国内外专家，形成以院士、大师等国家级专家为领军人物，中青年科技人才为主力军的协同创新科技人才智囊团队。

China Railway Engineering Equipment Group has built a "domestic + foreign" high-end talent collaborative innovation mechanism, and has successively hired 18 domestic and foreign experts in various forms such as full-time introduction, flexible introduction, and expert consultation, forming a collaborative and innovative technology talent think tank team led by national-level experts such as academicians and masters, with young and middle-aged scientific and technological talents as the main force.

中国中铁2022年员工总数及分类数据  
The total number of employees and classification data of CREC in 2022

截至本报告期末，公司共有在册员工297,620人。 As of the end of the reporting period, the Company has 297,620 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		297,620	100%
兼职员工 Part-time employees		0	0%
男性员工 Male employees		248,821	83.6%
女性员工 Female employees		48,799	16.4%
35岁及以下员工 Employees at or under 35 years old		131,983	44.3%
35岁至50岁员工 Employees between 35 and 50 years old		111,195	37.3%
50岁及以上员工 Employees aged 50 years old and above		54,442	18.4%
境内员工 Domestic employees		293,392	98.6%
境外员工 Overseas employees		4,228	1.4%
大专及以下学历员工 Employees with college education or below		119,015	40.0%
本科学历员工 Employees with a bachelor's degree		164,128	55.1%
硕士学位员工 Employees with a master's degree employee		14,154	4.8%
博士学位员工 Employees with a doctorate degree		323	0.1%
高级职称员工 (含正高级) Employees with senior titles (including: those with professorate senior titles)		42,191 (3,367)	14.18%
中级职称员工 Employees with intermediate titles		72,188	24.26%
助理级职称员工 Employees with assistant titles		100,448	33.75%
员级及以下 Employees with junior titles or below		8,057	2.71%
其他 Others		74,736	25.11%
专家 Experts		663	0.22%
有国家执业资格员工 Employees with national Vocational qualifications		31,943	10.7%
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	2.96%	35岁及以下员工 Employees at or under 35 years old	2.8%
女性员工 Female employees	0.34%	35-50岁员工 Employees between 35 and 50 years old	0.4%
境内员工 Domestic employees	5.21%	50岁及以上员工 Employees aged 50 years old and above	0.1%
境外员工 Overseas employees	1.73%		
1.2022年，公司员工流失比率为3.3%； 2.流失率=主动离职/同时期人数。		1. In 2022, the employee turnover rate of the Company was 3.3%; 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。2022年，公司召开了三届三次职代会，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195,215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，在央企率先制定了《企业民主管理办法》。加强日常民主管理，指导5家企业完成了职代会新建和换届工作，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。

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 2022, the Company held the 3rd 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 195,215 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 took the lead in formulating the Measures for Democratic Management of Enterprises among central enterprises. We enhanced the daily democratic management, guided 5 enterprises to complete the establishment and replacement of their workers' congresses and guided 47 enterprises to convene their workers' congresses to perform democratic procedures and implement the power of the workers' congress.

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，持续完善市场化薪酬分配机制。按照“效益决定、效率调整、水平调控”总原则，优化工资总额管理，推动薪酬资源向作出突出贡献的人才和一线关键苦脏险累岗位倾斜；大力推进工资总额备案制管理，赋予企业更大自主权；差异化确定核准制工资总额挂钩指标，切

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. Following the general principles of “benefit-based decision, efficiency-based adjustment, and level regulation”, we optimized the payroll management, and promoted the allocation of compensation resources towards talents who make outstanding contributions and do frontline jobs that are key, arduous, dirty and dangerous. We vigorously

合企业发展实际；突出效率调整，发挥人力资源投入产出效率的引领作用。不断完善按要素分配制度，积极稳妥推进中长期激励工作，完成限制性股票激励计划首次授予和预留股权授予登记工作，核心骨干员工利益与企业利益深度绑定；实现科技型企业岗位分红全覆盖，知识作为生产要素参与分配的效果明显。强化科技创新激励保障，制定出台推进科技创新激励保障机制建设实施方案，发挥科学技术推动生产力发展的“原动力”作用。保障职工工资支付，建立长效机制，守住“零拖欠”底线，健全和谐劳动关系。

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。



中国中铁为员工提供的定制化保险服务

Customized insurance service provided by CREC for employees

promoted the payroll registration system, giving enterprises greater independence. We differentiated the confirmation of the payroll linkage indicators to suit our actual development. We highlighted efficiency-based adjustments and unleashed the leading role of the input-output ratio of human resources. We continuously improved the allocation system based on various factors, actively and prudently advanced medium and long-term incentives, completed the first grant of restricted stock incentive plan and equity reservation registration, and deeply bound the interests of core employees to the interests of the enterprise. We achieved full coverage of post-based dividends for technology-based enterprises, and the role of knowledge as a factor for distribution is obvious. We strengthened and guaranteed the incentive for scientific and technological innovation and launched the implementation of a plan to establish the mechanism for promoting such incentives. We highlighted the role of science and technology in driving the development of productivity. We ensured the payment of employees' wages and established a long-term mechanism to protect the bottom line of "zero arrears" and cultivate harmonious labor relations.

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.



中国中铁广泛开展工地“幸福之家”建设

CREC extensively carried out the construction of "happy family" projects at construction sites

## 关爱员工身心健康

### Caring for employees' physical and psychological health

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》，并不断扩大了困难救助范围。2022年，帮扶特困职工424户、大病职工35人，发放救助金341.3万元。扎实做好疫情防控期间职工关怀和生活保障工作，向援建方舱医院的全体参建员工发出《慰问信》，制作心理疏导视频；下拨专项慰问金125万元，向59家二级公司下拨慰问金568万元；广泛开展助医助药助困活动，全公司累计专项资金支出7千多万元。切实增强了员工抵御重大疾病、意外事故能力。

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

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, and continued to expand the scope of assistance to those in need. In 2022, we granted RMB3.413 million to 424 families of poverty-stricken workers and 35 workers with major diseases for assistance purpose. We provided employee care and life protection during the pandemic prevention and control, sending a Letter of Condolence to all employees who had assisted in the building of the cabin hospitals, and producing a psychological counseling video. We allocated RMB1.25 million of special condolence money, and RMB5.68 million of condolence money to 59 second-tier companies. We also widely carried out activities to help doctors and the poor. Throughout the year, we spent more than RMB70 million of special funds, which effectively strengthened employees' ability to resist major diseases and accidents.

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



在中国中铁建工郑州航空港站举办的河南省总工会“万场文化活动现场进基层”演出  
“Ten Thousand Cultural Activities to the Grassroots” performance held by the Henan Federation of Trade Unions at Zhengzhou Airport Station which China Railway Construction Engineering Group was contracted to build



中国中铁关爱务工人员健康，广泛接种新冠疫苗  
CREC cared for the health of labor workers and ensured that they were vaccinated with COVID-19 vaccines



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。举办第二届EAP团辅大赛，全公司累计开展线上线下心理关爱服务7万余人次。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”。

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 held the second EAP group counseling competition, and carried out online and offline psychological care for more than 70,000 people in total. 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

2022年9月16日，受强降雨影响，云南省绿春县突发泥石流自然灾害，造成在建勐绿高速公路施工驻地受灾。公司工会向受灾项目下拨专项救灾慰问款100万元，保障了受灾职工的正常生产生活。

On 16 September 2022, a mudslide in the wake of a heavy rainfall lashed Luchun County, Yunnan Province, affecting the Menglv Expressway under construction. In response to the disaster, the Company's Labor Union allocated RMB1 million to the affected projects, which ensured the normal production and life of the affected employees.

## 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，制定有《劳动合同管理规定》等制度，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。制定并落实《境外员工薪酬及休假管理指导意见》，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，制定了《工作时间及假期管理办法》，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 and has various systems in place, such as the Labor Contract Management 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 formulates and implements the Guidelines for Remuneration and 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, and formulates Management Measures for Working Hours and Vacation to strengthen 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。在组建文学、书法、摄影、漫画、桥牌、乒乓球、新媒体等职工兴趣协会的基础上，新组建了音乐、朗诵、舞蹈、篆刻等职工兴趣协会。

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. In addition to employee interest associations such as literature, calligraphy, photography, cartoons, bridge, table tennis and new media, the Company set up new interest associations such as music, recitation, dance and seal cutting associations.



中国中铁四局昌景黄高铁建设工地举办百对新人集体婚礼

A group wedding of 100 couples at the construction site of Nanchang-Jingdezhen-Huangshan High-speed Railway undertaken by China Railway No.4 Engineering Group Co. Ltd.



中国中铁七局五公司邀请职工家属到公司过生日，营造“家”文化氛围

The Fifth Company of China Railway No. 7 Engineering (中铁七局五公司) invited employees' families to celebrate their birthdays in the company to foster a “family” cultural atmosphere

## 案例 Case

2022年，公司举办了首届企业文化节职工书画摄影作品展；全年获评全国职工书屋示范点8个，火车头体育运动先进单位7个、先进个人12人，27项职工文化作品在全国和全路比赛中获奖，1项作品荣获第十三届中国艺术节暨第十九届群星奖决赛入围奖。

In 2022, the Company held the first exhibition of calligraphy, painting and photography works of employees in the enterprise culture festival. Throughout the year, the Company had 8 national demonstration studies, 7 advanced locomotive sport units and 12 advanced individuals. 27 pieces of cultural work of employees won awards in national and road-wide competitions, and 1 piece of work won the finalist award in the 13th China Arts Festival and the 19th Group Star Award.

## 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，制定了《职业安全健康监督管理规定》《职工生活保障工作的指导意见》等制度，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。

2022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，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。

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 formulates related systems, such as the Occupational Safety and Health Supervision and Management Regulations, Guiding Opinions on Employee Life Security Works to continue 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 2022, 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. 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.





## 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《2022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 2022 (《2022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.



中国中铁六局基层正在对配电箱进行例行安全检查

The grassroots level of China Railway No.6 Engineering Group Co., Ltd. was conducting routine safety checks on distribution boxes



中国中铁四局基层正在对车辆轮胎进行例行安全检查

The grassroots level of China Railway No.4 Engineering Group Co. Ltd. was conducting routine safety checks on vehicle tires

## 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。

公司持续强化主体责任落实，完善管理体系，夯实管理基础，落实《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》要求，研究发布《关于开展安全生产提升年行动的通知》和《中国中铁安全质量管理体系提升实施方案》。落实国务院安委会“十五条”重要措施，修订发布《中国中铁铁腕治安硬十条》。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，构建了体系化、立体化、常态化并以检查、帮扶、指导于一体的预控机制。成立了安全质量环保督查总队、综合督查处、3个派驻督查组，各单位成立了123支管控稽查队、290个管控组。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。

2022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。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、生产安全习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。

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 continue to strengthen the fulfillment of main responsibilities, perfect the management system, and consolidate the management foundation, the Company implemented the requirements of the Circular on Further Implementing the Responsibility of Management and Supervision of Production Safety and Building a Long-term Mechanism of 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的通知》), and studied and released the Circular on the Action of the Year of Production Safety Improvement (《关于开展安全生产提升年行动的通知》) and the China Central Railway Plan for Improving the Safety and Quality Management System of CREC (《中国中铁安全质量管理体系提升实施方案》). The Company put into place 15 important measures of the Work Safety Committee of the State Council, and revised and issued the Ten Measures for Public Security by a Strong Hand of CREC (《中国中铁铁腕治安硬十条》). The Company kept strengthening the construction of safety production system, stepped up the investment and control of safety production, and built a systematic, three-dimensional, and normalized pre-control mechanism that integrated inspection, assistance, and guidance. In addition, the Company set up a safety, quality and environmental protection inspection team, a comprehensive inspection department and 3 stationed inspection teams, and the units set up 123 control inspection teams and 290 control teams, thus achieving significant decline of deaths per ten billion turnover while ensuring substantial increase in operating income.

In 2022, 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. 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.

2022年，公司深入开展了“复工复产”安全专项督查、安全隐患大排查大整治、自建房安全专项整治、防火防灾专项检查等，先后调研、检查二级公司61次，三级公司57次，督查项目310个，及时发现问题、消除隐患、压实责任。

2020年、2022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。

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。

In 2022, the Company furthered the special safety inspection on “resumption of work and production”, investigation and rectification of safety hazards, special safety rectification on self-built houses, special inspection on fire and disaster prevention, etc. The Company investigated and inspected secondary companies 61 times, tertiary companies 57 times, and inspected 310 projects in time to identify problems and eliminate hidden dangers, as part of its responsibility fulfillment.

In 2020 and 2022, 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.

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.





2022年，公司全面构建“总制度+专项制度+刚性标准”制度体系。制定出台安全质量纲领性文件《中国中铁安全质量环保管理办法》，对现有管理制度梳理、完善形成9个专项管理制度；印发了《安全质量环保刚性标准》，全面构建中国中铁安全质量环保管理制度体系。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。

2022年，公司按照时间维度和项目全生命周期维度，重塑了各层级管理机制。持续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。2022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。

In 2022, the Company comprehensively built a system of “general system + special system + rigid standard”. The Company formulated and issued the Administrative Measures for Safety, Quality and Environmental Protection of CREC (《中国中铁安全质量环保管理办法》), a programmatic document about safety and quality, sorted out and improved the existing management system to form 9 special management systems; issued the Rigid Standard for Safety, Quality and Environmental Protection (《安全质量环保刚性标准》), and comprehensively built a safety, quality and environmental protection management system. 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 2022, the Company reshaped the management mechanism at each level according to the time dimension and the whole life cycle dimension of projects. The Company continued to strengthen 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 2022, 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。2022年，公司对全员开展了《安全生产法》、安全生产管理制度等应知应会考试，并派员对所属企业进行现场督考。组织开展了注册安全工程师继续教育、“三类人员”继续教育培训，累积培训专职人员3300余名；全公司通过线上与线下相结合方式，共培训各级企业领导、项目经理、安全质量专职人员及作业人员计34.2万余人次，进一步提升了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 2022, the Company conducted examinations for all employees to understand the Production Safety Law 《安全生产法》 and the production safety management policy, and sent employees to supervise the examinations on site in the affiliated enterprises. The Company organized continuing education for registered safety engineers and “three types of personnel”, and trained more than 3,300 full-time personnel. Using online and offline methods, the Company trained a total of 342,000 times for enterprise leaders, project managers, safety and quality personnel and operators at all levels, further improving the quality of the full-time team and employees.



中国中铁七局武汉公司开展安全生产月咨询日活动  
Wuhan Branch of China Railway No.7 Engineering Group Co., Ltd. carried out consultation day activities for the month of safety production



中国中铁在基层广泛开展安全体验活动  
CREC extensively carried out safety experience activities at the grassroots level



## 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。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。2022年，公司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，对全体管理人员、作业人员实施了职业健康体检，为28,235个工作场所实施了职业病危害定期检测，将职业健康培训纳入中国中铁教育“云平台”，开展职业健康培训39,566次，参培人员超150万人次。

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。2022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》). 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. In 2022, 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 conducted occupational health checkups for all managers and operators, and checked 28,235 workplaces for occupational disease hazards. Incorporating occupational health training into its "cloud platform", the Company conducted occupational health training 39,566 times, with over 1.5 million participants.

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 2022, 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的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

2022年，公司落实《培训工作管理规定》《技能人员培训管理办法》等制度，并持续优化完善培训制度体系，积极推进培训工作长远谋划，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。公司及所属企业通过“线上+线下”等多种培训方式加大培训力度，进一步促进员工队伍能力素质提升，促进企业高质量发展。

In 2022, the Company implemented the Training Work Management Regulations, Skill Personnel Training Management Measures and other systems, and continued to optimize and improve the training system, advance the long-term planning of training in an active way, 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. The Company and its affiliated enterprises increased the training through “online and offline” training and other training methods, in a bid to further improve the ability and quality of the employees and promote high-quality development of the Company.

2022年，公司累计培训各类人员81万余人次，培训员工占员工总数的90%。其中，男员工培训22.58万人，占比91%，女员工培训4.42万人，占比90%；高级管理层培训640人，占比100%；中层管理人员培训9,977人，占比100%。员工平均受培训80课时，男性及女性员工平均受培训均约80课时；高级管理层平均受培训106课时，中层管理平均受培训98课时。

In 2022, the Company trained more than 810,000 personnel, accounting for 90% of the total number of employees. Among them, 225,800 were male, accounting for 91%, and 44,200 were female, accounting for 90%; 640 were senior management personnel, accounting for 100%; 9,977 were middle management personnel, accounting for 100%. The employees received an average of 80 hours of training, for male and female both. Senior management personnel received an average of 106 hours of training, while middle management personnel received an average of 98 hours.



中国中铁一局新运公司组织新员工学习企业历史  
China Railway First Group Track Engineering Co., Ltd. organized new employees to learn corporate history

## 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。2022年，评审通过正高级工程师439人，高级工程师4,102人；正高级会计师61人、高级会计师237人；正高级经济师74人、高级经济师120人；高级政工师401人。

公司各级企业大力开展各类技能培训、岗位练兵、技术比武和技能竞赛等技能提升活动，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。

2022年，公司选拔推荐中华技能大奖1名，全国技术能手2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。

The Company has improved the professional title evaluation system, focusing more on the performance, ability and actual contribution. In 2022, 439 professorate senior engineers and 4,102 senior engineers; 61 professorate senior accountants and 237 senior accountants; 74 professorate senior economists and 120 senior economists; and 401 senior political engineers passed the evaluation.

Enterprises at all levels of the Company carried out skills upgrading activities such as skills training, post training, technical contests and skill contests. 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 2022, the Company selected and recommended 1 candidate for the Grand Skill Award of China, and 2 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  
The 4th vocational skills competition and the 20th youth vocational skills competition for testers held by CREC

## 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。2022年，公司评审通过高级职称5,434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。2022年评定工匠技师3人、特级技师100人、高级技师496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 2022, 5,434 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 2022, the Company appraised 3 craftsman technicians, 100 special technicians and 496 senior 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，公司认真贯彻落实ISO9000体系标准和《质量管理体系文件》《质量程序文件》《工程质量管理规定》等文件办法，制定并落实《工程质量管理规定》《安全质量责任事故追究办法》《班组安全质量责任制的实施细则》等制度，不断强化施工过程管控，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。

2022年，公司修订了《中国中铁优质工程评选规定》，在“严格把关、优中选优”的基础上，规范优质工程评审流程，深入开展工程创优活动，推动企业和施工现场加强工程质量管理，评选出中国中铁优质工程金杯奖38项、中国中铁杯奖60项，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 (《工程质量管理规定》). The Company formulates and implements systems such as Regulations on Supervision and Management of Project Quality, Measures for Investigation of Safety and Quality Liability Accidents and Rules for Implementation of Safety and Quality Accountability System for Team Leaders to constantly strengthen 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 2022, the Company revised the “Selection Regulation of CREC’s Quality Project” (《中国中铁优质工程评选规定》) to regulate the quality project review process based on “strict control and best selection”. Through in-depth project excellence activities, the Company and the construction site are promoted to strengthen project quality management, during which 38 projects were selected and awarded as CREC’s Quality Project Gold Cup and 60 projects as CREC Cup, ensuring continuous improvement and optimization of project quality. As a construction company, the Company does not have to recall products for safety and health reasons.

2022年，公司获中国建设工程鲁班奖19项；获国家级优质工程奖54项，其中金奖4项。

In 2022, the Company won 19 China Construction Engineering Luban Prizes and 54 National Quality Engineering Awards, including 4 Gold Awards.



中国首个跳台滑雪场地——国家跳台滑雪中心“雪如意”  
“Snow Ruyi” at the ski jumping center – China’s first ski jumping venue



世界首座高速铁路悬索桥——五峰山长江大桥  
Wufengshan Bridge – the world’s first high-speed suspension bridge

### 中国中铁入选2021~2022年度中国建设工程鲁班奖名单

#### List of the First Batch of Projects in 2021-2022 Winning the China Construction Engineering Luban Prize

银川经济技术开发区年产15GW单晶硅棒项目

15GW Monocrystalline Silicon Rods Project in Yinchuan Economic and Technological Development Zone

新建连云港至镇江铁路五峰山长江特大桥 Construction of Wufengshan Yangtze River Grand Bridge of Lianyungang-Zhenjiang Railway

延庆至崇礼高速公路河北段 Hebei Section of Yanqing-Chongli Highway

新建福州至平潭铁路平潭海峡公铁大桥 Construction of Fuzhou-Pingtang Railway Pingtan Strait Highway Bridge

重庆两江桥隧连接线 Chongqing Liangjiang Bridge and Tunnel Link

新建商丘至合肥至杭州铁路亳州特大桥 Construction of Shangqiu-Hefei-Hangzhou Railway Bozhou Grand Bridge

平塘特大桥 Pingtang Grand Bridge

宜昌市伍家岗长江大桥 Yichang Wujiagang Yangtze River Bridge

昆明市轨道交通4号线工程PPP项目 PPP project of Kunming Rail Transit Line 4

无锡地铁3号线一期工程 Wuxi Metro Line 3 (Phase 1)

徐州市城市轨道交通3号线一期工程 Xuzhou Urban Rail Transit Line 3 (Phase 1)

新建北京至雄安新区城际铁路雄安站站房工程

Station Building Project of Xiong'an Station of The New Beijing-Xiong'an New District Intercity Railway

华晨宝马汽车有限公司产品升级项目（铁西厂区）BMW Brilliance Automotive Ltd. Product Upgrade Project (Tiexi Plant)

新建福州至平潭铁路站房及相关工程平潭站 Construction of Fuzhou-Pingtang Railway Station and Related Projects Pingtan Station

国家跳台滑雪中心 National Ski Jumping Center

成都天府国际机场 Chengdu Tianfu International Airport

斯里兰卡南部高速延长线项目2/3/4标段新建工程 Construction of Section 2/3/4 of Sri Lanka Southern Expressway Extension Project

越南河内城市轨道交通吉灵-河东线项目 Cat Linh-Ha Dong Line Project of Urban Rail Transit in Hanoi, Vietnam

坦桑尼亚尼雷尔基金会广场项目 Tanzania Nyerere Foundation Plaza 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。

2022年，公司工法开发和专利申请计划全面完成。国家知识产权局和世界知识产权组织发布第二十三届中国专利奖授权决定，中国中铁荣获中国专利奖银奖2项、优秀奖4项的好成绩，公司知识产权数量和质量得到了进一步提升。2022年，公司共获得省部级工法794件，授权专利9,256项，其中发明专利1,875项，PCT专利201项。

Taking development needs as the target, CREC 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 2022, the Company completed the industrial method development and patent application plan. The State Intellectual Property Office and the World Intellectual Property Organization issued the decision of granting the 23rd China Patent Award. CREC created remarkable results of winning two silver prizes and four excellence prizes of China Patent Award, further improving the quantity and quality of its intellectual property. In 2022, the Company won 794 provincial and ministerial industrial method development awards, and owned 9,256 authorized patents, including 1,875 invention patents and 201 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，制定有《网络信息安全管理规定》等制度，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。2022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、防护技能和网络防诈骗意识。

2022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2022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。2022年11月，公司举行了内部网络安全攻防演练活动，组织了6支攻击队伍、6家防守企业，128人参与演练活动，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，二十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, and formulates Regulations on Network Information Security Management and other systems in order to protect the customer privacy and enterprise data security, and guarantee the normal, efficient and safe operation of the information system. In 2022, 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 2022, the Company actively carried out the network security work in the important periods of 2022 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 November 2022, the Company held an internal network security attack and defense drill, and organized 6 attack teams and 6 defense enterprises, namely 128 people, 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 twenty 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.

中国中铁成立有中铁云网信息科技有限公司可为企业数据保护提供专业服务  
CREC has established CREC Cloudnet Information Technology Co., Ltd., which can provide professional services for enterprise data protection



## 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。2022年，我们作为上市公司，共收到业主有关诉求11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 2022, as a listed company, we received a total of 11 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2022年底，公司电商平台拥有各类注册供应商29万余家，其中国内供应商29万家，国外供应商25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 2022, there were more than 290,000 registered suppliers on the e-commerce platform of the Company, including 290,000 domestic suppliers and 25 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，在供应商管理制度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；公司开展各类采购活动时，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法等相关法律法规，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；2022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。公司开展供应商日常评价和年度评价，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，将评价结果纳入供应商年度考核。

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。通过签订合同，公司监督供应商保障劳务安全、维护农民工权益、保护环境，引导其履行社会责任。

The Company implements a commitment system to resist commercial bribery. In the System for the Management of Supplier, 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 conducts various procurement activities, it makes 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 prohibit bribery and other illegal activities. Suppliers should also sign integrity agreements and strictly implement the agreement. The Company 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 2022, 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 comprehensively evaluates the quality of raw materials provided by suppliers, environmental protection measures, etc., and includes the evaluation results into the annual evaluations of suppliers.

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. By signing contracts, the Company oversees 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，制定了《履行企业社会责任的指导意见》，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，大力支持基础教育，为构建和谐美好社会持续贡献力量。

公司高度重视文化的传承和保护，以优质的文物保护资质和精湛的专业技术，参与世界文化遗产保护项目50余项、全国重点文物保护单位相关保护项目300余项，累计完成文物保护项目600余项，为保护人类文明贡献了智慧和力量。

### 抗击新冠肺炎疫情 Fight against COVID-19

公司坚决执行国家疫情防控政策，先后组织所属21家企业参与到吉林、上海、海南等地抗疫用房建设，受到当地政府表彰。公司积极开展志愿活动和捐款捐物行动，服务周边社区、村镇防疫。

While developing, CREC attaches great importance to giving back to the society. We have formulated the Guidelines on Fulfilling Corporate Social Responsibility, take the initiative to assume social responsibilities, actively participate in the front line of disaster relief, encourage employees to participate in voluntary activities, and strongly support basic education, in order to make continuous contributions to the construction of a harmonious and beautiful society.

The Company focuses on the inheritance and protection of culture. With high quality cultural relics protection qualifications and exquisite professional technology, we have participated in more than 50 world cultural heritage protection projects and more than 300 related protection projects of key national cultural relics protection units, and completed more than 600 cultural relics protection projects, contributing wisdom and strength to the protection of human civilization.

Under the national pandemic prevention and control policy, the Company organized 21 enterprises to participate in the construction of anti-pandemic houses in Jilin Province, Shanghai and Hainan Province and was commended by the local governments. The Company actively carried out voluntary activities and donated money and materials to serve the epidemic prevention in the communities and villages.

中国中铁积极投身各地文物保护，图为中国中铁研究院参与的乐山大佛系列保护项目  
CREC is actively engaged in the protection of cultural relics in various regions. The picture shows the Leshan Giant Buddha preservation project, in which China Railway Research Institute actively participated



## 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。

2022年，公司全面提升应急救援能力和水平，修订了安全生产应急管理规范和应急预案，出台了《自然灾害防灾减灾指导意见》，组织协调参与了“8.17”重庆森林火灾、“9.5”泸定县地震等抢险救灾，共组织各类应急救援230次。国家隧道应急救援中铁二局西藏队获批成为国家级隧道应急救援队。

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 2022, the Company improved its emergency rescue capability and level in an all-round way. The Company revised the emergency management regulations and plans for safety production, and issued the Guidelines for Natural Disaster Prevention and Mitigation (《自然灾害防灾减灾指导意见》). It also organized and coordinated the participation in the “8.17” Chongqing forest fire, “9.5” Luding County earthquake and other rescue and relief efforts, totaling 230 times of emergency rescue. The Tibet team of China Railway No.2 Engineering Group Co., Ltd. was approved to become a national tunnel emergency rescue team.







中国中铁大桥局大渡河大桥项目正在参与四川泸定地震抗险救  
Dadu River Bridge of China Railway Major Bridge Engineering Group Co., Ltd.  
was participating in the Sichuan Luding earthquake rescue



中国中铁三支国家隧道应急救援队积极参与全国救援  
Three national tunnel emergency rescue teams of CREC provided rescue nationwide





## 案例 Case

2022年9月5日12时52分，四川省甘孜州泸定县发生6.8级地震。中国中铁二局第一时间启动《防震减灾应急预案》，火速成立“泸定县抗震救灾领导小组”工作专班，紧急集结人员316名投入抗震救灾工作，积极参与清除道路塌方、搭建照明设施、救灾物资运输等工作，尽最大努力保障人民群众的生命财产安全。

At 12:52 on 5 September 2022, a 6.8-magnitude earthquake ripped across Luding County, Ganzi Prefecture, Sichuan Province. Immediately after the earthquake, China Railway No.2 Engineering Group Co., Ltd. initiated the Emergency Plan for Earthquake Prevention and Disaster Reduction (《防震减灾应急预案》) at the first time. The Company set up a special team of Luding county earthquake relief and assembled 316 personnel to participate in the work of clearing the collapsed roads, building lighting facilities, and transporting relief materials, to protect people's lives and properties as much as possible.

## 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。

2022年，全公司持续以“青年文明号、青年安全质量监督岗、青年突击队”三支队伍为依托，组建青年志愿服务队2,300余支，投入到包含防汛救灾、助

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.

In 2022, the Company set up more than 2,300 youth volunteer teams in addition to the three teams of “Youth Civilization, Youth Safety and Quality Supervision Post and Youth Commando”. More than 30,000 of our employees got involved in over 3,000 various volunteer services such as



中国中铁与中国志愿服务基金会携手，在昌都市卡若区约巴乡乃通村小学举办第六季“五彩梦想”接力活动，为198名学生送去了爱心用品  
CREC and China Volunteer Service Foundation joined hands to hold the sixth season of “Colorful Dreams” relay activity at Naitong Village Primary School in Yueba Township, Kanuo District, Changdu City, sending loving supplies to 198 students

老帮困、助力高考等工作在内的各类志愿服务达到3万余人次，开展各类志愿服务活动近3,000余次，帮扶人数超过4.5万余人次。持续开展“海外青年家访”“千人百团”志愿服务活动，接续开展第六季“五彩梦想”接力计划品牌项目，2个项目荣获第六届中国青年志愿服务项目大赛银奖，大力弘扬社会道德风尚，积极构建和谐社会。

flood control and disaster relief, helping the elderly and the needy, and helping with the National College Entrance Examination, etc, covering more than 45,000 people. We continued with volunteer service activities of "Overseas Youth Home Visits" and "Thousands of Hundred Groups", and the sixth season of "Colorful Dreams" brand relay program. Two projects won the Silver Award in the Sixth China Youth Volunteer Service Competition. The above activities helped carry forward social morality and contributed to the building of a harmonious society.

### 案例 Case

中国中铁四局一公司“‘青’心携手，筑梦未来”帮扶儿童项目在全国工程项目成立项目分队，在集中区域成立志愿服务站点，同时在安哥拉、蒙古、印尼、埃塞、巴新等国家工程项目成立项目分队，截止目前，共成立国内项目分队324个，国外项目分队21个，成立服务站点6个，开展慰问活动1,200余次，开展定点扶贫助学56次。

The First Company of China Railway No.4 Engineering Group Co., Ltd. set up teams nationwide for the children assistance project, "Youth Hand in Hand, Building Dreams for the Future", and set up volunteer service stations in centralized areas. The Company also set up project teams in Angola, Mongolia, Indonesia, Ethiopia, PNG and other countries. Up to now, the Company set up a total of 324 project teams in China, 21 project teams overseas, and 6 service sites. The Company conducted more than 1,200 condolence activities, and 56 targeted poverty alleviation and education assistance.

## 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。全公司累计发放“两节”送温暖资金1.56亿元，走访慰问职（民）工36.9万人次；金秋助学款564万元，资助困难职工子女2,214人；暑期汛期慰问支出9,425万元；消费帮扶采购2,200万元。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”等九个方面为职工办实事，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 distributed RMB156 million in total for delivering warm in the "two festivals", visited and extended its regards to 369,000 migrant workers, offered a student loan of RMB5.64 million in the autumn, and subsidized 2,214 children of financially challenged workers. Meanwhile, RMB94.25 million has been incurred during its summer season and flood season condolences and RMB22 million was spent to purchase products featuring consumption assistance. The second-level trade union cadres have established more than 310 employee contact points across the Company and handled practical matters for employees with a focus on nine aspects, including "rights and interests protection, illness-related difficulties, health care and inclusive services", 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





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。9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 nine years, we have always kept in mind and carefully implemented General Secretary Xi Jinping’s important instructions of “Three Transformations”.



中国首台出口欧盟本土的盾构机——应用于意大利CEPAV 铁路项目的“中国中铁699号”  
“CREC No. 699” used in the CEPAV railroad project in Italy – China’s first shield machine exported to the European Union



中国中铁被授予“2022中国十大优秀品牌案例”  
CREC was awarded one of the “2022 China Top Ten Excellent Brands”

## 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

构建并完善“三级四层”科技创新体系。加强顶层设计和总体规划，出台了《中国中铁关于全面实施科技创新驱动企业高质量发展的决定》等系列顶层文件。2022年，召开两次科技创新领导小组会议，审议科技创新与信息化工作重大事项。

加快科技创新资源要素统筹和协调。首创了形式统一、分工紧密的研发体系，以行业领军企业为主体、以相关二级企业为支撑、以企业重大需求为引擎、以

The Company established and perfected the “three-level and four-layer” science and technology innovation system. The Company strengthened top-level design and overall planning, and issued a series of top documents such as the Decision of CREC on the Comprehensive Implementation of Science and Technology Innovation to Drive High-Quality Development of Enterprises (《中国中铁关于全面实施科技创新驱动企业高质量发展的决定》). In 2022, the Company held two meetings on science and technology innovation to consider major matters including science and technology innovation and informatization.

The Company accelerated the integration and coordination of resource elements of science and technology innovation. The Company pioneered a R&D system with unified form and close division of labor, with industry leading

重大工程问题需求为导向，对既有21家专业研发中心进行优化整合，形成了科研平台协同建设、领军人才协同培养、技术疑难协同攻关、研究成果协同转化的协同创新机制，得到了客户高度认可。

加大高端研发平台的建设力度。推进三个国家级实验室的建设，通过完善运行机制，确保经费、人员、课题、成果“四落实”。加快省级研发平台和各级企业技术中心建设，2022年度新增22个省（市）认定的企业技术中心和研发平台。

围绕建筑行业关键核心技术开展科研攻关。依托滇中引水工程、浙江舟山西堠门公铁两用大桥等重难点工程，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

2022年，公司共获得中国专利奖银奖2项、优秀奖4项，中国土木工程詹天佑奖15项；获得授权专利9,256项，其中发明专利1,875项，PCT等海外专利201项，获得省部级工法794项。

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），49个省部级研发中心（实验室）（新增5），18个国家认定企业技术中心和137个省级认定企业技术中心（新增17）；组建了22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4,778项。拥有专利32,579项，其中发明专利6,900项，海外专利354项。拥有国家级工法166项，省部级工法5,814项。

enterprises as the main body and with the support from relevant secondary enterprises, to satisfy major needs of enterprises and solve major engineering problems. By optimizing and integrating the existing 21 professional R&D centers, the Company formed a collaborative innovation mechanism of collaborative construction of scientific research platforms, collaborative training of leading talents, collaborative tackling of technical difficulties, and collaborative transformation of research results, getting the nod of customers.

The Company ramped up the construction of high-end R&D platforms. The Company promoted the construction of three national laboratories, and ensured that the funding, personnel and subjects were in place and the results were fruitful by improving the operational mechanism. The Company sped up the construction of provincial R&D platforms and enterprise technology centers at all levels, and added 22 provincially (municipally) recognized enterprise technology centers and R&D platforms.

Around the key core technologies in the construction industry, the Company carries out scientific researches. Relying on the Dianzhong Water Diversion Project, Zhejiang Zhoushan Xihoumen Highway-Railway Dual-use Bridge 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 2022, the Company won 2 Silver and 4 Excellence China Patent Awards, 15 Zhan Tianyou Civil Engineering Prizes; the Company was granted 9,256 patents, including 1,875 invention patents and 201 PCT patents, and 794 construction methods received provincial and ministerial level recognition.

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), 49 provincial and ministerial-level R&D centers (laboratories) (5 new ones), 18 nationally recognized enterprise technology centers and 137 provincially recognized enterprise technology centers (17 new ones); and the Company set up 22 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 4,778 Provincial and Ministerial-Level Science and Technology Progress Awards (including nationally recognized awards established by social forces). The Company had 32,579 patents, including 6,900 invention patents and 354 PCT patents. The Company had 166 national-level construction methods and 5,814 provincial and ministerial-level construction methods.





## 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。2022年，中国中铁作为建筑行业唯一代表企业，参与编写了中国首部也是唯一一部管理蓝皮书——《管理蓝皮书：中国管理发展报告（2022）》，是业界对中国中铁加快建设世界一流企业、实现高质量发展的充分肯定。

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 2022, CREC, as the only representative enterprise in the construction industry, participated in the preparation of China's first and only management blue book – "Management Blue Book: China Management Development Report (2022)". The book showed the industry's full recognition of the Company's accelerated construction of a world-class enterprise and high-quality development.



## 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等先进质量管理方式，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

2022年，公司参与建造的73项精品工程荣获国家级优质工程奖（中国建设工程鲁班奖、国家优质工程奖），获奖工程设计理念领先、工程质量优异、社会效益显著，是中国速度、中国高度、中国跨度、中国深度、中国精度和中国温度的经典代表，体现了中国中铁建造智慧，展示了中国中铁建造力量。我们将继续砥砺前行，推动中国速度向中国质量转变。

In 2022, 73 quality projects that the Company has participated in won National Quality Engineering Awards (China Construction Engineering Luban Prizes, National Quality Engineering Awards). The award-winning projects, featuring leading design philosophy, excellent quality and obvious social benefits, are classic representatives of Chinese Speed, Chinese Height, Chinese Span, Chinese Depth, Chinese Accuracy and Chinese Temperature. They have also reflected the wisdom and strength of CREC in construction. We will continue to forge ahead and promote the transformation from China's Speed to China's Quality.

#### 案例 Case

2022年10月31日，中国科技新闻学会在北京召开“2022中国新时代100大建筑”新闻发布会，并现场发布了“2022中国新时代100大建筑”名单，中国中铁设计、建设和参建的39项建筑入选。

On 31 October 2022, CSSTJ held a press conference in Beijing on "2022 China's Top 100 Buildings in the New Era" and released the list of "2022 China's Top 100 Buildings in the New Era" on site. The 39 buildings, which had been designed and built by or the construction of which attracted the participation of CREC were included on the list.

## 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

2022年，公司健全品牌建设体系，促使品牌运营管理向规范化、专业化迈进，为打造卓著品牌、加快建设世界一流企业提供有力支持。形成了以《品牌建设“十四五”规划》为总纲，《品牌管理办法》为“1”，《品牌架构与应用规范》《品牌资产目录》为“N”的制度体系，品牌管理基础进一步夯实；构建了以“中国品牌日”为主的立体式、全方位的品牌传播推广体系，3个品牌案例入选国资委品牌建设典型案例和优秀故事名录，1篇署名文章在国资委“一把手谈品牌”栏目刊发，5家单位入选中国施工企业管理协会“中国建造”品牌企业，中国中铁品牌知名度和影响力进一步扩大；确定了以“单一品牌架构”为主体，以“主副品牌架构”和“多品牌架构”为补充的“一主多辅”的品牌架构战略，品牌生态体系进一步优化，促使中国中铁品牌价值排名提升至2022年的第107位，较上一年度提升15位。

#### 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。

2022年，所属中国中铁四局被中国施工企业管理协会评为AAA级信用企业，中国中铁八局获评中国企业联合会AAA级企业信用等级证书，中国中铁十局被中国交通企业管理协会评为AAA级信用企业。

2022年，全公司如期保证了北京丰台站、郑渝高铁、杭台高铁、深圳地铁“两线三枢纽”、玉楚高速等一批重点工程建成。

In 2022, the Company refined the brand building system, and promoted the standardization and specialization of brand operation and management, strongly supporting the Company in creating a remarkable brand and growing into a world-class enterprise faster. A system was established with the 14th Five-Year Plan for Brand Building (《品牌建设“十四五”规划》) as the general outline, Brand Management Measures (《品牌管理办法》) as “1”, the Brand Structure and Application Specification (《品牌架构与应用规范》) and the Brand Asset Catalogue (《品牌资产目录》) as “N”, and the foundation of brand management was further consolidated. The Company built a three-dimensional and all-round brand communication and promotion system mainly themed “China Brand Day”, and three brand cases were included in the list of typical cases and excellent stories of brand building of SASAC. One signed article was published in the “Brand Talk” column of the SASAC, and five units were selected as “China Construction” brand enterprises of the China Association of Construction Enterprise Management (CACEM), further increasing the brand awareness and influence of CREC. The brand structure strategy of “one main brand structure”, supplemented by “main and secondary brand structures” and “multi-brand structure”, was established. All in all, the brand ecosystem was further optimized and CREC’s brand value ranking was raised to 107th in 2022, up 15 places from the previous year.

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.

In 2022, China Railway No.4 Engineering Group Co., Ltd. was awarded as an AAA credit enterprise by the CACEM; China Railway No.8 Engineering Group Co., Ltd. was awarded the AAA credit certificate by the China Enterprise Confederation (CEC); China Railway No.10 Engineering Group Co., Ltd. was awarded as an AAA credit enterprise by the China Association of Communication Enterprise Management (CACEM).

In 2022, the Company ensured the completion of a string of key projects such as the Beijing Fengtai Station, the Zhengzhou-Chongqing High-speed Railway, the Hangzhou-Taizhou High-speed Railway, “two lines and three hubs” of Shenzhen Metro, and Yuxi-Chuxiong Expressway.



## 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，中国中铁始终以信息披露为核心，坚持依法依规开展信息披露工作，合规率始终保持100%。公司制定了《投资者关系管理办法》《信息披露管理办法》等10余项投资者关系管理和信息披露管理相关制度，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。

公司持续深化和完善“大投关”“立体投关”理念体系，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6场业绩说明会、140余场次视频电话以及现场会议，充分覆盖境内外投资者、分析师，尤其是中小投资者；累计接听投资者热线电话897话次，回复上证E互动平台投资者问题117个，处理IR邮件1,173，并及时汇总梳理投资者关注重点与诉求，通过《每日股价市值动态信息》《资本市场监测周报》《资本市场观点汇总及管理建议》《年度市值管理报告》等形式反馈管理层，持续提升投资者关系管理工作的深度和广度，助推高质量发展目标实现。

自上海证券交易所开展信息披露评价工作以来，公司连续9年荣获A类评价；入选国资委“央企ESG先锋50指数”；获评中国上市公司协会、北京上市公司协会“上市公司ESG最佳实践”“年报业绩说明会最佳实践”；连续四年蝉联《新财富》“最佳IR港股公司（A+H股）”，荣获“最佳ESG信披奖”；年内还荣获证券时报“中国上市公司ESG100强”、金紫荆“最佳投资者关系管理上市公司”、金圆桌“优秀董事会”、证券之星“年度最具社会责任上市公司”等多个奖项，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, carried out information disclosure in compliance with laws and regulations, and maintained a compliance rate of 100%. The Company has formulated more than 10 systems for managing investor relations and information disclosure including the Management of Investor Relations Measures (《投资者关系管理办法》) and the Management of Information Disclosure Measures (《信息披露管理办法》) and established work processes of interim reports, periodic reports, performance briefing, investor reception and handling of capital market crises.

The Company continues to deepen and improve the systems of 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 held a total of six performance presentations and more than 140 video calls plus on-site meetings, covering domestic and foreign investors, analysts, particularly small and medium-sized investors. The Company answered 897 calls via the investor hotline, responded to 117 investor questions on the SSE e-interactive platform, handled 1,173 IR emails, and summarized and sorted out the key concerns and demands of investors in time. The Company provided feedback to the management through the Dynamic Information on the Market Capitalization of Daily Stock Prices (《每日股价市值动态信息》), Monitoring Report on Weekly Capital Market (《资本市场监测周报》), Summary of Capital Market Views and Management Recommendations (《资本市场观点汇总及管理建议》), Report on the Management of Annual Market Capitalization (《年度市值管理报告》), etc. The Company kept expanding the depth and breadth of investor relations management to achieve the goal of high-quality development.

Since the Shanghai Stock Exchange carried out the evaluation of information disclosure, the Company has won the Class A evaluation for 9 consecutive years; the Company was selected in the “State-owned Enterprises ESG Pioneer 50 Index” by the SASAC, rated as “ESG Best Practice Cases of Listed Companies” and “Best Practice Cases of Performance Presentation of Annual Report” of the China Association for Public Companies (CAPCO) and the Listed Companies Association of Beijing (LCAB) and won the “Best IR Hong Kong Listed Company (A + H Shares)” by New Fortune for four consecutive years and the “Best ESG Information Disclosure Award”; during the year, the Company won “Top 100 ESG Listed Companies” of Securities Times, the “Best Investor Relations Management Listed Company” of Golden Bauhinia, “Excellent Board of Directors” award of Golden Round Table, “Most Socially Responsible Listed Company of the Year” of Securities Star and many other awards, further establishing the Company’s good image in the capital market.

# 专题二： 助力乡村振兴

## Topic 2: Help 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







2022年，中国中铁深入贯彻党中央、国务院和国资委的决策部署，严格落实“产业兴旺、生态宜居、乡风文明、治理有效、生活富裕”工作总要求，合理规划年度工作任务，突出工作重点，创新工作举措，扎实推动巩固拓展脱贫攻坚成果同乡村振兴有效衔接，为全面推进乡村振兴战略持续贡献中国中铁力量。

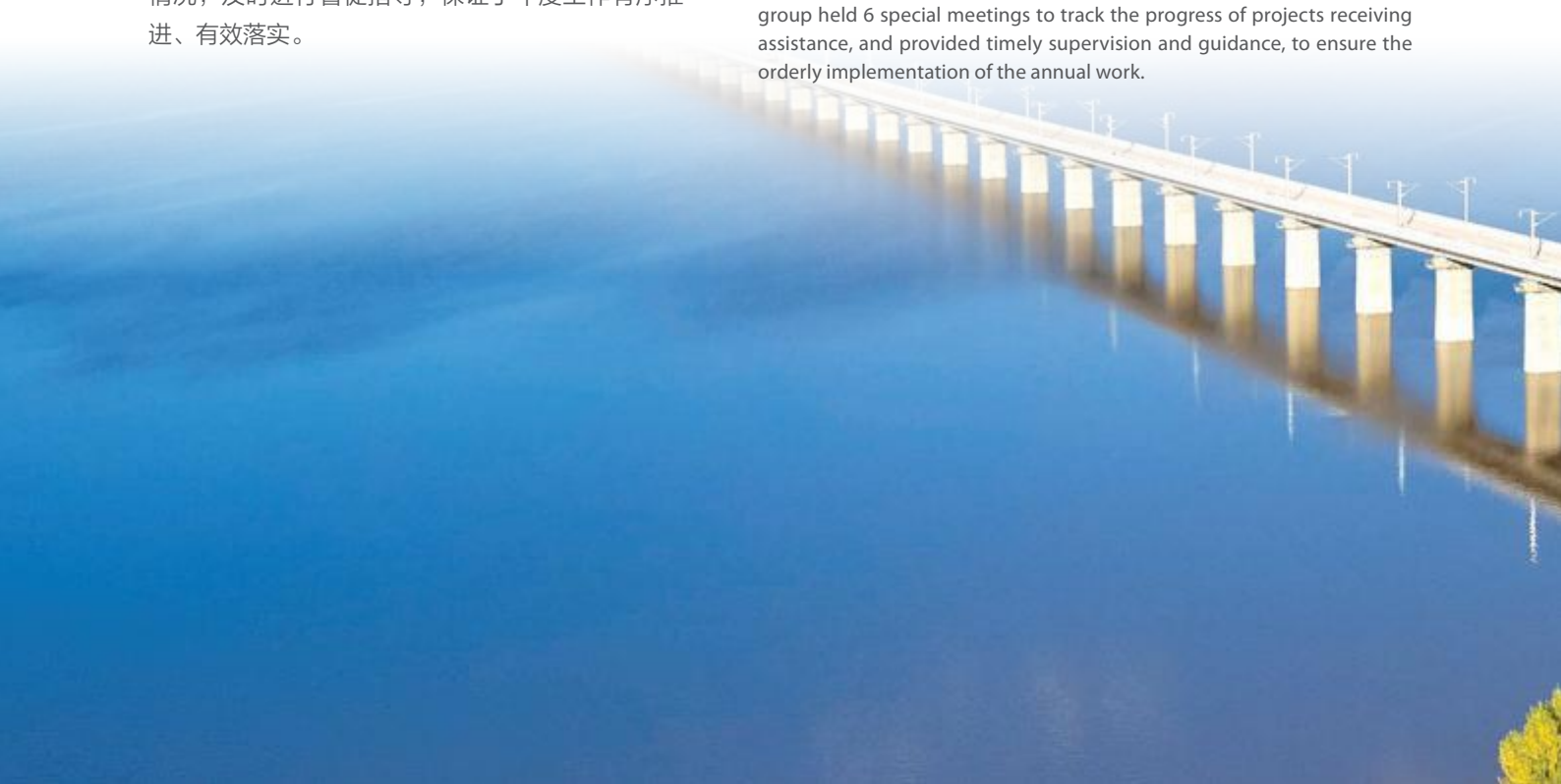
In 2022, CREC implemented the decisions and plans of the Party Central Committee, the State Council and SASAC as well as the general requirements of “prosperous industry, pleasant living environment, civilized countryside, effective governance and affluent living”. The Company planned tasks rationally, highlighted work priorities, and innovated work initiatives. In addition, the Company consolidated and expanded poverty alleviation results and linked poverty alleviation with rural revitalization, contributing its share to the rural revitalization strategy.

## 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。2022年，工作领导小组切实发挥统筹协调和决策监督作用，聚焦产业振兴和美丽乡村建设两大主线，按照“一县一策”原则，结合企业专业优势和帮扶地区资源禀赋，科学研判、选取年度重点帮扶项目，发布了《中国中铁2022年定点帮扶工作计划》。工作领导小组先后召开专题会议6次，跟踪了解帮扶项目推进情况，及时进行督促指导，保证了年度工作有序推进、有效落实。

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 2022, the work leading group played the role of coordination and decision-making supervision, with the focus on the two main lines of industrial revitalization and beautiful countryside construction. By upholding principle of “one strategy for one county” and leveraging the professional advantages of enterprises and the resource endowments of the areas receiving assistance, the Company scientifically studied and selected the annual key assistance projects, and released the Work Plan of CREC for 2022 《中国中铁2022年定点帮扶工作计划》. The work leading group held 6 special meetings to track the progress of projects receiving assistance, and provided timely supervision and guidance, to ensure the orderly implementation of the annual work.



公司领导积极开展政府对接和实地调研。2022年8月22日-24日，公司总裁、党委副书记陈文健带队到汝城县、桂东县调研考察；9月21日，公司党委副书记、工会主席、执行董事王士奇带队到保德县调研考察。期间，两位领导分别与当地政府深入交流，全面了解关于党中央乡村振兴最新要求的贯彻落实情况，及时掌握巩固拓展脱贫攻坚成果同乡村振兴有效衔接工作的开展情况，听取了帮扶地区和挂职干部的工作汇报，走访慰问了脱贫户和困难群众，形成调研报告2篇，梳理相关问题及困难3个，提出整改措施和建议3个。

The leaders of the Company actively carried out government docking and field research. On 22-24 August 2022, Chen Wenjian, deputy Party Secretary and President, led a team to Rucheng County and Guidong County for research and investigation; on September 21, Wang Shiqi, deputy Party Secretary, Chairperson of the Labour Union and executive director, led a team to Baode County for research and investigation. During the period, the two leaders had in-depth communication with the local governments, to understand the implementation of the latest requirements of the Party Central Committee on rural revitalization, the consolidation and expansion of poverty alleviation results, and the linkage of poverty alleviation with rural revitalization. The two leaders listened to the work reports of the areas receiving assistance and the cadres assuming a temporary post there, and visited the households lifted out of poverty and the people in difficulty. After that, the two leaders prepared two research reports, sorted out three related problems and difficulties, and put forward 3 corrective measures and suggestions.



中国中铁一局承建的四川省德昌县养殖园项目，是西南地区单体最大的生猪养殖项目

The Breeding Park project in Dechang County, Sichuan that was undertaken by China Railway No. 1 Engineering featured the largest pig breeding project in Southwest China





## 定点帮扶概要

### Summary of Targeted Poverty Alleviation

大力扶持产业发展，壮大振兴发展引擎。充分利用保德县日照时间长、太阳能资源丰富优势，投入2,000万元建设神山村5MW光伏电站项目；结合汝城县茶产业发展前景，成立白毛茶产业发展基金，投入500万元，并计划在“十四五”期间每年投入500万元，用于扶持白毛茶产业发展；基于桂东县中铁振兴大道（北段）项目对沿线乡镇产业带动效果显著，继续投入2,000万元用于桂东县X004线增口至泮溪公路改建项目（中铁振兴大道南段），拟通过疏解附近交通拥堵压力，促进沅江镇增口片区文旅地产项目发展。

创建生态文明示范村，打造美丽宜居家园。投入超过1,500万元，深入开展乡村建设、农村人居环境整治行动，在11个村实施乡村建设、人居环境整治专项工程，倾力打造干净、整洁、有序的美丽宜居家园，当地村民积极投身自己的家园建设，内生动力被全面激发。

The Company vigorously supported industrial development and strengthened the engine of revitalization and development. Fully utilizing the advantages of long sunshine hours and abundant solar resources in Baode County, the Company invested RMB20 million to build a 5MW photovoltaic power station project in Shenshan Village. In light of the development prospect of the tea industry in Rucheng County, the Company invested RMB5 million to establish a development fund for the camellia sinensis var. pubilimba industry, and planned to invest RMB5 million per year during the “14th Five-Year Plan” to support the industry development. Given the significant effect of the project of the CREC Revitalization Avenue (North Section) in Guidong County on the industry of the townships along the route, the Company continued investing RMB20 million for the reconstruction project of the Zengkou-Panxi Highway (the southern section of CREC Revitalization Avenue) on the X004 line of Guidong County. The move was intended to promote the development of cultural, tourism and real estate projects in Zengkou area of Oujiang Town by relieving the pressure of nearby traffic congestion.

The Company created ecological civilization demonstration villages as part of its efforts to create a beautiful and livable home. The Company invested more than RMB15 million to carry out in-depth rural construction and rural habitat improvement. The Company launched the special campaign of rural construction and habitat in 11 villages, to build a clean, neat, orderly, beautiful and livable home. Local villagers were fully motivated and participated in the construction of their own homes.







中国中铁与汝城县签订定点帮扶援建项目协议  
CREC and Rucheng County signed an agreement on  
targeted assistance and construction assistance projects

扩大培训覆盖面，提升各类人才能力素质。精准结合帮扶县实际需求，分层次、分类别组织做好各类人员培训工作，扩大培训的覆盖面，全年共培训基层干部406人，乡村振兴带头人123人，专业技术人才1,160人。利用公司党校等培训平台，组织54名帮扶县基层干部参加第二期定点帮扶基层党支部培训班，进一步发挥乡村振兴带头人的“领头雁”作用；在深入组织开展保德县“保德好司机”和汝城县“人人有技能”两个培训品牌项目的同时，打造了“保德好物业”新品牌，帮助首批44名脱贫户家庭成员完成相关技能提升培训，为脱贫户劳动力找到了一条致富新门路。

多措并举，加大帮扶地区农产品购销力度。建立农产品销售“一平台四机制”，进一步疏通销售渠道和保障购买职工的利益。全年实现购买农产品2,248.2万元；帮助销售地区农产品220.8万元。

The Company expanded the coverage of training to enhance the quality and capability of talents. Precisely combining with the actual needs of the helping counties, the Company organized the training of various types of personnel by level and classification to expand the coverage of training. The Company trained a total of 406 grass-roots cadres, 123 rural revitalization leaders and 1,160 professional and technical talents throughout the year. Using the training platform such as its Party school, the Company organized 54 grass-roots cadres from the counties receiving assistance to participate in the phase II training course for the grass-roots Party chiefs in counties receiving targeted assistance, to further play the role of “bellwether” in pursuing rural revitalization. While implementing the branded training projects of “good driver in Baode County” and “everyone has skills in Rucheng County”, the Company created the new brand of “good property in Baode County”. Furthermore, the Company helped the first batch of 44 households lifted out of poverty to complete the training of relevant skill, finding a new way for the labor force in the households to achieve prosperity.

The Company increased the purchase and sale of agricultural products with a combination of measures in the areas receiving assistance. The Company established “a platform and four mechanisms” for the sale of agricultural products to further dredge sales channels and protect the interests of purchasers. The Company purchased RMB22.482 million of agricultural products annually, and helped sell RMB2.208 million of regional agricultural products.

## 定点帮扶成效

### Effectiveness of Targeted Poverty Alleviation Efforts

2022年，中国中铁选派挂职干部6名，投入定点帮扶资金8,463万元（无偿资金6,440万元，有偿资金2,023万元），引进帮扶资金5.73亿元（无偿资金2.58亿元，有偿资金3.15亿元），培训基层干部406人次，培训乡村振兴带头人123人次，培训专业技术人员1,160人次，购买农产品2,248.2万元，帮助销售农产品220.8万元。以保德县獭窝村乡村面貌变化为题材的《幸福“窝”》短视频荣获“听老乡说小康”评委提名奖。汝城县东山村获评湖南省美丽乡村示范村；热水村吸引民企投资4,000万元发展温泉民宿，汝城县“四出六靠”人居环境整治模式充分调动当地群众参与积极性，放大投放资金使用效能，在国家乡村振兴局实地核查中获得高度评价。编写制作的《红色汝城》教育读本、少儿歌曲《半条被子的温暖》，被评为郴州市“五个一工程”优秀作品。

In 2022, CREC selected 6 cadres assuming temporary posts, invested RMB84.63 million in targeted assistance funds (including RMB64.4 million of donation and RMB20.23 million of reimbursable funds), attracted RMB573 million of assistance funds (including RMB258 million of donation and RMB315 million of reimbursable funds), trained 406 grass-roots cadres, 123 rural revitalization leaders, and 1,160 professional and technical personnel. The Company purchased RMB22.482 million of agricultural products and helped sell RMB2.208 million of agricultural products. The Sweet “Home” (《幸福“窝”》), a short video themed great changes in village Tuanwo, Baode County, was nominated for the “Villagers’ Story about Prosperity (听老乡说小康)” award. Dongshan Village, Rucheng County was honored with the title “Beautiful Demonstration Village in Hunan Province”. Reshui Village attracted investments of RMB40 million from private enterprises to develop hot spring inns. Rucheng County’s “four determinations and six supports (四出六靠)” habitat improvement model fully aroused the enthusiasm of local people for engagement and magnified the effectiveness of investment funds, which was highly recognized by the National Rural Revitalization Administration during the field inspection. The educational book “Red Rucheng (《红色汝城》)” and the children’s song “The Warmth of Half a Quilt (《半条被子的温暖》)” were rated by Chenzhou among the excellent works for “Five-Ones Program (五个一工程)” in Chenzhou.



中国中铁在湖南省桂东县捐建的中铁振兴大道正式开工  
The CREC Revitalization Avenue in Guidong County, Hunan Province donated by China Railway was officially commenced

## 定点帮扶计划

### Targeted Poverty Alleviation Plan

2023年，中国中铁将深入贯彻党的二十大精神，按照全面推进乡村振兴，巩固拓展脱贫攻坚成果，加快建设农业强国，扎实推动乡村产业、人才、文化、生态、组织振兴的有关要求，着力创新帮扶方式，锚定推动产业发展不放松，统筹考虑经济、社会效益，切实发挥帮扶资金撬动作用，以产业促进就业，改善民生，推动脱贫攻坚向乡村振兴平稳过渡。

In 2023, we will work as a strong champion of the guideline of the 20th CPC National Congress. With the push for rural revitalization by cementing the fruits of poverty reduction, we will move faster to build China into a major agricultural economy given the requirements on rural industry, talents, culture, ecology, and organizational renewal. To make it happen, we will give priority to the innovation of supporting means and industrial development. Specifically, we will make better use of the supporting fund taking a holistic approach to economic and social benefits. That is how we can improve employment and people’s livelihood for the smooth transition from poverty reduction to rural revitalization.

- 突出产业振兴，进一步发挥带动作用。紧扣产业振兴带动乡村振兴这一核心，结合当地资源禀赋和帮扶前期工作成效，计划在桂东县、汝城县发展文旅产业，打造文旅品牌；在保德县继续发展光伏产业。夯实帮扶地区特色产业根基，增加帮扶地区群众长远福祉。
- 聚焦生态振兴、文化振兴，进一步深化美丽乡村建设。践行“绿水青山就是金山银山”理念，遵循因地制宜、经济适用、运行良好的原则，以乡村振兴示范村建设为契机，深入开展农村人居环境整治提升行动，着力提升乡村精神文明和建设，按照“办点、连线、扩面、成景”的思路，抓好乡村环境、乡风文明建设工作，努力绘就乡村美丽画卷。
- 围绕致富增收，进一步提高消费帮扶质量。着力打造更具特色的产品品牌，拓展微信公众号、电商平台、直播带货等线上营销方式，进一步便利消费者购买商品；探寻中央企业引路搭台、对外推介等方面的方法路径，畅通物流运输渠道，降低物流成本，压缩销售环节，逐步培育差异化农副产品竞争优势，加强与临近地区市场、超市的合作，进一步深化推动消费帮扶。
- 强化人才振兴，进一步壮大农村集体经济。充分发挥挂职干部引领作用，注重发掘和培育本土人才，增强集体经济发展活力；发挥“外脑”持续拉动作用，加大人才引进力度，邀请专家、学者现场指导，为各类人才大展才华提供平台，为村集体经济高质量发展输送人才源动力。

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。

- Focus on industrial revitalization and better play a leading role. Centering on rural revitalization through industrial revitalization, we plan to develop cultural tourism industry in Guidong County and Rucheng County leveraging on the local resource endowment and the effectiveness of the preliminary support for creating a cultural tourism brand. We will further develop the photovoltaic industry in Baode County. These efforts will solidify the foundation of the special industries in the needy areas and improve the long-term welfare of the people in such areas.
- Focus on both ecological revitalization and cultural revitalization to further the construction of beautiful countryside. Staying true to the concept of "lucid waters and lush mountains are invaluable assets", we will follow the principles of localization, economy and sound operation. That means taking the construction of model villages for rural revitalization as an opportunity to improve the rural habitat environment. To that end, we will focus on improving rural spiritual civilization and construction adhering to the idea of "running points, connecting lines, expanding the surface and creating scenery (办点、连线、扩面、成景)". That is how we can push forward the construction of rural environment and rural civilization for building a prettier countryside.
- Further improve the quality of consumer support by increasing income. We will make every effort in creating more distinctive product brands through expanding online marketing modes such as the WeChat official account, e-commerce platform and live streaming, which will further facilitate consumers to buy goods. Meanwhile, we will explore methods and paths for central enterprises to lead the way and make publicity for us, smoothen logistics channels and reduce logistics costs. This will reduce sales links and gradually cultivate competitive advantages of differentiated agricultural and sideline products by strengthening cooperation with markets and supermarkets in nearby areas. All these efforts will further drive consumer assistance.
- Reinforce the revitalization of talents and further strengthen the rural collective economy. To enhance the vitality of collective economic development, we will give full play to the leading role of cadres at temporary posts and concentrate on discovering and cultivating local talents. We will introduce more "external talents (外脑)" and invite experts and scholars for on-site guidance. In addition, we will provide a platform for all kinds of talents to show their wisdom and deliver talent power for the high-quality development of village collective economy.

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





2022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”。公司国际业务新签合同额275.91亿美元，同比增加42.45亿美元，增长率为18.18%。本年度公司成功中标蒙古国东戈壁省露天煤矿煤炭剥采和运输、孟加拉数字联通、匈塞铁路匈牙利段北段枢纽工程、香港新界大埔及湾仔综合商业体等项目。在ENR全球承包商250强排名第2位，在全球最大250家国际承包商排名第11位，较2021年上升两位。

In 2022, CREC actively participated in the joint construction of the "Belt and Road" initiative, 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\$27,591 million, an increase of US\$4,245 million or 18.18% year-on-year. During the year, the Company successfully won bids for coal stripping and transportation of the open-pit coal mine in Mongolia's East Gobi Province, Bangladesh Digital Link, the northern junction project of the Hungarian section of the Hungarian-Serbian railroad, and the Tai Po and Wanchai integrated commercial complex in Hong Kong's New Territories. CREC ranked No. 2 on ENR's Top 250 Global Contractors and No. 11 on the 250 largest international contractors in the world, up two spots from 2021.

## 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

2022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13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、第五届中国国际进口博览会、香港第七届“一带一路”高峰论坛、2022年服贸会中国国际经济合作“走出去”高峰论坛、贸促会建会70周年大会暨全球贸易投资促进峰会、2022年金砖国家基础设施工作组理事会会议、B20印尼金融与基础设施组系列会议等活动，并加入“国际可持续基础设施促进机制（MISIP）”，经营成果丰硕，达成多项共识。

In 2022, the Company actively served the overall situation of the country's foreign cooperation, carried out solid international exchanges and cooperation, and actively participated in activities, such as the 13th International Infrastructure Investment and Construction Forum, the China International Fair for Trade in Services, the Fifth China International Import Expo, the 7th "Belt and Road" Summit Forum in Hong Kong, the 2022 China International Economic Cooperation "Going Global" Summit Forum of China International Fair for Trade in Services (CIFTIS), the 70th Anniversary Conference of the Council for the Promotion of International Trade and Global Trade and Investment Promotion Summit, the 2022 BRICS Infrastructure Working Group Board Meeting, and the B20 Indonesia Finance and Infrastructure Group Series Meeting. The Company also joined the "Mechanism for International Sustainable Infrastructure Promotion (MISIP)" and have yielded fruitful results and reached a number of consensuses.



由中国中铁承建，第一条采用中国标准并与中国铁路网直接连通的境外铁路——中老铁路  
China-Laos Railway – the first overseas railway undertaken by CREC, which adopts Chinese standards and is directly connected to the Chinese railway network



中国中铁在2022年《财富》世界500强中排名第34位  
CREC ranked 34th among the Fortune 500 in 2022



## 属地化经营

### Territorial operation

公司持续推进海外体制机制改革，加快境外业务区域化发展，构建境外立体经营格局，进一步提升中国中铁国际化发展水平。公司不断完善境外区域总部机构运行体系，从政策导向、人员配置、资金保障等方面提供强有力支持，持续深化制度建设，不断提高履约管理水平，有序提升风险防控能力，推动境外区域总部属地化经营高质量发展。

The Company continues to promote the reform of systems and mechanisms of overseas operations, accelerates the regionalization of overseas business development and builds a three-dimensional overseas operation landscape, for the purpose of further enhancing the international development of CREC. The Company continuously improves the operation system of the overseas regional headquarters by providing strong support in terms of policy orientation, staffing and financial guarantee. Meanwhile, the Company continues to deepen system construction, improves performance management and enhances the ability of risk prevention and control in an orderly manner. This will drive the high-quality development of localized operation of the overseas regional headquarters.

## 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.



中国中铁六局海外分公司向越南和平省金追小学捐赠学习用品  
Overseas Branch of China Railway No.6 Engineering donated school supplies to Jinzhui Primary School (金追小学) in Tinh Hoa Binh, Vietnam



中国中铁二局尼泊尔巴瑞巴贝引水隧道项目联合中国扶贫基金会为当地学校发放爱心书包  
Baribabei (巴瑞巴贝) Water Tunnel Project in Nepal in the charge of China Railway No.2 Engineering joined hands with China Foundation for Rural Development to distribute school bags to local schools

### 案例 Case

2012年至2022年，中国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2,100余名外籍学员开展国际铁路知识专业培训。

From 2012 to 2022, 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 2,100 foreign trainees from more than 100 countries and regions from five continents.

### 案例 Case

2022年7月，中国中铁一局东南亚区域总部开展“中华文化大讲堂”活动，邀请孔子学院的老师以中英双语为大家讲述中国文化，通过此次文化交流活动，来自新加坡、马来西亚和孟加拉的外籍员工们感受到了中国传统文化的魅力，增强了对企业的归属感。

In July 2022, the Southeast Asia regional headquarters of China Railway No. 1 Engineering carried out the activity of “Chinese Culture Lecture” by inviting teachers from Confucius Institute to talk about Chinese culture in both Chinese and English. Through this cultural exchange activity, the foreign employees from Singapore, Malaysia and Bangladesh felt the charm of traditional Chinese culture and enhanced their sense of belonging to the enterprise.

### 案例 Case

2022年9月，中国中铁参加中国科协“一带一路”交通科普志愿活动，在马来西亚、印度尼西亚、尼泊尔、泰国和肯尼亚五个国家与该国初高中学生进行了线上交流，提供科普学习材料辅导。

In September 2022, CREC participated in the “Belt and Road” transportation science volunteer activities of the China Association for Science and Technology (CAST) and conducted online exchanges with middle and high school students in five countries, namely Malaysia, Indonesia, Nepal, Thailand and Kenya to provide tutorials on science learning materials.

## 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

2022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 2022, 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

2022年，中国中铁匈塞项目持续就环境保护及鸟类保护问题与业主进行协商，在充分尊重当地习惯的情况下，对架空线上安装使用防电击、防撞击装置方案进行了细致研究，同时，充分尊重环保要求，不在鸟类繁殖季节进行噪音、震动施工，确保了沿线自然保护区等区域鸟类迁徙不受项目改造的影响。对于保护区内的特殊植物，在施工前采集相关种子，到施工结束后再进行播撒，恢复特殊植物，维护当地生态环境。

In 2022, the Company consulted with the owner on environmental protection and bird protection of the Hungarian-Serbian project. Specifically, the Company conducted a meticulous study of the option of installing and using anti-electric shock and anti-impact devices on the overhead line with full respect for local customs, while fully respecting environmental requirements for no noise and vibration construction during the bird breeding season, ensuring that bird migration in areas such as nature reserves along the line was not affected by the project renovation. For the special plants in the protected area, relevant seeds were collected before construction and then sown until the end of construction. In this way, the special plants were restored for the local ecological environment protection.

#### 案例 Case

中国中铁新加坡地铁T302项目主要施工场地位于新加坡河入海口处水源保护区之内，外排水质需达到国内一级水质的要求。项目聘请外部的排水咨询，进行场地内相关排水设计，科学布置污水沉淀池和污水处理设备，并定期维护污水处理设备。项目部在围挡外设置噪声监控系统，严控噪声污染。截至目前，项目安全生产无事故工时累计超过六百万小时，多次荣获新加坡陆路交通管理局（LTA）“施工环境优秀奖”。

Singapore MRT T302 project attached great importance to the fulfillment of social responsibility. The main construction site of the project was located within the water source protection zone at the estuary of the Singapore River, and the effluent water quality shall meet the requirements of the domestic first-class water quality. As for the project, an external drainage consultant was engaged for the drainage design related to the site. The Company also scientifically arranged sewage sedimentation tanks and sewage treatment equipment and regularly maintained the sewage treatment equipment. The project department set up noise monitoring system outside the enclosure to strictly control noise pollution. Up to now, the project has accumulated more than 6 million hours of accident-free work and has been awarded the "Construction Environment Excellence Award" by the Land Transport Authority of Singapore (LTA) several times.

## 强化依法合规管理

### Strengthening management in compliance with laws and regulations

2022年，公司不断建立健全境外合规管理体系，设立专门机构统筹境外合规管理。开展重点领域合规管理研究，发布《多边开发银行合规风险防范指南》《多边开发银行制裁体系与制裁应对指南》等文件，出版《“一带一路”项目法律风险及合规管理典型案例精析》等书籍，有效提升涉外法治工作能力。持续完善排查机制，连续5年开展境外法律合规风险年度排查，认真组织开展“合规管理强化年”系列活动，不定期开展各类专项排查，督促各层级识别、防范各类合规风险。组织全系统境外从业人员签订了合规承诺书。稳步推进合规管理信息化，强化重点环节的合规管控。持续培育合规文化，组织公司相关单位参加国资委法治讲堂、亚行合规培训会等培训活动；通过公司海外合规微信公众号，推送境外业务合规资讯，积极开展合规文化宣贯。

In 2022, the Company continued to establish and improve its overseas compliance management system by setting up a specialized agency for coordinating overseas compliance management. The Company conducted researches on compliance management in key areas, issued documents such as “Guidelines on Compliance Risk Prevention for Multilateral Development Banks” and “Guidelines on Sanctions System and Sanctions Response for Multilateral Development Banks”, and published books such as “Analysis of Typical Cases on Legal Risks and Compliance Management of “Belt and Road” Projects”, which effectively enhanced the Company’s ability to work on foreign-related rule of law. The Company further improved the inspection mechanism by carrying out annual inspection of overseas legal compliance risks for five consecutive years. Additionally, the Company organized a series of activities for the “Year of Strengthening Compliance Management” and carried out various special inspections from time to time to urge all levels to identify and prevent compliance risks. The Company organized overseas employees to sign the Compliance Commitment Letter. The Company steadily promoted the informatization of compliance management and strengthened the compliance control of key links. To further cultivate compliance culture, the Company organized relevant units to participate in training activities such as rule of law lectures of SASAC and ADB (Asian Development Bank) compliance training sessions. Notifying the overseas business compliance information through its WeChat official account for overseas compliance, the Company actively carried out compliance culture propaganda.

## 保障海外项目安全

### Ensuring the safe operation of overseas projects

2022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 2022, 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。

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和常规体检、配备合格劳动保护用品。

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.

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

中国中铁匈塞项目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。与当地专业的“职业健康安全和消防监督公司”签署了技术监督服务合同，确保项目施工管理符合匈牙利当地法律法规。项目安全工程师每日对施工人员进行进场前安全培训并办理MAV进场许可证，每天进行工地巡查，检查人员安全防护、监督机械设备操作证和检测证明，确保现场作业人员符合岗位职责标准，具备作业资格。项目配备专职安全管理人员，按照法律法规要求，对安全标志进行安装和维护，消除潜在安全隐患。

CREC's Hungarian-Serbian project engaged doctors from the local railroad medical center to carry out occupational health management and provided various medical services as per the contract. A technical supervision service contract was signed with a local professional "occupational health and safety and fire supervision company" to ensure that the project construction management complied with local Hungarian laws and regulations. Project safety engineers conducted daily pre-entry safety training for construction personnel and applied for MAV entry permits. They carried out daily site inspections, checked personnel safety protection and supervised machinery and equipment operation certificates and testing certificates, which ensured that site operators met job responsibility standards and were qualified. The project was equipped with full-time safety management personnel for the installation and maintenance of safety signs to eliminate potential safety hazards in accordance with the requirements of laws and regulations.

### 案例 Case

中国中铁孟加拉帕德玛大桥铁路连接线项目通过实践教学、体验教学、信息化教学、模块化教学等形式，对作业人员进行经常性安全培训和教育。2022年，项目共召开安全质量环保会议172次，开展安全教育培训2,779次，培训达39,083人次，做到了进场人员培训工作的全覆盖；针对艾滋病防治，每月安排HIV职业健康专家到现场，为所有施工人员、周边村民做艾滋病知识宣传，讲授职业健康知识，年度共计开展教育31次，受训达1,860人次。

For the railway connection project of the Padma Bridge in Bangladesh, the Company provided regular safety training and education for operators through hands-on teaching, experiential teaching, information-based teaching and modular teaching. In 2022, for the project, the Company held 172 meetings for safety, quality and environmental protection and conducted 2,779 trainings for safety education, which received 39,083 trainees and achieved full coverage of personnel on the site. For AIDS prevention and treatment, HIV occupational health experts were arranged to the site every month to publicize AIDS knowledge and teach occupational health knowledge for all construction workers and surrounding villagers. A total of 31 times of education were conducted annually, with 1,860 trainees.

## 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。公司依托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. 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

中国中铁二局尼泊尔逊科西马林引水隧道项目开工至今累计为当地提供约2,200余个就业岗位，培养了近400余名技术操作工人和40余名项目管理人员，被誉为尼泊尔“国家骄傲工程”，被加德满都邮报评为“在尼唯一在建工程进度正常的施工项目”。

Nepal Sunkosi Marin Diversion Tunnel Project of China Railway No.2 Engineering has provided more than 2,200 jobs for the local people and trained more than 400 technical workers and 40 project management personnel since its commencement. It is known as the "National Pride Project" in Nepal and has been rated by the Kathmandu Post as "the only project under construction in Nepal with normal progress".

#### 案例 Case

中国中铁及联合运营单位共同围绕亚吉铁路运维，分层次、分类别、分岗位开展能力建设。2022年，累计举办培训班54个，新参培的埃塞和吉布提当地员工共计1,163人，已累计完成当地员工培训3,792人。

CREC and joint operating units worked together to carry out capacity building at different levels, categories and positions around the operation and maintenance of Asia-Djibouti Railway. In 2022, a total of 54 training courses were held, involving 1,163 new local employees from Ethiopia and Djibouti, and 3,792 local employees have been trained.



## 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

中国中铁印尼雅万高铁项目建设通过采购和租赁拉动当地内需，带动印尼当地经济发展。在岸物资采购合计2,972万美元。全线长期租赁车辆93辆，轨行车辆11辆，合计租赁费34,503,241,850印尼盾。

The construction of CREC's Jakarta-Bandung high-speed railway project in Indonesia was boosting local domestic demand through procurement and leasing, and driving local economic development in Indonesia. Onshore material purchases totaled US\$29.72 million. There were 93 long-term leased vehicles and 11 rail vehicles on the whole line, with a total leasing fee of Rp34,503,241,850.

#### 案例 Case

中国中铁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 rail sleeper production plant with fully automated assembly line operation using Chinese standards and equipment, achieving the daily capacity of 500 rail sleepers. It is the largest rail sleeper plant in Bangladesh featuring the most advanced equipment and the highest degree of standardization, effectively driving the local employment and 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

2022年，中国中铁印尼雅万高铁项目部积极开展文化交流，在第五届“万隆精神论坛”传播了中国文化，到雅万高铁项目沿线中小学开展雅万高铁教学活动，组织达润合堪国际学校（Darul Hikam International School）30名师生到雅万高铁工程施工现场参观，进一步提升了中国中铁的美誉度。

In 2022, CREC's Jakarta-Bandung high-speed railway project department actively carried out cultural exchanges. Specifically, the project department disseminated Chinese culture in the 5th “Bandung Spirit Forum”, conducted Jakarta-Bandung high-speed railway teaching activities in primary and secondary schools along the Jakarta-Bandung high-speed railway project line, and organized a visit to the Jakarta-Bandung high-speed railway project construction site for 30 teachers and students from Darul Hikam International School, which further enhanced the reputation of CREC.

#### 案例 Case

2022年6月，孟加拉国遭受20年来最严重的洪灾，造成东北部锡尔赫特市低洼地区约4万座房屋被完全或部分摧毁，450万人被困或无家可归。中国中铁紧急驰援，累积捐赠大米1,750公斤、食用油450公斤、面粉720公斤、白砂糖700公斤……为当地灾民带来了温暖和希望，彰显了企业的社会担当。

In June 2022, Bangladesh suffered its worst flooding in 20 years, leaving some 40,000 houses completely or partially destroyed and 4.5 million people stranded or homeless in the low-lying areas of the northeastern city of Sylhet. CREC came to the rescue in an emergency and donated 1,750 kg of rice, 450 kg of cooking oil, 720 kg of flour and 700 kg of sugar, etc. to bring warmth and hope to the local victims, demonstrating the social responsibility of the enterprise.



## 展望 Outlook

2023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，完整、准确、全面贯彻新发展理念，服务构建新发展格局，聚焦高质量发展这一首要任务，坚定“十四五”规划战略不动摇，全方位推进管理强企、改革强企、科技强企、人才强企、文化强企，着力构建现代化产业体系、着力防范化解重大风险、着力实现质的有效提升和量的合理增长，不断提升企业核心竞争力，为全面建设社会主义现代化国家开好局起好步贡献中铁力量！

2023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 2023, 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 primary task of high-quality development, CREC will hold fast to the strategy of the 14th Five-Year Plan by promoting a strong enterprise with management, reform, technology, talents and culture in an all-round way. To that end, CREC will make every effort in building a modern industrial system and preventing and resolving major risks for achieving effective improvement in quality and reasonable growth in quantity. Meanwhile, CREC will further improve its core competitiveness, all of which will contribute to a good start in building a modernized socialist country in all aspects.

In 2023, 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2022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 2022 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.

