華潤電力
CR POWER

Powering Life with Green Energy

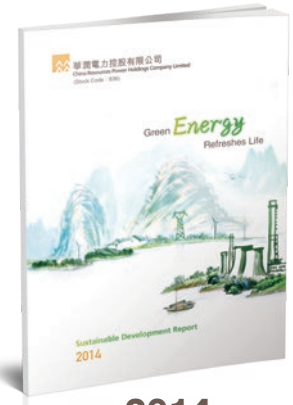
China Resources Power Holdings Company Limited

Sustainable Development Report 2021

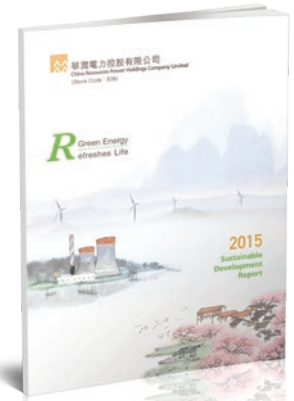
2010

2011

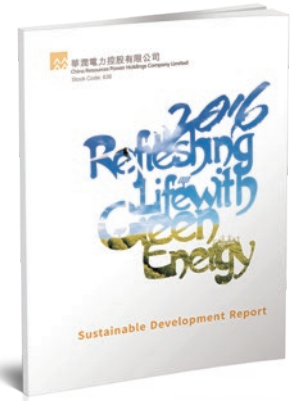
2012



2014



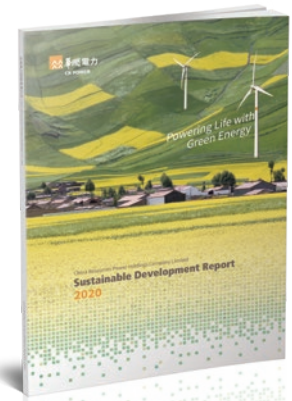
2015



2016

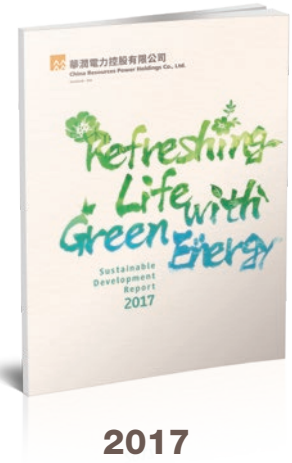
2018

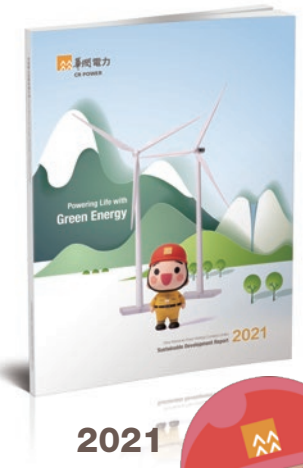
2019



2020

About the Report





This is the 12th annual Sustainable Development Report published by China Resources Power Holdings Company Limited ("CR Power") for the year from January 1 to December 31, 2021.

Basis of Preparation

This Report is prepared with reference to the following important standards:

- *Environmental, Social and Governance Reporting Guide* as set forth in Appendix 27 of the *Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited* issued by the Stock Exchange of Hong Kong Limited ("HKEx")
- *Sustainability Reporting Guidelines* of the Global Reporting Initiative (GRI Standards)
- *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) – Basic Framework* of the Chinese Academy of Social Sciences
- *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 3.0) – Power Production Industry*
- *Guidelines to the State-Owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities* released by the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC)
- *CR Group Social Responsibility Program Management Rules*
- *CR Power Social Responsibility Program Management Standards*

Scope

This Report relates to China Resources Power Holdings Company Limited and its affiliates (see Organizational Structure at page 11), referred to herein as "We," "the Company," or "CR Power."

We have engaged an independent third party to provide assurance of 16 performance indicators in this Report. The Assurance Report is available at page 4 to 5.

Source of Information

Unless otherwise specified, the information and data cited in this report all come from the company's official documents, statistical and financial reports, as well as other related public documents. CR Power guarantees that this report is free from any omissions, misrepresentation or misleading statements, and is responsible for the truthfulness and accuracy of its contents.

Reporting Principles

This Report complies with the requirements of the Environmental, Social and Governance Reporting Guide for the "Materiality", "Quantitative", "Balance", and "Consistency" principles. Specifically, this Report responds to the principle of "Materiality" by providing materiality matrix analysis of sustainability issues, the principle of "Quantitative" by setting out lists of quantitative data and sources of conversion factors, the principle of "Consistency" by applying consistent data disclosure standards and statistical methods, and the principle of "Balance" by disclosing and reviewing negative issues.

Report Confirmation and Approval

This report was confirmed by the Company's Sustainability Committee and approved by the Board of Directors on April 26, 2022.

Access to This Report

This Report is available on the HKEx website (www.hkexnews.hk) and the CR Power website (https://www.cr-power.com/duty/kcxfzbg/).

For any enquiries, comments or suggestions about this Report and the sustainable development of the Company, please contact:

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E-mail: cr-power@crpower.com.cn
Website: www.cr-power.com

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Assurance Report

Deloitte.

INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT

To the Board of Directors of China Resources Power Holdings Company Limited

We have been engaged by the Board of Directors of China Resources Power Holdings Company Limited (the "Company") to perform a limited assurance engagement in relation to the selected data listed below and identified with an asterisk [*] on page 87 to 89 (the "Selected Sustainability Information") in the Company's Sustainability Report for the year ended 31 December 2021 (the "2021 Sustainability Report").

Selected Sustainability Information

The details of the Selected Sustainability Information are listed below:

	Selected Sustainability Information#
1	Nitrogen Oxides (NO_x) emissions (kt)
2	Nitrogen Oxides (NO_x) emissions rate (g/kWh)
3	Sulphur Dioxide (SO_2) emissions (kt)
4	Sulphur Dioxide (SO_2) emission rate (g/kWh)
5	Particulates emissions (kt)
6	Particulates emissions rate (g/kWh)
7	Installation rate of desulfurization device in coal-fired thermal power plants (%)
8	Installation rate of denitrification device in coal-fired thermal power plants (%)
9	Natural gas consumption (Million cubic meters)
10	Diesel consumption (kt)
11	Coal consumption (kt)
12	Net generation coal consumption rate (g/kWh)
13	Purchased electricity (MWh)
14	Total greenhouse gas emissions (Mt)
15	Carbon emission intensity in power generation (g/kWh)^
16	Carbon emission intensity in thermal power generation (g/kWh)

Assurance scope refers to the power plants indicated by Δ on page 12 – 13 in the "About Us" section, and also the Zhuhai Heating Unit.

^ In addition to the coal-fired power plants in the assurance scope, the power generation figure included in the calculation of this key performance indicator also includes other renewable energy power plants controlled by the Group.

Our limited assurance was with respect of the year ended 31 December 2021 Selected Sustainability Information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2021 Sustainability Report and, therefore, do not express any conclusion thereon.

Reporting Criteria

The criteria used by the Company to prepare the Selected Sustainability Information is set out in the footnotes of "Key Performance Index" on page 87 to 89 of the 2021 Sustainability Report (the "Reporting Criteria").

Responsibilities of the Board of Directors

The Board of Directors is responsible for preparing and presenting the 2021 Sustainability Report in accordance with the Reporting Criteria. The responsibility includes designing, establishing and maintaining appropriate internal control system for preparing, obtaining and presenting the Selected Sustainability Information in the report, applying an appropriate basis of preparation, making estimates that are reasonable in the circumstances, ensuring the accuracy and completeness of the Selected Sustainability Information, and maintaining sufficient records.

Our Responsibilities

In accordance with the agreed terms with the Company, we are responsible for performing a limited level of assurance engagement on the Selected Sustainability Information in the 2021 Sustainability Report. Our work is only for the Board of Directors, and for no other purposes. We do not assume responsibility or accept liability to any other person or third party for our work or the contents of this report.

Our Independence and Quality Control

We conducted our engagement in accordance with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board of Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Control 1, "*Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*" and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Basis of Our Work

We conducted our work in accordance with the International Standard on Assurance Engagements 3000 (Revised), "*Assurance Engagements other than Audits or Reviews of Historical Financial Information*" (the "Standard"), issued by the International Auditing and Assurance Standards Board. We planned and performed our engagement to obtain all the information and evidences which we considered necessary to form conclusions.

Procedures, Scopes and Limitation of Our Work

Our work performed includes interviewing personnel responsible for the 2021 Sustainability Report, analyzing information, and other steps to collect evidence. Specifically, our procedures include:

- Interviewing management and staff responsible for the Selected Sustainability Information;
- Assessing the Selected Sustainability Information in the 2021 Sustainability Report against the Reporting Criteria;
- Establishing acknowledgement of Selected Sustainability Information regarding the 2021 Sustainability Report with the Company to perform this limited assurance engagement;
- Analyzing sampled data, reviewing its consistency with our work results;
- Did not perform any testing on the Continuous Emission Monitoring System of the Company.

The extent of evidence gathering procedures performed is less than that of a reasonable assurance engagement and therefore a substantially lower level of assurance is provided. Our work performed is not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Moreover, historical data and financial information are not within the scope of our work.

Inherent Limitations

Non-financial performance information, including the Selected Sustainability Information, is subject to more inherent limitations than financial information given both its nature and the methods used for determining, calculating, sampling and estimating such information. This could have a material impact on comparability. Qualitative interpretations of relevance, materiality and the accuracy of such information are subject to individual assumptions and judgements.

Conclusion

Based on our work performed, nothing has come to our attention that would lead us to believe that the Selected Sustainability Information have not been prepared, in all material respects, in accordance with the Reporting Criteria.

This is translation of the Chinese language version of the Independent Assurance Report. If there is any conflict between the Chinese and English version, the Chinese version will prevail.

Deloitte Touche Tohmatsu
Certified Public Accountants

Hong Kong
27 April 2022

Letter from the Chairman

The year 2021 marked the start of China's 14th Five-Year Plan and also witnessed the continuous growth of CR Power driven by two decades of efforts. In the past year, keeping in mind our original mission and building on our development achievements from the past two decades, we endeavored towards developing CR Power into a globally competitive and leading clean energy company. According to the national requirements to understand new development stage, apply the new development philosophy, create a new development dynamic, and promote high-quality development as well as the strategic "dual carbon" goals of China (i.e., achieving carbon peak by 2030 and carbon neutrality by 2060), we continued to perform social responsibility and worked with stakeholders to maximize economic, environmental, and social value creation, starting a new chapter in the development of CR Power.

Pursuing Green Development to Support the National Strategies

To fulfil our new mission, we fully promote green transition for greater business transformation by capturing opportunities from the carbon peak and carbon neutrality ("dual carbon") goals. In 2021, we accelerated investment in clean energy by boosting the development of offshore and onshore wind power, photovoltaic power, gas-fired power, hydroelectric power, and other clean energy projects, with attributable operational generation capacity of renewable energy projects surging by 240.5% from 2015. At the end of 2021, CR Power commenced the construction of Cangnan #1, its first offshore wind power project in China; with a designed installed capacity of 400 MW. This project can save about 422,000 tons of standard coal and 4 million cubic meters of fresh water each year, compared with conventional coal-fired units with the same capacity. We also take actions to push the application of the carbon capture, utilization and storage (CCUS) technology. We have built the world's third and Asia's first ultra supercritical thermal power plant-based multi-thread multi-technology carbon capture test platform, which has captured 22,000 tons of carbon dioxide in total. In addition, we make efforts to reduce energy consumption during business operation. In 2021, we invested RMB1.096 billion in upgrading energy conservation and emission reduction technologies.

Creating More Value Through Stable Operation

To implement our new plan, we expand business and seek low-cost, high-efficiency and green development for greater value reconstruction. Prioritizing the improvement of our operation and management, we have set up a general oversight network for deep integration of oversight and business operation. In 2021, we achieved a turnover of HKD89.8 billion and paid RMB4.57 billion in taxes, creating more economic value for the shareholders and the society. We are committed to technology-driven development. In 2021, we invested RMB220 million in R&D, applied for 243 new patents, obtained 346 new licensed patents, and received 26 provincial, ministerial and industry awards; with a focus on smart energy, smart power plants and smart energy storage, we facilitated the implementation of new 11 integrated energy service projects with a total contract value of more than RMB100 million. We promote all-round and whole-process work safety management that involves all employees and set work safety targets. In 2021, EHS trainings provided by CR Power totaled 1,290,069 hours, and no work-related employee injury and death occurred.

Stimulating Employee Growth with Concerted Efforts

To promote our new reform, we deepen the reform of CR Power as a SOE and drive the creation of new models for talent development by setting up positive role models and building a learning organization for deeper organizational restructuring. In 2021, we created a new organizational governance model aligned with our strategic development, advanced organizational reform, adopted tenure limits for senior managers and managed them by contract to motivate the development of employees and the Company. We have established a Learning and Development Center, which provides a diverse range of trainings, including but not limited to new hire orientation, professional skill, and leadership trainings, through more than 300 offline courses and over 1,100 online courses. In 2021, we spent RMB10.301 million in employee training and achieved a training coverage ratio of 100% for the employees.

Building a Better Community through Joint Efforts

To develop our new culture, we are committed to "Making Money in the Right Way and Spending Money for Society" and perform our responsibility and mission as a central SOE by leveraging our own resource strengths. In 2021, confronted with a tightening energy supply, CR Power made best efforts to ensure power and heating supply for the livelihood of the people; by increasing the coal inventory of its power plants as early as possible, CR Power became the only central SOE that had fully eliminated unplanned outages of coal-fired power units and thus was highly recognized by the SASAC. We fully support China's rural revitalization initiative by developing clean energy and supporting local industries to consolidate the country's achievements in poverty alleviation. We plan to invest RMB50 billion in developing the China Resources Chibi Yangtze River Economic Belt Rural Revitalization Demonstration Zone, a beautiful rural demonstration base for integrated development of high-quality industries. In 2021, we invested RMB6.646 million in rural revitalization projects, benefiting about 3,750 people. In addition, we invest resources in biological environmental protection, education assistance, community public services, and other areas. In 2021, we made public welfare and charitable donations totaling about RMB15.43 million and organized 59 volunteer activities involving 1,260 volunteers.

Looking forward, CR Power will work hard to address challenges. Faced with historic opportunities for green transition, CR Power will, with responsibility and mission as well as glory and dream, work with all employees to meet the expectations of all stakeholders; CR Power will enhance its operational and technical capabilities and be more motivated to achieve its development goals during the 14th Five-Year Plan period; CR Power will promote the enhancement of value for stakeholders, make continual contribution to the society, and strive towards becoming a world leading clean energy supplier and integrated energy service provider.

Wang Chuandong
Chairman of the Board

About Us

CR Power was established in August 2001 and listed on the Main Board of the HKEx in November 2003 (stock code 836). CR Power's businesses mainly cover wind power, thermal power, hydroelectric power, photovoltaic power, distributed energy, energy storage, power sales, smart energy, and coal mining.

As at the end of December 2021, CR Power had total assets of HKD287.355 billion, operational generation capacity of 60,465 MW, and attributable operational generation capacity of 47,997 MW (of which 32.2% were contributed by renewable energy projects), with its businesses covering 31 provinces, autonomous regions, municipalities, and special administrative regions. The Company has been listed in the S&P Global Platts Top 250 Global Energy Companies and Forbes Global 2,000 for 15 consecutive years, ranking 74th and 937th, respectively, in 2021. Since 2020, CR Power has been selected as a constituent of both the Hang Seng ESG 50 Index and the Hang Seng Corporate Sustainability Benchmark Index for two consecutive years.

Total Assets
HKD287.355
billion

Operational Generation Capacity
60,465
MW

Attributable Operational Generation Capacity
47,997
MW

Renewable Energy Attributable Operational Generation Capacity Mix
32.2%


Photovoltaic Power


Hydroelectric Power


綜合能源服務云平台
Integrated Energy Services

Corporate Governance

Read More

Diversity Policy on Members of the Board of Directors of CR Power

CR Power has been improving its governance structure and management system in line with the *Corporate Governance Code in Appendix 14* of the *Main Board Listing Rules* of the HKEx. CR Power's Board of Directors, committed to improving the Company's corporate governance framework, is mainly responsible for making overall strategic plans, setting long-term performance and management targets, developing and supervising the implementation of policies, ensuring the compliance of the Company with laws, regulations and requirements of business ethics, supervising the performance of the Senior Management, and overseeing the operation of the risk management system, among others.

CR Power is committed to the board diversity policy. The Nomination Committee considers the diversity requirements as set out in the Company's nomination policy and board diversity policy, including but not limited to the requirements on gender, age, cultural and educational backgrounds, race, nationality, religion, socioeconomic status, and physical fitness, when reviewing the composition and selection criteria of the Board of Directors and seeking qualified candidates of directors. As at the end of 2021, CR Power had 10 Directors, consisting of 3 Executive Directors, 3 Non-executive Directors, and 4 Independent Non-executive Directors (which include 2 female Directors).

General Meeting of Shareholders 1

Meetings of the Board of Directors 9

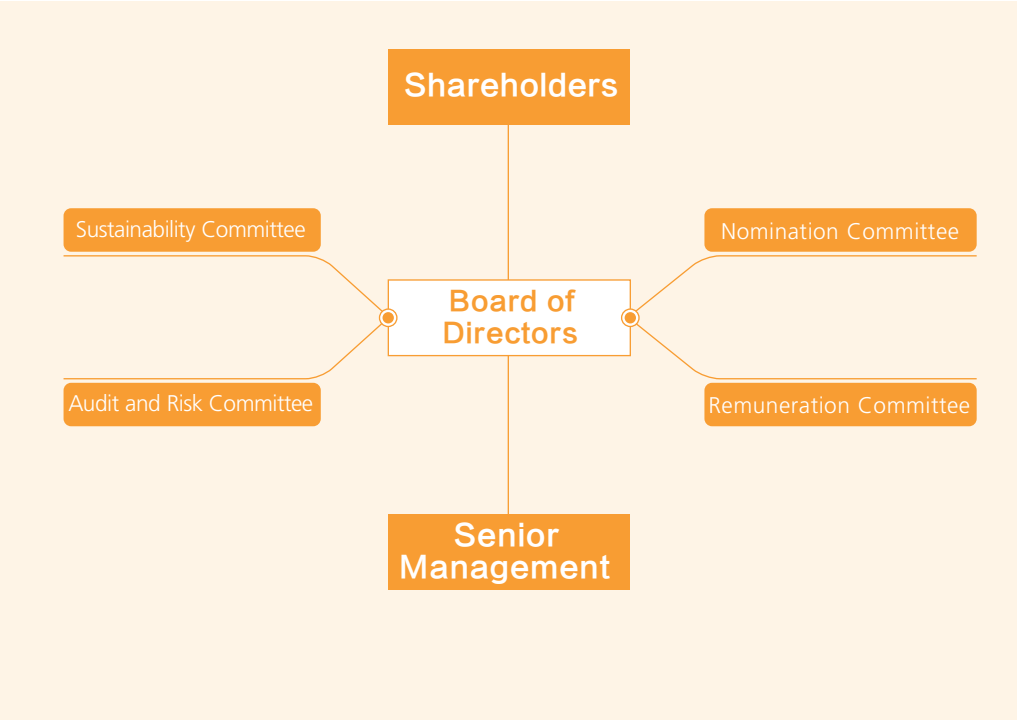
Nomination Committee Meetings 2

Sustainability Committee Meeting 1

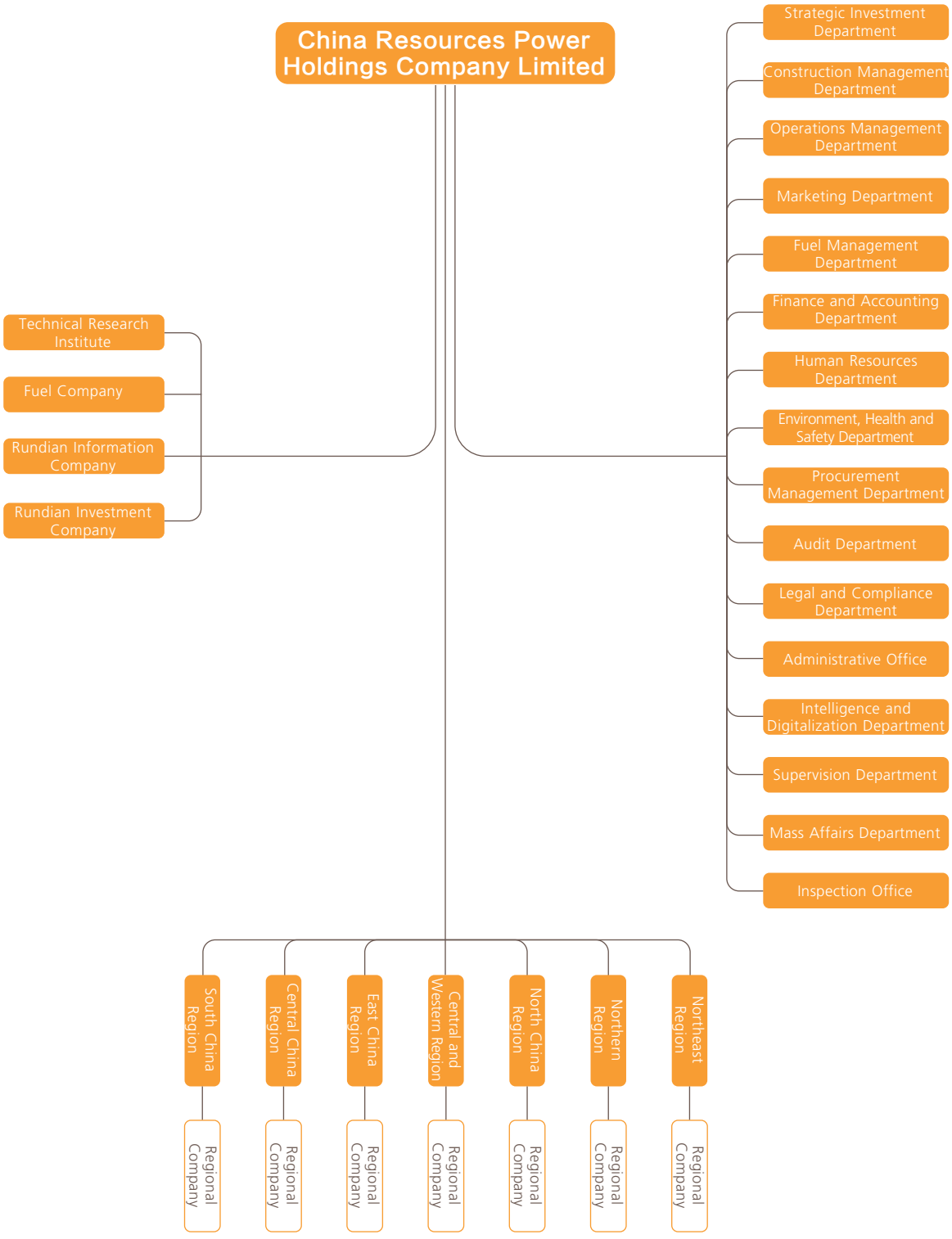
Audit and Risk Committee Meetings 3

Remuneration Committee Meetings 2

Governance Structure



Organizational Structure



Types and Distribution of Business

Jiangsu

Changshu (1,950.0MW) △
Changzhou Gas (103.0MW) △
Huaxin (660.0MW) △
Nanjing Banqiao (660.0MW) △
Nanjing Chemical Industry Park (670.0MW) △
Nanjing Thermal (1,200.0MW) △
Tongshan (2,000.0MW) △
Xuzhou (1,280.0MW) △
Taizhou Gas (83.0MW)
Yangzhou No. 2 (1,260.0MW)
Zhenjiang (1,540.0MW) △
Gaoyou Wind (53.0MW)
Huai'an Wind (80.0MW)
Nantong Wind (65.5MW)
Yancheng Wind (44.0MW)
Huai'an Photovoltaic (10.1MW)
Suqian Photovoltaic (20.4MW)

Henan

Dengfeng (1,840.0MW) △
Gucheng (600.0MW) △
Jiaozuo Longyuan (1,320.0MW) △
Shouyangshan (1,200.0MW)) △
Anyang Wind (250.0MW)
Biyang Wind (239.5MW)
Dingbian Wind (50.0MW)
Fengqiu Wind (40.0MW)
Huaxian Wind (200.0MW)
Linying Wind (100.0MW)
Luohe Wind (30.0MW)
Lushan Wind (28.6MW)
Neihuang Wind (420.0MW)
Queshan Wind (60.4MW)
Shangqiu Wind (20.0MW)
Tanghe Wind (354.5MW)
Wugang Wind (76.0MW)
Xinxian Wind (22.5MW)
Xinye Wind (50.0MW)
Yanshi Wind (30.0MW)
Yexian Wind (60.7MW)
Yucheng Wind (50.0MW)
Zhoukou Wind (20.0MW)
Zhumadian Wind (18.0MW)

Guangdong

Guangzhou Thermal (600.0MW) △
Shenzhen (2,000.0MW) △
Huilai Wind (133.5MW)
Leizhou Wind (100.0MW)
Lianzhou Wind (345.0MW)
Lianzhou Wind Phase II (50.0MW)
Longmen Wind (81.7MW)
Lufeng Wind (66.0MW)
Qingyuan Fogang Wind (47.0MW)
Qingyuan Qingxin Wind (60.0MW)
Shantou Chaonan Wind (145.9MW)
Shantou Haojiang Wind (18.0MW)
Shantou Wind (29.3MW)
Xinfeng Wind (50.0MW)
Xinyi Wind (39.0MW)
Xuwen Wind (100.0MW)
Yangjiang Wind (89.8MW)
Yangjiang Wind Phase II (45.5MW)
Fogang Wind (50.0MW)
Haifeng Photovoltaic (4.0MW)
Yingde Photovoltaic (29.3MW)
Zhuhai Photovoltaic (4.2MW)

Hubei

Hubei (600.0MW) △
Hubei Phase II (2,000.0MW) △
Yichang (700.0MW) △
Dangyang Wind (37.5MW)
Guangshui Wind (182.3MW)
Shayang Wind (100.0MW)
Suixian Tianhekou Wind (634.8MW)
Suizhou Fengming Wind (76.5MW)
Suizhou Wind (49.8MW)
Yicheng Wind (217.8MW)
Yicheng Lvze Wind (75.0MW)
Zaoyang Bailu Wind (40.0MW)
Zaoyang Wind (181.3MW)
Zhongxiang Wind (70.0MW)

Hebei

Bohai Xinqu (700.0MW) △
Cangzhou (660.0MW) △
Caofeidian (600.0MW) △
Caofeidian Phase II (2,000.0MW) △
Tangshan Fengrun (700.0MW) △
Yundong (700.0MW) △
Chengde Weichang Wind (246.0MW)
Fucheng Wind (50.0MW)
Handan Wind (100.0MW)
Linzhang Wind (50.0MW)
Mulan Weichang Wind (450.0MW)
Qinhuangdao Wind (100.0MW)
Caofeidian Photovoltaic (11.4MW)

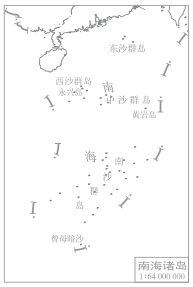
Shandong

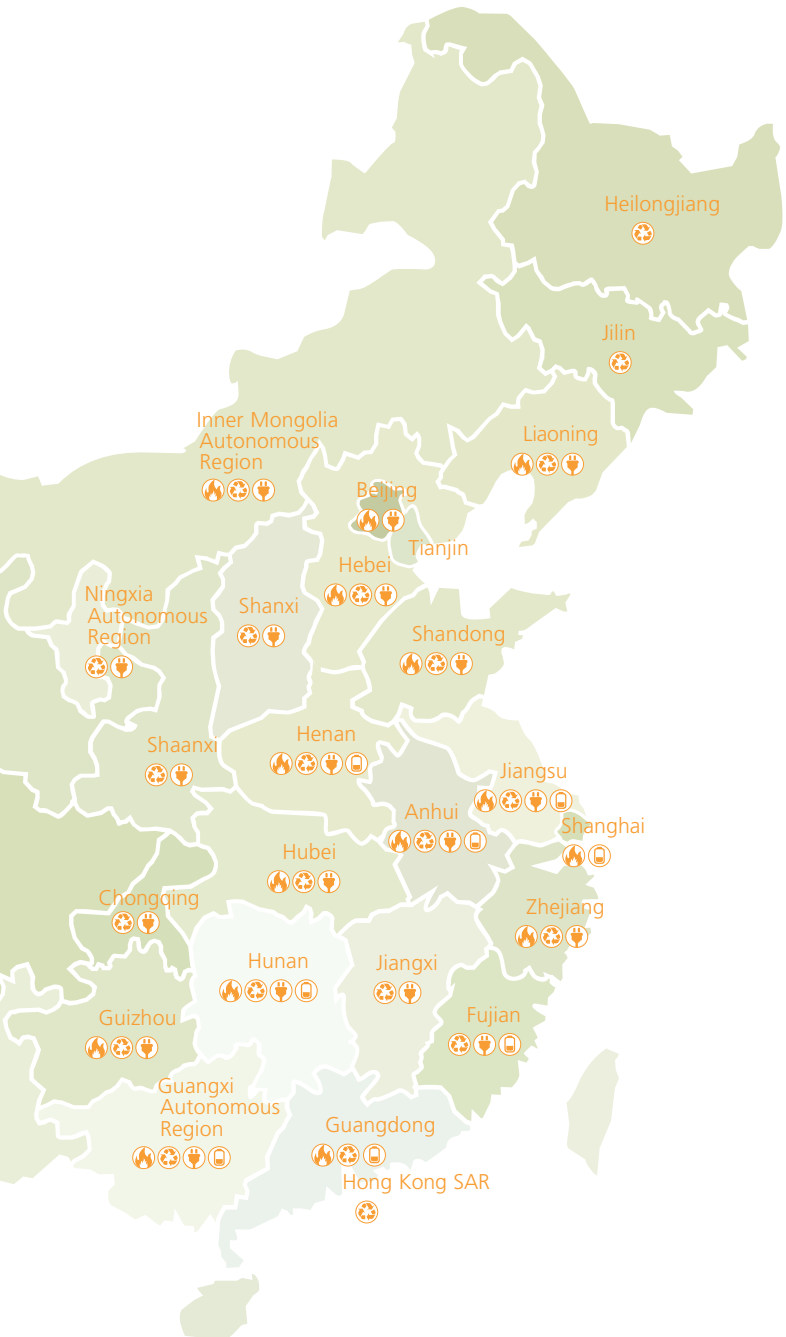
Heze (1,200.0MW) △
Dezhou Wind (150.0MW)
Dongying Wind (100.0MW)
Feixian Wind (119.4MW)
Haiyang Wind (300.0MW)
Heze Wind (100.0MW)
Jining Wind (49.5MW)
Juxian Wind Phase I (50.0MW)
Juxian Wind Phase II (50.0MW)
Linyi Wind (86.0MW)
Linyi Wind Phase II (80.0MW)
Penglai Daliuhang Wind (49.8MW)
Penglai Daxindian Wind (49.8MW)
Qingdao Wind (134.0MW)
Qingdao Wind Phase I (50.0MW)
Qingdao Wind Phase II (50.0MW)
Rizhao Wind (48.6MW)
Weihai Huancui Wind (50.0MW)
Weihai Wind (50.0MW)
Wulian Wind Phase I (50.0MW)
Wulian Wind Phase II (50.0MW)
Yantai Penglai Wind (40.6MW)
Yantai Wind (48.0MW)
Zibo Wind (38.0MW)
Zoucheng Wind (44.0MW)

Inner Mongolia Autonomous Region

Dengkou (600.0MW) △
Xilinguole (1,320.0MW) △
Jingneng Xilinguole (1,320.0MW)
Bayinxile Wind (198.0MW)
Manzhouli Wind (49.5MW)
Manzhouli Wind Phase II (49.5MW)
Taipusiqi Wind (300.0MW)
Wulanchabu Hongmu Wind (49.5MW)
Xilinhaote Wind (200.0MW)
Zhengxiangbaiqi Wind (225.0MW)

- Thermal power
- Wind power, hydro-electric power, photovoltaic power
- Power sales
- Integrated energy services





Liaoning

Panjin (700.0MW) △
Jinzhou Thermal (1,320.0MW)
Shenhai Thermal (600.0MW) △
Beipiao Wind (240.1MW)
Fuxin Wind (99.0MW)
Fuxin Wind Phase II (97.5MW)
Jianping Wind (99.0MW)
Jinzhou Wind (48.0MW)
Linghai Wind (90.0MW)

Guangxi Autonomous Region

Hezhou (2,000.0MW) △
Beiliu Wind (46.2MW)
Cangwu Wind (50.0MW)
Nanning Wind (10.0MW)
Rongxian Wind (130.0MW)
Xiangzhou Wind (50.0MW)
Yulin Wind (84.0MW)
Hezhou Photovoltaic (6.0MW)

Zhejiang

Cangnan (2,030.0MW) △
Wenzhou Telluride (660.0MW)
Wenzhou Photovoltaic (12.1MW)
Zhejiang Photovoltaic (6.1MW)

Guizhou

Guizhou Liuzhi (1,320.0MW)
Jianhe Wind (182.0MW)
Jinping Wind (35.1MW)
Kaili Wind (50.0MW)
Liping Wind (339.1MW)

Shanxi

Datong Guangling Wind (99.0MW)
Datong Wind (198.0MW)
Datong Yanggao Wind (129.0MW)
Guxian Wind (19.5MW)
Linfen Wind (114.4MW)
Taiyuan Wind (50.0MW)
Wuzhai Wind (50.0MW)
Xinrong Wind (60.0MW)
Xinzhou Wind (170.0MW)
Zhongyang Wind (220.0MW)
Datong Photovoltaic (20.0MW)
Lanxian Photovoltaic (30.0MW)
Xinrong Photovoltaic (50.0MW)

Hunan

Liyujiang A (600.0MW) △
Liyujiang B (1,300.0MW) △
Lianyuan (600.0MW) △
Linwu Wind (68.0MW)

Anhui

Fuyang (1,280.0MW)
Dingyuan Wind (25.0MW)
Fengyang Wind (30.8MW)
Mengcheng Wind (50.0MW)
Mingguang Wind Phase I (50.0MW)
Suixi Wind (50.0MW)
Huaibei Photovoltaic (5.9MW)
Huoshan Photovoltaic (18.0MW)

Ningxia Autonomous Region

Haiyuan Wind (700.0MW)
Haiyuan Photovoltaic (120.0MW)
Shizuishan City Photovoltaic (20.0MW)
Zhongningxian Photovoltaic (150.0MW)

Gansu

Guazhou Wind (279.5MW)
Huanxian Wind (50.0MW)

Heilongjiang

Fujin Wind (50.0MW)
Jiamusi Wind (43.5MW)
Anda Photovoltaic (120.0MW)
Tailai Photovoltaic (20.0MW)

Shaanxi

Baoji Wind (100.0MW)
Tongguan Wind (49.4MW)
Yan' an Wind (100.0MW)

Yunnan

Honghe Hydro (210.0MW)
Midu Photovoltaic (20.3MW)
Zhaotong Photovoltaic (20.1MW)

Sichuan

Yazuihe Hydro (260.0MW)
Heishui Photovoltaic (30.0MW)

Jiangxi

De'an Wind (48.0MW)
Dingnan Wind (70.0MW)
Ganzhou Nankang Wind (64.0MW)
Ruichang Wind (36.0MW)
Xiajiang Wind (82.0MW)

Fujian

Changting Wind (46.0MW)
Longyan Wind (48.0MW)
Minqing Wind (30.0MW)
Fujian Photovoltaic (14.3MW)
Fuqing Photovoltaic (7.0MW)
Fuzhou Photovoltaic (8.1MW)

Beijing

Beijing Thermal (150.0MW) △
CR Logistics Park Photovoltaic (0.6MW)
Xiexin Photovoltaic (1.9MW)

Qinghai

Dachaidan Wind (50.0MW)
Gonghe Wind (100.0MW)
Delingha Photovoltaic (20.0MW)
Jipin Photovoltaic (100.0MW)

Tibet Autonomous Region

Jiangzi Photovoltaic (20.0MW)

Jilin

Nong'an Wind (40.0MW)

Shanghai

Shanghai Gas (2.4MW) △

Chongqing

Chongqing Wind (62.5MW)

Hong Kong SAR

Huachuang Photovoltaic (0.7MW)

CR Power in 2021

Environmental Performance

Net Generation Standard Coal Consumption Rate (Subsidiary Coal-fired Power Plants)
296.8
g/kWh

Sulfur Dioxide Emission Rate
0.0698
g/kWh

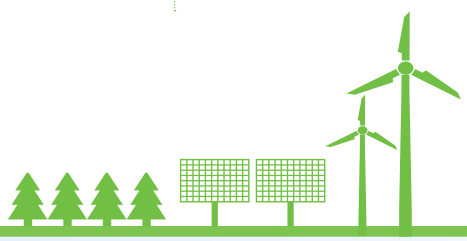
Particulate Emission Rate
0.0079
g/kWh

Investment in Energy Efficiency and Emission Reduction Technology Upgrades
1,096
RMB million

NOx Emission Rate
0.1248
g/kWh

Renewable Energy Attributable Operational Generation Capacity Mix
32.2%

Net Generation Volume of Renewable Energy Projects
34,849
GWh



Social Performance

Safety Investment
208
RMB million

Total Number of Employees
21,252

Charitable Donations
15.43
RMB million

New Graduates Employed
235

Total Tax Paid
4,570
RMB million

Economic Performance

Total Assets
287.4
HKD billion

Turnover
89.8
HKD billion

Net Generation Volume of Subsidiary Power Plants
177,300
GWh

Attributable Operational Generation Capacity
47,997
MW

Profit Attributable to Owners of the Company
1,592.8
HKD million

Core Profit Contribution from Renewable Energy Projects
8,381
HKD million

Total Heat Supply
115.24
kTJ

Sustainability Management

CR Power has been improving its sustainability management by increasing its sense of responsibility, establishing an effective sustainability management system, promoting communication with stakeholders, and prioritizing the disclosure of selected substantial issues.

Sustainability Management System

Based on its own responsibility concept, CR Power has built a four-level social responsibility governance structure to promote the stable implementation of its sustainability programs.

Statement of the Board of Directors

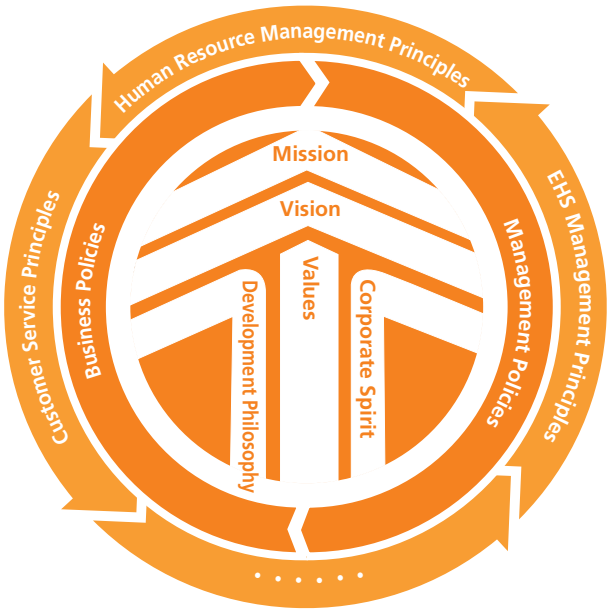
The Board of Directors highly values sustainability management and has built a four-level social responsibility governance structure, which in practice forms a closed-loop management system covering decision-making, communication, actual implementation, and reporting and assessment.

The Board of Directors is fully responsible for CR Power's ESG programs by overseeing the Company's ESG directions and strategies; identifying, evaluating, and managing important ESG risks related to the Company's business; regularly receiving reporting from the Sustainability Committee or other relevant management teams; and reviewing and approving the Company's sustainable development reports and other ESG management policies.

The Company has, as required by the *Main Board Listing Rules* of the HKEx, set key ESG targets covering but not limited to greenhouse gas emissions, pollutant emissions, and resource consumption. The Board of Directors has reviewed and discussed the setting of those targets and will regularly examine progress in the achievement of relevant targets.

Responsibility Concept

CR Power has developed a "Power Culture" responsibility concept system which focuses on quality products and services, efficient operation management, and excellent team building. Based on the "Power Culture" responsibility concept system, we have formulated the *Social Responsibility Program Management Standards* to integrate sustainability into all aspects of the Company's strategic planning, corporate governance and business operation for better sustainability management.



CR Power's "Power Culture" Model

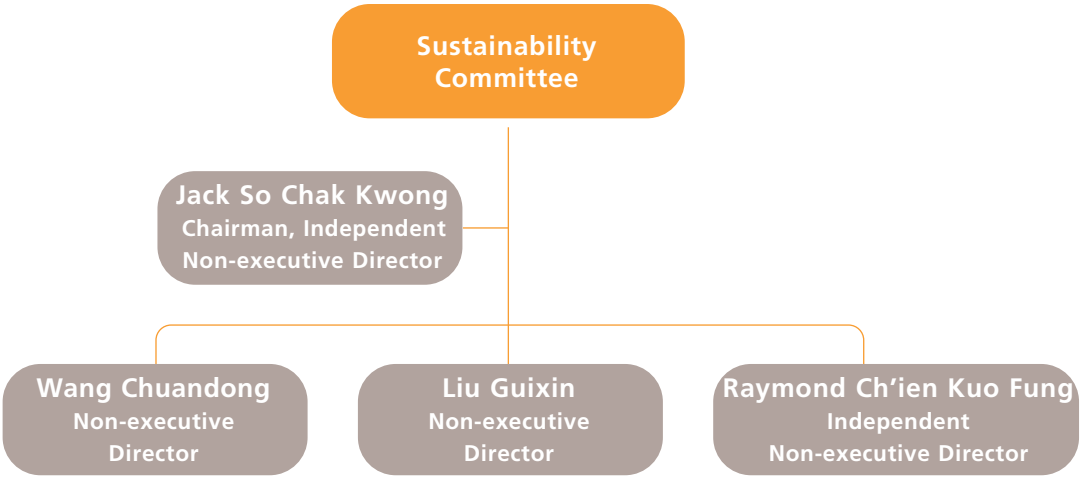
Governance Structure

CR Power has a four-level social responsibility governance structure composed of the Leadership Team, the Guidance Team, the Coordination Team, and the Implementation Team, which in practice forms a closed-loop management system covering decision-making, communication, actual implementation, and reporting and assessment.

In 2021, the Company amended the Terms of Reference of the Sustainability Committee to further define the Sustainability Committee's role, duties, composition, and reporting system and to underscore the Sustainability Committee's supervision and review of sustainability issues. We submitted 12 *CR Power Monthly Public Sentiment and Social Responsibility Reports* to the Board of Directors, and held sustainability communication meetings attended by the Senior Management to reinforce the supervision and governance of sustainability issues.

Read More

Terms of Reference of the Sustainability Committee of CR Power



Governance Structure		Main Responsibilities
Leadership Team	Sustainability Committee	• Reviewing CR Power's sustainable development goals and plans and overseeing the implementation of such goals and plans; • Assessing CR Power's adequacy of resources, compliance, and effectiveness of procedures in environment, health, and safety (EHS); • Assessing the risks and opportunities faced by CR Power in fulfilling social responsibility and sustainable development; • Reviewing CR Power's performance in EHS, social responsibility, and sustainable development; • Assessing how CR Power differs from its domestic and foreign peers in sustainability policies and performance; • Assessing the impact of CR Power's business on employees, third parties, local communities, and corporate reputation; and • Reviewing CR Power's annual sustainable development reports and causing the Senior Management to take specific actions to ensure the accuracy, completeness, and continuous improvement of such reports.
Guidance Team	Social Responsibility Steering Committee	• Studying CR Power's strategies on social responsibility programs; • Studying and approving CR Power strategic plans, major rules, and annual plans and reports on social responsibility; and • Studying and approving CR Power's major issues on social responsibility.
Coordination Team	Administrative Office of Headquarters	• Preparing CR Power's medium- and long-term plans on social responsibility; and facilitating the implementation of CR Power strategic and annual plans on social responsibility, and major resolutions of the Sustainability Committee under the Board of Directors and the Social Responsibility Steering Committee; • Organizing the preparation of CR Power's annual sustainable development reports; • Developing sound rules and indicator systems for CR Power's social responsibility programs; conducting performance assessment; and organizing best practice recognition programs; • Guiding affiliated entities' social responsibility efforts and promoting social responsibility initiatives; • Organizing studies, training, communications, and other day-to-day management affairs concerning CR Power's social responsibility programs; • Overseeing corporate governance, information disclosure, media relations, brand management, poverty alleviation, public welfare, and other work; and • Regularly updating the Sustainability Committee under the Board of Directors on CR Power's social responsibility achievements.
Implementation Team	Departments & Offices of Headquarters Regions Regional Companies	• Identifying the heads and points of contact for social responsibility programs and being responsible for supervising and advancing such programs in line with their functions; accepting the guidance and performance evaluation of the Company on social responsibility programs; • Making social responsibility plans as delegated by regional companies; promoting responsibility integration; introducing innovative responsibility practices; and enhancing responsibility performance capacity; • Submitting information on social responsibility reports as required by the Company; and • Broadcasting their social responsibility achievements and performance, and strengthening communication with stakeholders.

Management Performance

To improve the management and dissemination of our social responsibility, we have made an overall plan for ESG governance, build more robust mechanisms, promoted distinctive social responsibility practices, and stepped up communication and dissemination efforts, public sentiment monitoring, and responses to market concerns.

CR Power Rated a Five-Star Company in the Central SOE Pioneer 50 Index

In 2021, by virtue of its outstanding social responsibility practices, the Company was ranked first among the companies included by the Research Group of the SASAC under the State Council into the "Central SOE ESG Pioneer 50 Index" and was the only company reaching the five-star rating among the 440 participating central SOE-controlled listed companies. Moreover, our project – "Exploring a New Model of Poverty Alleviation via Wind Power Project to Create a New Paradigm for Rural Revitalization" was selected as an outstanding ESG case. In addition, we received the ESG Excellence Award 2021 from Chamber of Hong Kong Listed Companies and others, Best Corporate Governance and ESG Awards 2011 ESG Special Mention from Hong Kong Institute of Certified Public Accountants, six Hong Kong Green Awards from Hong Kong Green Council, including a Corporate Green Governance Award – Corporate Leadership and an Environmental Health and Safety Award – Platinum.

In the capital market, the Company has been selected as a constituent of the Hang Seng ESG 50 Index and the Hang Seng Corporate Sustainability Benchmark Index for two consecutive years, with a Dow Jones Sustainability Index (DJSI) score of 51, much higher than the industry average (which is 38) and a MSCI-ESG rating of BBB.

Furthermore, we have cooperated with all sectors of society to participate in the research of corporate social responsibility and the formulation of industry standards.

- *The Blue Book of Corporate Philanthropy (2021)-Based on the Perspective of "Third Distribution"*, jointly prepared by CR Power and CSR Cloud, was officially released at the 4th Beijing Responsibility Exhibition in December 2021. As one of the outstanding cases in the Blue Book, CR Power's model of poverty alleviation through wind power projects provides a useful reference for enterprises in carrying out public welfare and charity activities based on their business advantages;

- CR Power cooperated with the SASAC under the State Council and the Institute of Economics of Chinese Academy of Social Sciences in the preparation of the *Basic Textbook for Environmental, Social and Governance (ESG)* and the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CHINA-ESG 5.0)*. Based on our experience in practicing corporate social responsibility, we provide professional support for China's ESG education and ESG evaluation standard development.

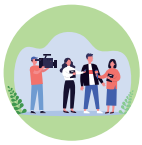
Read More

Blue Book of Corporate Philanthropy (2021)- Based on the Perspective of "Third Distribution"

Stakeholder Engagement

CR Power has always been committed to providing customers, shareholders, employees, partners, and other stakeholders with a better life. Through an effective communication mechanism, CR Power protects the rights of stakeholders to know and participate and helped them understand and appreciate our actions. In addition, by taking specific actions, CR Power incorporates stakeholders' expectations and concerns in its corporate strategies, operations, and management to boost mutual trust and cooperation for win-win results.

Stakeholders	Main Concerns	Engagement Methods	Responses Taken in 2021
 Government and regulatory agencies	Legal and regulatory compliance Work safety and environmental protection Economic development promotion Tax payment Job creation Corporate stability	Formulation of rules and policies Strategic cooperation Information submission Work reports Statistics reports	• Conducted 32 special/economic responsibility investigation projects • Responded to integrity suggestions from 3,818 people • Created a general oversight network, contributing to the recovery of about RMB2.09 million in direct economic losses • Complied with national environmental standards • Proposed an *Action Plan for Achieving Carbon Neutrality and Carbon Peak* in response to the nation's dual carbon targets
 Investors	Corporate governance EGS performance Performance growth Dividend distribution Investor relations Stock performance Carbon emission reduction goal and plan	Shareholder meetings Information disclosure Email and telephone inquiries On-site visits Roadshows	• Disclosed three regular reports, 51 announcements and notifications, 12 monthly statements and two circulars • Held one general meeting of shareholders • Held investor meetings and roadshows via video or audio conferences and communicated with more than 1,500 fund managers and analysts
 Employees	Legitimate rights and interests Compensation and benefits Career development Training Occupational health and working environment Employee care	Employee representative meetings Employee suggestions Intranet and public websites Seminars, networking, and other activities	• Hired 933 new employees • Ensured an employee training rate of 100% • Organized 438 occupational health trainings • Achieved a rectification rate of 100% for identified safety hazards
 Customers	Supply of safe and stable electricity, heating, and cooling Customer services Clean energy	Agreements/contracts Customer meetings Satisfaction surveys Customer care activities	• Provided adequate, reliable, and environmentally friendly energy services such as power, heat, cooling, and coal, and sold 177,300 GWh of electricity • Made efforts to ensure energy supply and the headquarters held three special meetings on maintaining energy supply • Facilitated the implementation of 11 new integrated energy projects with a total contract value of more than RMB100 million • Promoted to carbon trading and green power trading • Conducted satisfaction surveys to improve customer satisfaction

Stakeholders	Main Concerns	Engagement Methods	Responses Taken in 2021
 Partners	Contract compliance and mutual trust Equal and Long-term cooperation Mutual benefits	High-level meetings Agreements/contracts Products and services	• Ensured an integrity agreement signing rate of 100% among suppliers • Achieved a responsible procurement rate of 100% • Maintained an economic contract performance rate of 100% • Provided 813,894 hours of safety trainings for stakeholders
 Communities and environment	Environmental protection Safety and stability Harmonious community Charity programs Public relations	Philanthropic events Community building	• Facilitated carbon capture, utilization and storage (CCUS) projects, with 22,000 tons of high-purity carbon dioxide being captured • Invested RMB1.08 billion in the technological transformation of coal-fired generating units • Increased the installed capacity of renewable energy projects to 15,441 MW • Made a public welfare investment of about RMB15.43 million • Had 711 employees participated in volunteer services
 Media and NGOs	Information disclosure Interaction with media Contribution to NGOs Impact on sustainable development	Activity organization On-site visits Information disclosure	• Organized open-day events for 1,800 visitors • Initiated the establishment of the China Smart Energy Industry Alliance to build a clean, low-carbon, safe, and efficient energy system

Case Study

CR Power Organized Regional Companies to Hold Open-Day Events Themed on "Two Decades of Green Development"

To celebrate the 20th anniversary of the founding of CR Power and strengthen communication with stakeholders, we organized regional companies and local project companies to hold Open-Day events with the theme of "Two Decades of Green Development". These events attracted around 1,800 people, including employees' family members, students, media workers, government officials, and representatives from NGOs and partners.

CR Power Northeast China Region New Energy Co., Ltd. invited more than 200 people from relevant government agencies at all levels, trade unions, colleges and universities, local communities, and other walks of life to visit the master control room, booster station, a simulation sand table for wind farm layout, and other production sites at the wind farm of the Chaoyang maintenance base.

China Resources Power (Lianyuan) Co., Ltd. organized more than 80 students and residents from local counties and cities to watch a promotional video for the 20th anniversary of the establishment of CR Power to gain an understanding of the development history, cultural concept and social responsibility fulfillment of CR Power and basic knowledge of power generation at power plants. The students took an active part in a prize quiz on the green development of enterprises.

Open-day event in Wanshun Wind Farm at Nong'an in CR Power Northeast China Region

Local students visit the green plant of China Resources Power (Lianyuan) Co., Ltd.

Management of Materiality Issues

Identification Process for Materiality Issues

To inform internal and external stakeholders of our progress toward sustainability fully and accurately, we optimize on an ongoing basis the identification and evaluation processes of sustainability issues from issue identification and stakeholder survey to issue analysis and review. As a result, we have developed a materiality issue matrix to respond to the concerns of stakeholders and to disclose the materiality issues. The analysis of materiality issues provides an important reference for the future sustainability management of CR Power.

Step 1: Establishment of a Library of Materiality Issues

By comprehensively considering policy trends, corporate development, disclosure standards, capital market, and peer benchmarks and based on the existing list of materiality issues, we identify, and classify the current year's materiality issues and build a library of materiality issues.

- **Policy Trend Analysis:** We track national macro policies, conduct in-depth research on national and provincial policies and regulations, and in light of policies and regulations governing the energy and power industries, analyze sustainability trends of such industries.
- **Corporate Development Plan:** We identify key issues significant to CR Power's strategic goals as per the strategic development plans and annual business plans of China Resources (Holdings) Co., Ltd. ("CR Group") and CR Power;
- **Disclosure Standard Analysis:** We analyze the GRI Standards, UN SDGs, TCFD recommendations, *CASS Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0)*, HKEx's *Environmental, Social and Governance Reporting Guide*, and other standards to understand the latest management standards and disclosure requirements for sustainability issues.
- **Capital Market Analysis:** We build a capital market information database and summarize capital market concerns by reference to the MSCI ESG Ratings, Hang Seng Corporate Sustainability Index, Carbon Disclosure Project (CDP) index requirements, Dow Jones Sustainability Indices (DJSI), and Sustainability Accounting Standards Board (SASB) Standards related to the sustainability management of the power sector to form a library of issues.
- **Peer Benchmark Analysis:** We conduct benchmark analysis on sustainable development reports of leading domestic and foreign peers to identify and determine key issues of concern to the power sector and how stakeholders respond to such issues.

Step 2: Stakeholder Survey

Based on the above analyses, we identify 31 issues that have a substantial impact on CR Power, including 10 environmental ones, 12 social ones and 9 governance ones, and invite internal and external stakeholders via an online questionnaire to evaluate the materiality of the 31 issues from their respective perspective and comment on CR Power's existing sustainability strategies, performance, reporting methods, and disclosure quality.

In 2021, 805 stakeholders took part in the survey, including CR Power's directors, senior managers, employees, investors/shareholders, partners, suppliers, media, the public, government agencies, and regulators.

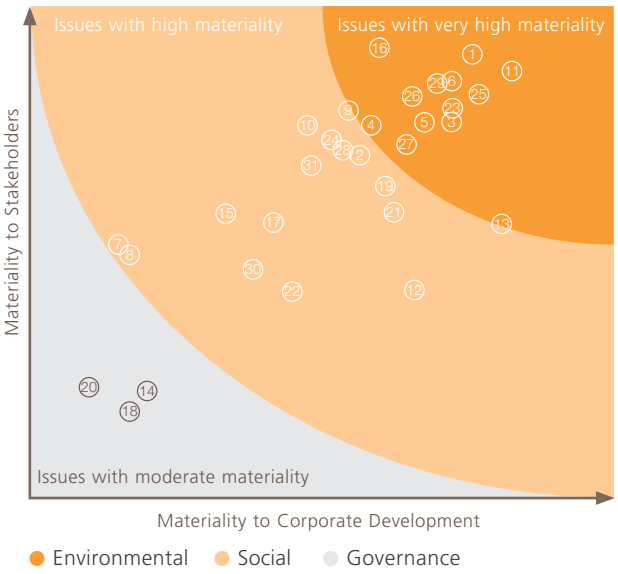
Step 3: Analysis and Review of Materiality Issues

We collect and analyze the scores of the issues and assign risk-based weightings to the issues, forming a two-dimensional representation of the materiality of each issue to stakeholders and to corporate development; have screening and analysis results reviewed by internal management and external experts.

Step 4: Responses to and Disclosure of Materiality Issues

We formulate and implement an action plan for substantial issues, and prioritize responses to and disclosure of such issues in the report.

2021 CR Power ESG Issue Materiality Matrix



Issues with very high materiality

11	Safe Production and Occupational Health
1	Carbon Peak and Carbon Neutrality Planning and Goals
25	Anti-corruption
6	Development of Clean Energy
29	Response to National Policies
23	Sustainable Development Planning
3	Reduction of Exhaust and Pollutant Emissions
26	Compliant Operation
5	Water Resources and Wastewater Management
16	Supply of Safe and Stable Electric and Heat Energy
27	Corporate Governance and Risk Management
13	Employee Rights and Care
4	Waste Disposal and Utilization Issues with high materiality

Issues with high materiality

9	Environmental Governance and Compliance
19	Protection of Data Privacy and Security
2	Carbon Asset Management
21	Technological Innovations and Transformation
28	Preservation and Appreciation of State-owned Assets
24	Corporate Culture and Business Ethics
10	Environmentally Friendly Technologies
12	Employee Training and Development
31	Maintenance of Market Environment
17	Protection of Intellectual Property
15	Optimization of Customer Services
22	Industry Cooperation and Development
30	Protection of the Rights and Interests of Shareholders
8	Identification of and Responses to Climate Change Risks
7	Biodiversity Conservation Issues with moderate materiality

Issues with moderate materiality

14	Supply Chain Management
18	Fair Marketing
20	Community Service and Philanthropy

Report Preparation Process

CR Power aims to give a comprehensive and objective presentation of its social responsibility concept, practices, and performance to the public and all stakeholders for more mutual communication and trust. To this end, CR Power engages management and implementation personnel at all levels in the preparation of its annual sustainable development reports and tasks them with corresponding responsibilities.

Before the preparation of the report, the Guidance Team trains the Coordination Team and Implementation Team according to the requirements, goals and responsibility allocation plan set by the Leadership Team. The Implementation Team then collects and submits reporting materials, based on which the Coordination Team prepares a report and coordinates data assurance and report rating with an independent third party. Following completion of the report, the Leadership Team reviews its contents and submits it to the Board of Directors for final approval. After the report is released, the Coordination Team organizes the promotion and dissemination of the report and collects comments from stakeholders, to further improve CR Power's sustainable development programs.

Responsibility Topics

Achieving Transformation through Two-Decade Persistent Efforts to Strive Forward

On August 27, 2001, CR Power was incorporated in Hong Kong. After two decades of development, CR Power has become one of the largest energy companies in China, with its business lines expanded from mere thermal power generation to clean energy and integrated energy services. During this challenging process, CR Power has been adopting a never-quit approach to difficulties and seeking to make breakthroughs and innovations for further development. CR Power's specific actions have embodied its responsibilities and mission.

Business Coverage: With a Market Awareness, Making Transformation through Reforms and Innovations

Ceremony for the Official Operation of Pengcheng Power Plant #1 unit

With a keen business sense and market awareness, CR Power has been seeking to seize market opportunities so that it can develop and transform through reforms and innovations.

- In 1990s, Pengcheng Power Plant gained a competitive edge in cost and quality through a performance assessment system and a procurement tendering process.
- In 2015, when a new round of power system reforms started, CR Power captured opportunities in the power sales market by establishing its first power sales company; after that, CR Power achieved step-by-step a full coverage of the national power sales market.
- To contribute to China's "dual carbon" goals, CR Power introduced its green and low-carbon strategy during the 14th Five-Year Plan period, vowing to increase the installed capacity of clean power projects, research smart energy and low-carbon technologies, and explore market-based green power trading.

Driven by reforms and innovations, CR Power, deeply rooted in the traditional energy industry, has expanded its business to include, among others, wind power, photovoltaic power, distributed energy, energy storage, power sales, and integrated energy services. The Company is striving to become a world-class clean energy supplier and integrated energy service provider.

Development History of CR Power

1996

Pengcheng Power Plants #1 unit of China Resources Power (Xuzhou) Co., Ltd. was completed and put into operation, making many industry leading achievements and being written into the annals of China's power industry as the "Pengcheng mode".

2001

CR Power was incorporated in Hong Kong.

2002

CR Power rapidly expanded its assets through major acquisitions of Wenzhou Telluride Power Plant, Hubei Puqi Power Plant, and Guangdong Shajiao C Power Plant.

2003

CR Power was listed on the Main Board of the HKEx.

2006

CR Power acquired a 55% equity interest in Shantou Dannan Wind Power Co., Ltd. in Guangdong, its first wind farm project.

2007

The three 70 MW units of CR Power's first hydroelectric project, Yunnan China Resources Power (Red River) Limited, were wholly put into operation.

2010

CR Power's first million watts class unit, #5 unit of Pengcheng Power Plant, was completed and put into operation.

2015

The first units of the 20 MW photovoltaic power generation project in Tianzhen, Shanxi was successfully connected to the grid, marking a zero breakthrough in photovoltaic power generation for CR Power.

2017

- CR Power successfully acquired an equity interest in Dudgeon Offshore Wind Farm in UK, its first overseas power generation project.
- CR Power's first integrated energy demonstration project, Fuyao Smart Energy Platform, was launched.

2019

CR Power put into operation a ultra supercritical thermal power plant-based multi-thread and multi-technology carbon dioxide capture utilization, and storage (CCUS) test platform, which was the third in the world and the first in Asia.

2021

- CR Power participated in the first-day trading on the national carbon market.
- CR Power's first offshore wind power project in China, Cangnan #1 Project commenced construction.

Business Development: Based on the Effect of Benchmarks, Achieving Transformation through Learning and Innovation

In 1996, Pengcheng Power Plant's #1 unit was completed and put into operation, the independently constructed, managed, and operated "Pengcheng model" soon became an industry benchmark. Since then, CR Power has incorporated the effect of benchmarks into its management philosophy and taken a wide range of actions to set benchmarks.

In 2021, CR Power established a system of benchmark indicators by comparing with world-class benchmarks. CR Power intended to, through learning from benchmarks, identify and improve weaknesses, achieve a systematic and comprehensive increase in operational, marketing, and organizational capabilities, and improve quality and efficiency for quantum development. In July 2021, by virtue of its management performance, CR Power was recognized as a Benchmark Enterprise by the SASAC in the Key SOE Management Benchmark Setting Campaign.

> "Learning from benchmarks is a driving force for the continual improvement of the Company; by doing so, the Company can identify and improve its weaknesses and will become an industry leader in terms of scale, efficiency, management, technology, and innovation during the 14th Five-Year Plan period."
>
> ——Shi Baofeng, President of CR Power

Employee Management: With a People-Oriented Policy, Accomplishing Transformation through Organizational Optimization

Over the past two decades, according to a people-oriented policy, CR Power has put more efforts on motiving its employees to grow and develop by protecting their rights and interests in accordance with the law, offering a diverse range of trainings for their further development, and striving to meet the growth needs of different employees through a dual career ladder. The number of employees at CR Power has grown from an initial total of 590 people in Pengcheng Power Plant to 21,252 employees in 49 regional companies within 7 regions.

Amid a shift towards renewable energy business, the Company has promoted organizational reforms by adopting tenure limits for senior managers and managing them by contract, and provided employees of thermal power plants with trainings on skills related to renewable energy business to enable them to meet new requirements for such shift.

2021 CR Power 20th Anniversary Commendation Meeting

[Read More] Working Together to Set off on a New Journey after Two Decades of Efforts

Responsibility Topics

Serving the Livelihood Needs of the Public by Ensuring Energy Supply

From the second half of 2021, coal started to be in tight supply in the market due to a combination of factors. As a result, the soaring coal price repeatedly hit new highs, giving rise to enormous pressure on the supply of coal-fired power and an imperative need to ensure heat supply for the livelihood of the people. In such a context, President Xi Jinping gave important instructions to ensure energy and power supply, while the State Council and relevant ministries and commissions held special meetings on how to maintain such supply, requiring the safe supply of energy to ensure the people stay warm during the winter.

In rapid response to China's strategic arrangement and in strict compliance with CR Group's requirements for ensuring energy supply, CR Power has effectively fulfilled its responsibilities as a central SOE in ensuring power and heat supply for the people's livelihood; through efforts to ensure power and heat supply by taking coordinated actions, enhance such supply by implementing integrated measures, and promote such supply by maintaining safety and stability, CR Power has mobilized all resources to keep the stable supply of power and heat to serve the people's livelihood.

- **Implementing strategic deployment to promote safe supply of energy**

A team dedicated to ensuring energy supply was set up by CR Power to coordinate the efforts of all affiliates in ensuring coal supply, manage the operation of equipment cooperate and communicate with internal and external parties, and closely track policy changes so that responsive measures can be taken promptly to ensure coal supply. A task force was established by each of CR Power's regions and regional companies to prepare a work plan for ensuring supply and define clear responsibility at each level to maintain stable energy supply.

CR Group Chairman Wang Xiangming Visits CR Power to See If Energy Supply Is Ensured

China Resources Power (Changshu) Co., Ltd. Makes Every Effort to Ensure Coal Supply

Total quantity of long-term coal contracts

84.66 million tons

Coverage rate of long-term coal contracts

over **90%**

- **Cooperating with multiple parties to guarantee fuel supply**

Signing long-term coal supply contracts	CR Power took the lead in implementing the requirement of the National Development and Reform Commission (NDRC) for the early and effective signing of longer-term coal supply contracts, by seeking available coal sources through communication and coordination with multiple parties and signing long-term coal supply contracts with large energy companies such as China Energy, China National Coal Group, and Jinneng Holding Group to ensure that the supply of coal from all regions is basically covered by such contracts.
Broadening logistics channels	CR Power coordinated the operation of six non-stop freight trains and four quasi liners and promoted the commencement of road-to-rail container transport projects to enhance fuel transport capacity and increase the performance rate of long-term coal supply contracts for eliminating the shortage of coal used for heating during the winter.
Performing IT-based management of fuel procurement	CR Power integrated internal and external information and established an IT-based management system for whole-process fuel procurement to achieve collection of data collection throughout the internal fuel procurement process and real-time monitoring of fuel inventory; CR Power set automatic early warnings with respect to the fuel market, business, and management, enabled automatic early warnings in terms of procurement plan, price, contract, and acceptance deviation analysis, and promoted the management of early warning handling to ensure that the fuel procurement process continues as planned.

Since October 28, 2021, unplanned outages of CR Power's coal-fired power units have been fully eliminated, making the Company the only one among central SOE that has done so.

- **Strengthening production management to consolidate the foundation for ensuring supply**

To maintain production safety and reinforce the foundation for stable supply, CR Power focused on the safe and efficient operation of equipment by conducting inspection and maintenance of equipment to obtain information on the working conditions of the equipment in a scientific and efficient manner and to rapidly respond to and promptly eliminate any defects.

➢ **Enhancing equipment overhaul**

✧ China Resources Power (Guangzhou) Co., Ltd. completed an overhaul of 170 items and wiped out 52 standby and downtime defects within 10 days around the National Day holiday;

✧ China Resources Power (Chenzhou) Co., Ltd. commenced Liyujiang Power Plant's flexible power supply to Hunan and completed an overhaul of Hunan Power Plant's #2 unit in advance in mid-October;

✧ China Resources Power (Zhejiang) Co., Ltd. cleaned up coking on the water cooling walls of boilers through breaking the coking manually or with air picks or blowing it up to remove potential production safety hazards and to improve the continuous and stable power supply capacity.

➢ **Improving emergency plans**

✧ China Resources Power (Panjin) Co., Ltd. established an emergency maintenance team for heat sources and another for heat supply network and prepared a plan for supplies, materials, tools, communication, transportation, and public sentiments to avoid the occurrence of serious events such as coal shortage and shutdown at critical moments.

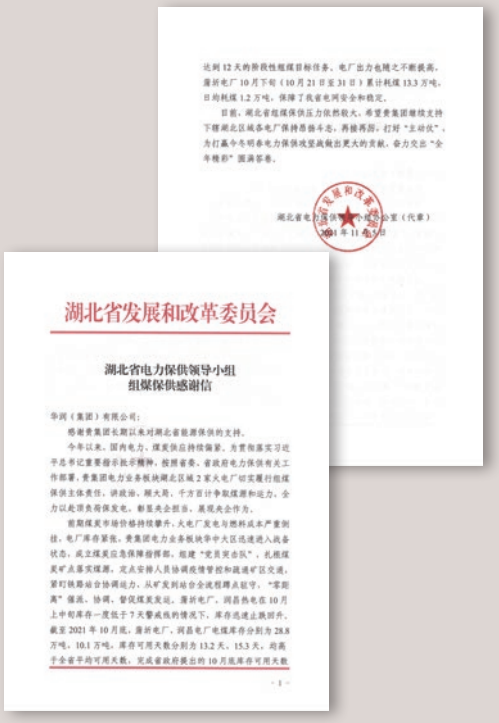
✧ China Resources Power (Shenzhen) Co., Ltd. strengthened its emergency shift system, closely tracked and promptly obtained updated meteorological information, organized accident drills, and made emergency preparations against typhoons and floods, successfully completing the tasks of ensuring power supply and guarding against typhoons and floods.

• **Being widely recognized**

➢ On October 19, 2021, the SASAC released its *Daily Report on the Performance of Central SOEs in Ensuring Energy Supply*, pointing out that CR Group was ranked first among the companies whose maximum output rate higher than the average output rate of coal-fired generation units of central SOEs.

➢ CR Power also received many commendations and letters of thanks from national ministries and commissions, local governments, and energy administration authorities for early actions in response to the nation's call for ensuring energy supply, good results of such actions, and performance of social responsibilities.

At a moment critical to the economy and the people's livelihood, CR Power and its affiliates as a whole, rising to challenges, worked together to overcome difficulties with a high sense of responsibility and mission and cooperate with all stakeholders to ensure energy supply for the livelihood of thousands of homes.



湖北省发展和改革委员会

湖北省电力保供领导小组
组煤保供感谢信

A Letter of Thanks from Hubei's Leading Group for Ensuring Power Supply to CR Power for Its Efforts in Seeking Coal Sources for Ensuring Power Supply

Equipment Personnel at Liyujiang Power Plant Perform an On-site Inspection of Equipment

Pursuing Green Development to Support the National Strategies

Challenges

Climate change is a major challenge to humankind in sustainable development. In 2021, China put great efforts in implementing its action plan for achieving the carbon peak and carbon neutrality targets. The Communist Party of China ("CPC") Central Committee and the State Council issued the *Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy*, calling for the accelerated building of a clean, low-carbon, safe and efficient energy system. In such a context, how to promote a transition to a low-carbon energy structure in accordance with the policies and arrangements of the CPC Central Committee and the State Council to achieve CR Power's "dual carbon" goals is a challenge for CR Power.

Our Actions

- Promoting the development of photovoltaic power, wind power and other clean energy and integrated energy services to contribute to the achievement of the nation's "dual carbon" goals;
- Enhancing the R&D of CCUS, microalgae-based carbon fixation and other green technologies to reduce carbon emissions;
- Reinforcing environmental management and pollution control and researching and applying resource saving technologies to minimize the adverse impact of business operation on the environment.

Key Performance

Increased the proportion of attributable operational generation capacity of renewable energy projects to

32.2%

Achieved a water recycling rate of

97.48%

Captured more than

22,000 tons

of carbon dioxide through CCUS

SDGs

Climate Change

CR Power strictly follows the "dual carbon" policy of China. According to the centralized arrangement of the nation and applicable requirements, CR Power has set its own "dual carbon" goals commensurate with its characteristics. To improve its governance performance in climate-related issues, CR Power has taken actions to identify risks and opportunities in relation to climate change and research paths to achieve carbon peak and carbon neutrality. With reference to TCFD recommendations, CR Power has disclosed climate-related work plans and results in terms of governance, strategy, risk management, and metrics & targets.

Governance

CR Power's Board of Directors has set up a Sustainability Committee to assist the Board of Directors in supervising, reviewing, and dealing with policies, measures, and performance targets related to sustainability (including climate change). The Sustainability Committee, chaired by an independent non-executive director and mostly consisting of independent non-executive directors, meets at least once a year to discuss issues related to climate change and reports regularly to the Board of Directors. In addition, the Sustainability Committee has established the Guidance Team, the Coordination Team, and the Implementation Team to ensure that policies and measures related to climate change are integrated into CR Power's day-to-day operations. When necessary, the Sustainability Committee may also consult external experts for professional advice on climate change.

Strategy

Risks associated with climate change primarily include physical risks arising from extreme climate or rising temperature and transition risks arising from market, regulation and policy changes occurring in response to climate change. As one of the large energy suppliers in China, CR Power has taken on the important task of promoting energy structure transition and adopted a combination of measures to address risks, opportunities and challenges brought about by climate change.

In 2021, we initiated the establishment of CR Power Carbon Neutrality Research Institute with China Resources Cement Holdings Limited; identified main challenges and opportunities faced by the Company by analyzing the "dual carbon" policy, domestic and foreign requirements related to climate change, main low-carbon technologies in the power industry and their development trends, and conditions of the Company; and prepared the *Research Report on Action Plan of CR Power for Achieving Carbon Peak and Carbon Neutrality*. These efforts have laid a solid foundation for CR Power to accomplish its "dual carbon" goals and respond to climate change.

CR Power Xiangfeng Wind Farm in Hebei

Identification of Risks and Opportunities from Climate Change

Category of Risk/ Opportunity	Highlights of Potential Risks and Opportunities Related to CR Power	Solutions
Policy and legal risks	Along with China's progress in achieving carbon peak and carbon neutrality goals, there will be changes in national policies and requirements, e.g., regional differences in energy consumption and intensity control policies, changes in carbon trading rules and emission quota prices over time, changes in trading rules for green power and development requirements for renewable energy projects, and ecological and environmental constraints on project development. These changes will push up CR Power's compliance cost.	Seeking to get in contact with local policy authorities to learn and understand the details of policies, analyzing major local problems, challenges and policy trends in each region, identifying potential risks, and mitigating the risks through standardized management practices.
Market and technology risks	a) Given the impact of the "dual carbon" policy on carbon emissions, thermal power units tend to play a role in basic guarantee and system regulation and are utilized less and less, driving up the operation costs of coal-fired power plants; b) According to the released regional policies, additional renewable energy projects are required to be equipped with a corresponding proportion of energy storage facilities, which means that it is necessary to improve the application of energy storage technology to gain more market opportunities; c) A gradual decrease in emission quotas will mean an increase in trading price, which will impose higher requirements for carbon asset management.	a) Strictly controlling an increase in the capacity of coal-fired power units, ensuring new coal-fired power units reach the world-class level in coal consumption, performing energy conservation, heating, and flexibility transformations of coal-fired power units, and allowing coal-fired power units to play a supporting role in ensuring safe substitution of renewable energy for traditional energy. b) Increasing investment in technological innovation and application of energy storage technology, and exploring solutions more friendly to new power systems; c) Please refer to the section "**Enhancing carbon asset management**" below.
Extreme climate risks	Extreme climate events will increase due to global warming, such as extremely high temperature, extreme cold weather, rainstorms, floods, and typhoons, which will pose challenges to CR Power's asset security and power system security protection.	a) Utilizing techniques to beef up capabilities in safe management of battery energy storage temperature, resistance of offshore wind farms against typhoons, and anti-icing of wind turbines in high-risk areas; b) Developing emergency plans for extreme climate and strengthening the identification of hidden hazards based on weather forecast and other information to ensure the safety of units and systems; c) Taking reasonable measures such as maintain commercial insurance to reduce potential losses caused by extreme climates.
Clean energy development opportunities	China's efforts to promote carbon peak and carbon neutrality will create a vast potential for the clean energy market.	Please refer to the section "**Developing clean energy**" below.

• Developing clean energy

CR Power has been making best efforts to promote a transition to a low-carbon energy structure by starting with clean energy development. In 2021, its attributable operational generation capacity of renewable energy projects hit 15,441 MW, a surge of 240.5% from 4,535 MW in 2015.

Greatly developing centralized onshore wind power and photovoltaic power projects >>	With a nationwide business coverage and a priority in key projects, we have combined local consumption with external transmission, focused on regions with abundant resources such as Northeast China, Northwest China, North China, and Southwest China, maintained a strategic pipeline of resources, and ensured the cascade development of such resources.
Developing offshore wind power in a well-organized manner >>	By adopting an approach which considers both development of offshore resources and enclosure of open sea resources, we have focused on China's six major offshore wind power bases and striven to maintain a pipeline of high-quality resources for optimal development.
Developing distributed photovoltaic power and dispersed wind power in an innovative manner >>	We have promoted the innovative and integrated development of distributed energy in China's major strategic areas and the surrounding areas of CR Power's existing projects according to local conditions.
Developing gas-fired power in selected areas >>	We have introduced large-scale gas-fired power generation in the Yangtze River Delta and the Greater Bay Area, where gas sources are reliable, gas price is affordable, demand for peak load regulation is large, and energy consumption and intensity control policy is strict; we have provided gas-fired CCHP (Combined Cooling, Heating and Power) systems for centralized energy consumption scenarios with stable heat load in economically developed areas.
Maintaining long-term development of conventional hydropower and pumped hydro storage plants >>	We have continued to advance the early-stage work for the existing hydropower projects, sought opportunities for joint development and equity acquisition of large and medium-sized hydropower projects, and endeavored to develop a pipeline of umped hydro storage plants.

Case Study

CR Power Commenced Construction of Its First Offshore Wind Power Project Cangnan #1

On December 16, CR Power started the construction of Cangnan #1 in Zhejiang's Cangnan County, its first offshore wind power project in China. With a designed installed capacity of 400 MW, Cangnan #1 Project is scheduled to be put into operation in December 2022 and will have an annual on-grid capacity of 1.35 billion MWh. Compared with conventional coal-fired units with the same capacity, this project can save about 422,000 tons of standard coal and 4 million cubic meters of fresh water each year and reduce wastewater and thermal effluent discharge.

Operation of the Positioning Platform for Cangnan #1's Foundation Construction

Total operational generation capacity

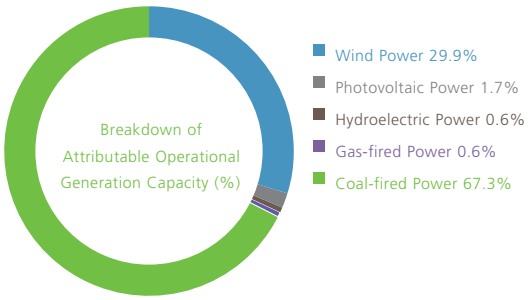
60,465 MW

Attributable operational generation capacity of grid-connected wind power projects

15,779 MW

Attributable operational generation capacity of grid-connected photovoltaic power projects

955 MW



- **Researching low-carbon technologies**

- **Upgrading the stability of CCUS system:** The CCUS technology is an important emission reduction technology to respond to climate change. China Resources Power (Shenzhen) Co., Ltd. has built the world's third and Asia's first ultra supercritical thermal power plant-based multi-thread multi-technology carbon capture test platform. In April 2021, China Resources Power (Shenzhen) Co., Ltd. upgraded the CCUS system to comprehensively improve its test data quality and operation stability, striving to make it a world-leading CCUS technology validation platform.

Carbon Capture Test Platform of China Resources Power (Shenzhen) Co., Ltd.

- **Microalgae-based carbon fixation and microalgae-based oxygen generation projects:** Microalgae-based carbon fixation, which utilizes microalgae to convert a large amount of carbon dioxide into biomass, is an important way to realize the bio-utilization of carbon dioxide in CCUS technology. As a carbon-fixing organism, microalgae are characterized by a high photosynthetic rate, fast reproduction rate, and strong adaptability to the environment and have a capacity to fix carbon dioxide 10-50 times that of forests. We have set up a joint R&D Center with Zhejiang University and invested RMB5 million in a 300-square-meter microalgae-based carbon fixation project, which is the first demonstration project in China to convert carbon dioxide in the flue gas of coal-fired power plants through a vertical microalgae photosynthetic reactor. In addition, we cooperated with Zhejiang University in developing a microalgae-based oxygen generation project in Shenzhen International Low Carbon City, the first one in China.

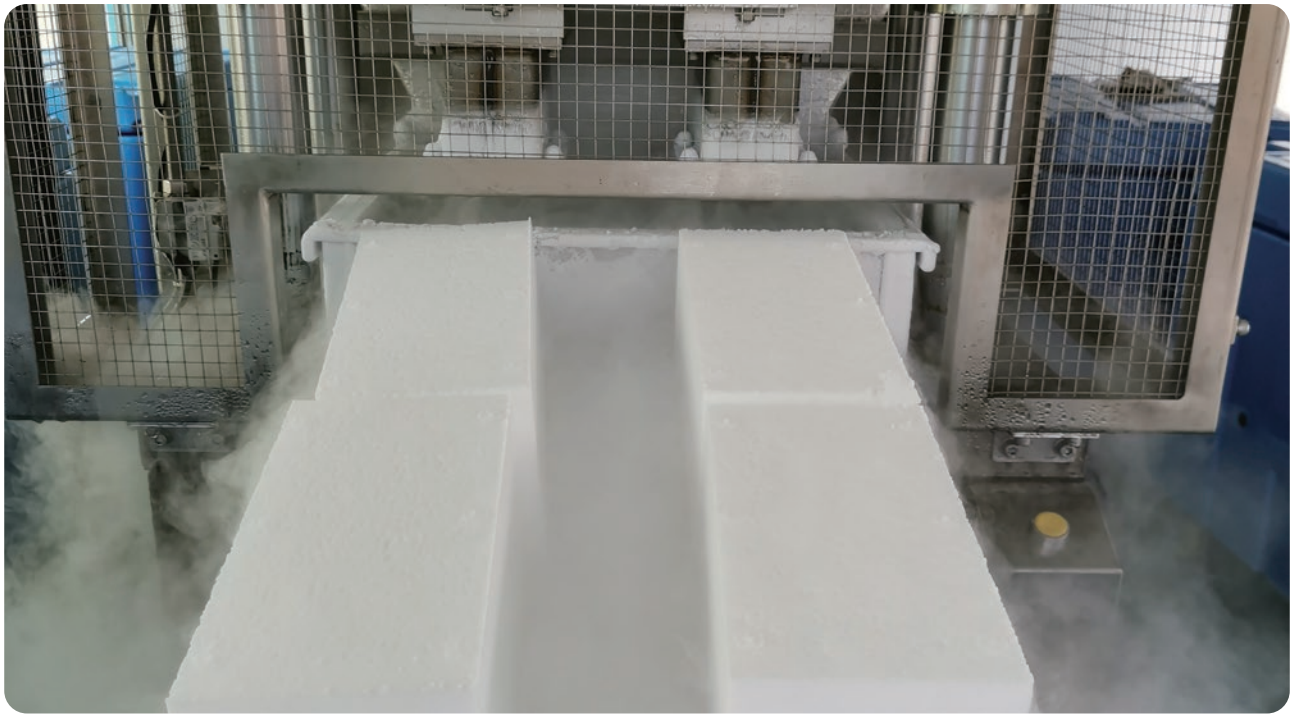
Sunroom of Microalgae-Based Carbon Fixation Project

Microalgae-based Oxygen Generation Project

- **Project of converting carbon dioxide to dry ice**: Converting carbon dioxide into dry ice is a method to make efficient use of carbon dioxide captured by a carbon capture test platform. On August 12, a dry ice conversion system with a capacity of 1t/h built by CR Power passed commissioning and successfully produced the first piece of dry ice, covering the entire process from carbon capture to carbon utilization.

Total carbon dioxide captured by CCUS

22,000 tons



Dry Ice Production Workshop

• Strengthening carbon asset management

We implement the CPC Central Committee and the State Council's "dual carbon" strategy and CR Group's "dual carbon" instructions; through optimizing internal management, we have enhanced our market capabilities. At the same time, as an active participant in national carbon trading and green power trading, we have leveraged the opportunities created by such trading to promote restructuring and lower energy consumption for a transition to a low-carbon structure.

- **Refining internal policies:** In accordance with the *Interim Regulations for the Administration of Carbon Emission Trading* issued by the Ministry of Ecology and Environment, the *Interim Measures for the Administration of Voluntary Greenhouse Gas Emission Reduction Transactions*, and other rules, we have revised the *Management Measures for Carbon Assets (Tentative)*, specifying the management mode of carbon assets, allocation of responsibilities, and account management to provide guidance to the Company in managing carbon assets in the new market environment.

- **Taking an active part in carbon trading:** On July 16, the national carbon trading market was officially launched. By virtue of its excellent performance capability, CR Power was invited to attend the launching ceremony of the national carbon trading market and participate in the first-day trading, with a trading volume of 250,000 tons of emission quotas. In 2021, CR Power used CCER (Chinese Certified Emission Reductions) to offset carbon emission, completed the settlement of the emission quotas for the 2019-2020 period on schedule, and purchased 567,600 tons of CCER to reduce costs.

- **Making exploratory efforts in green power trading:** On June 22, CR Power reached a 2.45 million KW power deal with BASF (China) Co. Ltd. at Guangdong Power Exchange Center, the first renewable energy deal in Guangdong that can help effectively enhance the added value of green energy, promote transformation in the consumption model of green energy, and spur the introduction of renewable energy trading rules in Guangdong. In addition, CR Power participated in China's first green power trading in September 2021 and concluded China's first independent cross-provincial green power transaction in November 2021.

Read More

China Resources Power (Yichang) Co., Ltd.'s Participation in Carbon Trading is Reported by CCTV

- **Providing carbon management training:** CR Power has delivered regular training courses on carbon asset management, held special discussions on carbon asset data management and annual performance of obligations, and released related results to improve the carbon asset management capabilities of relevant personnel.

CR Power Participates in the First-Day Trading of the National Carbon Trading Market

- **Communication and cooperation**

- **The First National Conference on Carbon Neutrality and Green Development:** At the First National Conference on Carbon Neutrality and Green Development hosted by Chinese Society for Environmental Sciences and organized by Guangdong Society of Environmental Sciences, CR Power shared the information of its CCUS platform to provide a technical reference for the industry in addressing climate change.

- **2021 China International Urban Energy Expo (CIUEE):** At CIUEE co-organized by China Energy Internet Alliance and other organizations, CR Power shared its typical practices in building a new urban clean energy system.

Risk Management

We have set up a Risk Management Committee to establish a sound reporting mechanism for major business risk events and coordinate and guide the reporting of major business risk events. We have established a risk standards assessment system covering all business units, regularly conducted annual risk assessments, and organized all units each quarter to fill in a major risk monitoring form to dynamically assess risk changes and promptly prepare responsive measures. In 2021, we incorporated climate change related issues into our risk management process to identify, assess, and manage climate change risks. By analyzing climate change-related policies at home and abroad, development trends of power systems, and the conditions of CR Power, we have identified three major climate change risks, namely policy and legal risks, market and technology risks, and extreme climate risks.

Metrics & Targets

CR Power sets an overall sustainability target in relation to climate change every five years and allocates responsibilities for achieving such target to affiliates at all levels by requiring them to sign a letter of responsibility to ensure that they assume their respective development tasks. Meantime, to stimulate the rapid development of renewable energy, CR Power has in place a performance evaluation system, which requires regional companies to maintain a growth of 10% in terms of the development and construction of additional renewable energy projects in their respective region and be regionally ranked among the top three in this regard. Furthermore, CR Power has conducted research on the planning and construction of renewable energy projects in advance, built a project management system, and performed process management and timely review to steadily promote the development and construction of renewable energy projects.

In 2021, we set a clean energy development goal – adding 40 GW in capacity of renewable energy projects during the 14th Five-Year Plan period, including onshore and offshore wind power, distributed wind power, centralized photovoltaic power, and distributed photovoltaic power projects (including countywide rooftop distributed photovoltaic power projects); we also imposed strategic requirements for pumped hydro storage, electrochemical energy storage and integrated energy services. These efforts aimed to boost the development of clean energy and mitigate the impact of traditional fossil energy on the climate. For the grid-connected capacity of new wind and photovoltaic power projects in 2022, our goal is 6,300 MW.

CR Power Xiantao Power Plant

Environmental Management

To improve environmental management and lay a solid foundation for its green development, CR Power has set environmental management targets and regularly evaluated and supervised the achievement of such targets and, through conducting environmental compliance review, formulating emergency plans for environmental accidents, and offering environmental protection training.

Environmental Management Targets

CR Power prioritizes ecosystem protection by incorporating ecosystem protection efforts of affiliates at all levels into their annual EHS goals and annual performance contracts. Each year, CR Power assigns tasks and targets for ecosystem protection and energy conservation and regularly evaluates and supervises the achievement of such tasks and targets.

In 2021, there was a massive energy supply shortage around China caused by the soaring coal price. In response to the nationals call to guarantee energy supply, CR Power increased its thermal power and heat supply by 9.5% and 4.4% YOY respectively. However, due to the tight supply and low quality of coal, the ash and sulfur content of coal increased, producing more nitrogen oxide, sulfur dioxide, and soot. In addition, to ensure the stability of the grid, coal-fired power generation units in all regions, including energy-intensive power units, had to maintain operation. As a result, we failed to achieve some of the environmental targets in 2021.

Indicators	2021 Targets	2021 Achievements	2022 Targets
Net generation standard coal consumption rate (Subsidiary Coal-fired Power Plants) (g/kWh)	0.1% lower than in 2020 (296 g/kWh)	296.8 (target not achieved)	YoY decline
Pollution incident of major or higher impact	0	0 (target achieved)	0
SO_2 emissions	not higher than in 2020	12,312.46 tons (target not achieved)	4% lower than in 2020
NO_x emissions	not higher than in 2020	22,028.42 tons (target not achieved)	4% lower than in 2020
Particulate emissions	Continued decline from 2020	1,397.73 tons (target not achieved)	Continued to decline from 2020
Chemical oxygen demand (COD) emissions (tons)	Continued to decline from 2020	50.86 (target achieved)	Continued to decline from 2020
Comprehensive energy consumption rate per RMB10,000 of output value (tons of standard coal)	3% lower than in 2020	Down by 7.96% YoY (target achieved)	5% lower than in 2020
Comprehensive energy consumption rate per RMB10,000 of industrial added value (tons of standard coal)	2% lower than in 2020	Up by 47.31% YoY (target not achieved)	4% lower than in 2020

Note: Given that the Company mainly referenced the data from the 13th Five-Year Plan period when setting the 2022 targets, the data from 2020 are the baseline for such targets.

Environmental management system

For better environmental performance, we have been reviewing the application of rules and regulations and updating and improving the environmental management system during the business operation to consolidate the foundation for environmental management. We have revised the *Management Rules for Ecological Environment*, adding provisions on the "Three Simultaneous" Management of soil and water conservation with main projects, prevention and control of hazardous waste pollution, soil pollution and noise pollution, management of pollutant discharge permits, environmental protection tax, and carbon asset management in a bid to prevent and minimize any adverse impact of construction, production and operation activities on the ecological environment.

- **Environmental compliance review**

We include environmental compliance evaluation into the annual EHS performance evaluation of regional companies, require them to check their environmental compliance on a monthly basis, hold regular meetings for promoting EHS compliance, and prompt regional companies to achieve closed-loop management of non-compliance rectification. In 2021, in accordance with the *Key Inspection Points of CR Power for Ecological Environmental Protection*, we conducted a special inspection on the performance of basic-level business units of the 14 regional companies in 27 areas, including compliance management, pollution prevention, emergency management, and accident and incident management, identified 95 problems, prompted them to formulate a rectification plan for such problems, and supervised the rectification process. Of those problems, 83 were rectified, representing a rectification rate of 87.4%.

- **Environmental accident prevention**

We put in place a comprehensive emergency response plan for sudden EHS accidents and incidents, which contains clear provisions and requirements on the early warning, reporting, handling, and aftermath treatment of emergencies, require affiliates at all levels to conduct regular drills, and update such plan every three years. In 2021, China Resources Power (Chenzhou) Co., Ltd. arranged a Liquid Ammonia Leakage Emergency Drill involving more than 60 people, including its General Manager, to effectively test and evaluate the rapid response and emergency response capabilities of all levels of emergency teams.

- **Environmental protection training**

While performing strict environmental protection inspection, we provide environmental protection training to the employees in whole-process environmental management, industrial pollution prevention and control, cleaner production, and solid waste treatment to improve their environmental protection awareness and environmental management capabilities.

- **Environmental protection incentives**

To improve EHS performance, we grant EHS awards to outstanding affiliates, basic-level teams, and employees. In 2021, 14 affiliates, 15 basic-level teams, and 28 employees received EHS awards.

Number of power plants passed the cleaner production audit and certification organized by local governments:

20

China Resources Power (Chenzhou) Co., Ltd. Conducts Emergency Drills

Resources Conservation

The integrated utilization of resources is a major step for China to further implement its sustainability strategy. CR Power embeds the concepts of circular economy and resources conservation into each aspect of its production and operation process and strives to increase on an ongoing basis the efficiency of resources utilization by using diverse green technologies and measures to develop itself into a resource-saving and environment-friendly company.

Lowering Water Use

Highly committed to the conservation and integrated utilization of water resources, we regularly assess the risks of each water source and take measures, such as looking for alternative water sources, recycling water, and strengthening wastewater treatment, to increase water use efficiency and reduce water consumption. CR Power's EHS Department oversees and manages the water resources management objectives and performance of each subsidiary and regularly reports water resources-related management issues to the Sustainability Committee. Our goal is to continuously reduce water consumption per unit of power generation and minimize fresh water consumption during the 14th Five-Year Plan period.

In 2021, several thermal power plans in Northern China used urban reclaimed water or mine water as supplementary water to reduce their groundwater and surface water intake. Notably, China Resources Power (Dengfeng) Co., Ltd. used more than 4.92 million tons of mine water throughout the year, saving RMB2.95 million in water costs, and was recognized as a "Provincial Water Saving Enterprise".

In 2021, due to business expansion, CR Power's annual fresh water consumption[1] climbed 8.03% YoY to 195,185,100 tons, including 168,025,800 tons of fresh surface water (-2.28% YoY), 5,953,800 tons of fresh groundwater (+15.52% YoY), and 21,205,500 tons of fresh water from other sources (+45.19% YoY); CR Power's consumption of fresh urban reclaimed water reached 40,830,400 tons, an increase of 20.47% YoY.

Mine Water Recycling System of China Resources Power (Dengfeng) Co., Ltd.

Note: 1. The annual fresh water consumption excludes the consumption of fresh urban reclaimed water; fresh water from other sources mainly refers to coal mine dewatering water, tap water, and water produced by seawater desalination.

Water recycling rate **97.48%** | up **0.05%** YoY

Integrated Use of Solid Wastes

CR Power has been exploring technologies for treatment and integrated use of solid wastes in the power industry. CR Power applies the biomass coupling technology to treat industrial and environmental wastes in multiple thermal power plants, promoting the integrated use of solid wastes. As at the end of 2021, CR Power's 13 coal-fired power plants, including Guangzhou Thermal Power Plant, Zhenjiang Power Plant in Jiangsu, and Heze Power Plant in Shandong, had engaged in sludge-coupling power generation and integrated use of industrial wastes to maximize the conversion of wastes to energy and improve the integrated utilization rate of solid wastes.

Sludge-coupling power generation

CR Power strives to promote the application of sludge-coupling technology in its coal-fired power plants. The Shenzhen Ecological Demonstration Park for the Energy Utilization of Sludge built within Shenzhen Power Plant, which is the world's largest sludge coupling power generation project, boasts a daily disposal capacity of 6,000 tons of sludge (with a moisture content of 80%) and a much lower emission of dioxins, nitrogen oxides, sulfur dioxide, dust, and others than that required by international emission standards, and can turn municipal sludge into harmless energy resources. As at the end of 2021, the sludge-coupling power generation project at China Resources Power (Shenzhen) Co., Ltd. had disposed of 1.09 million tons of sludge.

Recycling of industrial solid wastes

CR Power coordinates and promotes the efforts of its thermal power plants in recycling industrial solid wastes. Currently, CR Power focuses on the disposal of paper-making white mud, drug residues, calcium carbide slag, shoe manufacturing wastes, and marble waste pulp. Gucheng Power Plant uses white mud, a solid waste from paper makers, for flue gas desulfurization and had disposed of 124,100 tons of white mud as of the end of 2021; Henan Shouyangshan Power Plant has transformed its systems and equipment so that after being pulverized, shoe manufacturing wastes can be fed into the boiler for power generation, making itself a national pioneer in combusting shoe manufacturing wastes in pulverized coal-fired boilers for power generation.

Pollution Prevention and Control

To improve pollution prevention and control, CR Power lays down stringent measures against air and water pollution, properly manages the discharge of wastes, and has in place an online pollutant management system for monitoring and controlling sources of pollution.

Air Pollution

We abide by laws and regulations governing air pollution prevention and control. For each project to be built, we require the construction entity to develop a specific plan for preventing and controlling construction dust pollution; during our day-to-day operation, we require all thermal power plants to discharge air pollutants in compliance with the *Air Pollutant Emission Standards for Thermal Power Plants* and the emission requirements for key air pollutants; we also require responsible persons to take airtight or other necessary measures to prevent materials from being scattered or raising dust during the transportation of such materials, drive along the prescribed route, and adopt enclosure, spraying, and other measures to prevent dust when loading and unloading the materials. All coal-fired power generation units of CR Power have achieved ultra-low emissions and reached the world-class level in air pollutant emissions since 2020.

Water Pollution

In strict accordance with the *Law of the People's Republic of China on Prevention and Control of Water Pollution* and local discharge standards, CR Power manages and controls the discharge of wastewater through wastewater pretreatment, wastewater classification and collection, and other measures. In 2021, CR Power's 15 power plants, including those in Xuzhou, Tongshan, Huagongyuan, Zhenjiang, and Wenzhou, substantially reduced wastewater discharge by implementing comprehensive improvements such as cascaded utilization of wastewater. In 2021, CR Power discharged 1,652,000 tons of waste water, a decline of 48.29% YoY and reduced COD emissions by 4.16 tons, a decrease of 7.57% YoY.

Wastewater pretreatment

For industrial wastewater to be discharged to centralized sewage treatment facilities, CR Power requires the wastewater to be pretreated and meet the treatment process requirements of centralized sewage treatment facilities before being discharged.

Wastewater classification and collection

For desulfurization wastewater, CR Power has in place a separate treatment system; for wastewater produced by the limestone-gypsum wet flue gas desulfurization process, CR Power ensures the effluent quality meets the requirements for recycling; for wastewater from chemical cleaning or shutdown protection, CR Power requires the formulation of a waste liquid treatment plan and implementation of such plan after it is approved to ensure that all wastewater is collected and treated for recycling or disposed of by a qualified third party engaged by the Company; for industrial wastewater containing toxic and harmful pollutants, CR Power requires the classification, collection and disposal of such wastewater without diluted discharge.

Solid Waste Pollution

In 2021, in accordance with the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (the New Solid Waste Law)*, we updated the provisions on the prevention and control of solid wastes of the *Management Rules for Ecological Environment*, specifying the process for the supervision and management of solid waste prevention and control and the requirements for the collection, storage, transportation, and utilization of solid wastes. In addition, to ensure compliance in the discharge of solid wastes, we organized relevant personnel to interpret and communicate the *New Solid Waste Law* and other laws, regulations, and policies for the employees. Our goal is to continuously reduce the wastes emission per unit of power generation during the 14th Five-Year Plan period.

Disposal of hazardous wastes : CR Power requires affiliates at all levels to establish sound management systems and ledgers for hazardous wastes to standardize the collection and storage of hazardous wastes and to engage qualified third parties for the proper disposal of hazardous wastes.

Disposal of general wastes : CR Power researches and develops solid waste recycling technology to strengthen the integrated utilization of main solid wastes such as fly ash, slag, and desulfurized gypsum; CR Power engages qualified waste disposal service providers to achieve the integrated use of ash, gypsum and other by-products; CR Power develops emergency plans and builds emergency storage equipment and facilities for temporary stacking and storage of by-products in off-peak seasons to avoid environmental pollution.

Quantity of solid wastes generated

23,508,167.53 tons

(including 23,502,278.79 tons of general wastes and 5,888.73 tons of hazardous wastes)

Quantity of solid wastes treated

23,643,794.50 tons

(including 135,535.63 tons of general wastes from previous years that were put into integrated use and 88.19 tons of hazardous wastes from previous years that were disposed of)

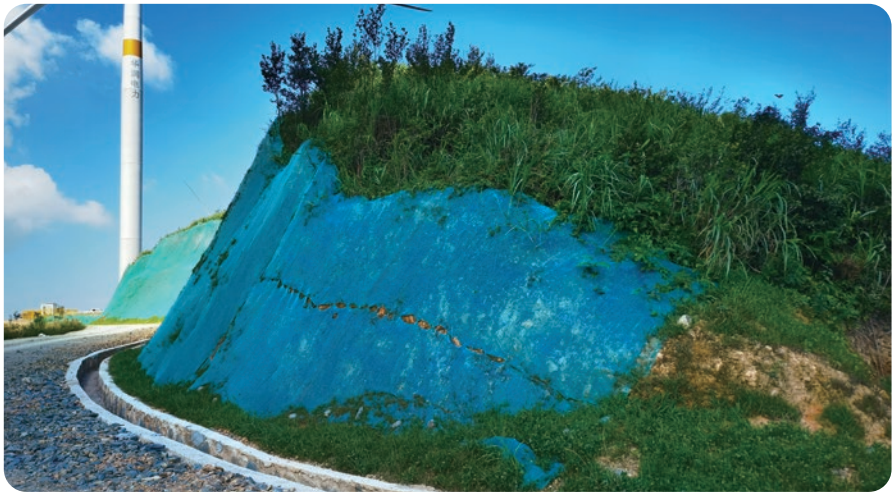
Biodiversity Protection

CR Power pays attention to biodiversity protection. At the development stage of each project, we invite a qualified third party to conduct community impact, biodiversity, and surrounding ecosystem impact assessments with respect to the proposed site of the project to comprehensively assess the possible impact of the construction of the project on the surrounding ecosystem; at the construction stage of the project, we strictly implement the "Three Simultaneous" requirements for environment protection (i.e., environmental facilities are to be designed, constructed, and operated concurrently with the principal facilities) to mitigate the impact of production activities on the ecological environment; at the later stage of construction, we take actions for ecological compensation and restoration, such as breeding and releasing of fish or transplantation or nursery seedling of rare plants, to remedy the impact of the construction on the ecological environment.

Case Study

Regulators Inspected the Ecological Restoration Efforts of Yungui Wind Power Projects

In June 2021, Guizhou Energy Administration and Guizhou Water Resources Department jointly inspected the soil and water conservation facilities of wind power projects in Jiuchao Town, Liping County, Jiuyang Town, Jianhe County, and Wanchao Town, Kaili County. In strict accordance with the "Three Simultaneous" requirements during the construction of the wind power projects, Yungui Wind Power Project has restored the lower slopes of roads and built drainage facilities to avoid flood damage, and distributed mixed grass seeds in different proportions for the four seasons to ensure that wind turbine platforms and their surrounding slopes are green in all seasons. The effect of ecological restoration efforts at the project sites was recognized by the regulators.



Restoration of Vegetation around Wind Farms through Hydroseeding

Case Study

Caofeidian Power Plant Conducted Marine Fish Breeding and Releasing Activities

To fully implement the *Program of Action for Aquatic Biological Resources Conservation in China* and repair the damage to fishery resources caused by the construction and operation of its phase II expansion project, Caofeidian Power Plant carried out marine fish breeding and releasing activities from July 23 to 25, 2021, releasing 675,700 cynoglossus semilaevis fry and 333,300 paralichthys olivaceus fry off the estuary of Shuanglong River in Luannan County, and 194,400 sebastes schlegeli fry off the estuary of Daqing River. The activities have effectively promoted the continuous restoration of fishery resources and effective restoration of water ecology in the Bohai Sea area, ensuring the income of the local fishermen, the social stability of the fishing area, and a balance between the development of local economy and protection of resources.

Creating More Value through Stable Operation

Challenges

With the COVID-19 pandemic raging around the world, the growth of China's real economy slows down, the fuel prices fluctuate dramatically, and energy policies are frequently updated. This has posed great operational risks to power generation companies. The power industry is at a critical stage for accelerating energy restructuring, bringing great opportunities as well as compliance risks in environmental protection, work safety, and other areas for renewable energy projects. In addition, the power industry is tasked with the challenge of ensuring the national energy supply security. Ensuring safe and stable operation of electrical energy information systems, amid persistent threats from cyber security risks, is vital to the national economy and the people's livelihood. Furthermore, there are still many challenges to power safety production, especially work safety accidents of contractors.

Our Actions

- Improving internal risk control and audit management system and related measures to ensure compliance in business operations and maintain stable development.
- Optimizing the technology innovation system, with a focus on smart energy, power plant, and energy storage, to improve integrated energy services.
- Strengthening cyber and information security management and establishing a cyber security protection system to protect privacy and information of customers; practicing responsible marketing and optimizing the customer service system to ensure high quality services.
- Implementing a work safety responsibility system for all employees, strengthening risk and hazard management, and enhancing the safety management of stakeholders to steadily improve safety management and create a safe working environment.

Key Performance

Total assets

HKD 287.355 bn

Total R&D expenditure

RMB 220 mn

Total EHS training hours

1,290,069 hours


SDGs
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Legal Compliance

CR Power improves its internal risk control and audit management system and related measures in strict accordance with applicable national and industry laws and regulations as well as business ethics and integrity standards to ensure compliance in business operations and maintain stable development.

Boosting Compliance

We steadily enhance compliance by improving the compliance management system, strengthening control of legal compliance risks, applying consistent business ethics standards, and fully promoting anti-corruption and bribery efforts.

Improving compliance management system

In 2021, we formulated the *CR Power Compliance Management Procedures (Tentative)* and set up a compliance management system covering the Board of Directors, Senior Management, functional departments, and all business units to fully boost our compliance efforts.

Compliance Management System

Function	Responsible Party	Main Responsibilities
Making decisions, offering guidance, and giving approval	Board of Directors (The highest governing and decision-making body)	• Approving a general plan for the compliance management system • Promoting the improvement of the compliance management system
	Senior Management	• Approving annual compliance management work plans, compliance management reports, response plans for major compliance risks, and evaluation reports on the compliance management system, among others. • Promoting the development of a compliance culture
	Compliance Leadership Group	• Considering and deciding on major compliance management issues; providing guidance on, overseeing, and evaluating compliance management efforts
Organizing, coordinating, and overseeing	Compliance Working Group	• Performing cross-functional coordination in compliance, and approving specific compliance matters such as connected transactions
	Compliance Management Department	• Developing a general plan for the compliance management system, specific compliance management procedures, a plan for compliance management organizational structure plan, among others • Identifying, assessing, monitoring, and warning against compliance risks, and performing compliance audits • Accepting non-compliance incident reports and organizing or participating in investigation of non-compliance incidents • Developing a compliance culture and evaluating compliance management performance
Promoting implementation	Other business and functional departments	• Cooperating in the implementation of compliance management requirements set by superior departments
Exercising independent oversight	Audit Department	• Independently overseeing the compliance management system
	Discipline Inspection Department	• Performing the oversight duty within the term of reference

In addition, we strictly comply with the following basic principles in our compliance management efforts:

Comprehensiveness	We make it clear that compliance management covers all business lines, business units, and employees and is throughout the process from decision making and implementation to oversight;
Relative independence	We require all business units, organizations, and individuals not to hinder or obstruct the Compliance Management Department or its personnel from fulfilling its or his responsibilities to ensure the objectivity and independence of the Compliance Management Department in terms of organizational structure, institutional setting and reporting line;
Importance	While ensuring all areas, processes, and personnel are covered by the compliance management system, we prioritize the compliance management of those which are important;
Continual improvement	We apply a Plan-Do-Check-Act (PDCA) cycle to maintain a closed-loop compliance management system to adapt to changes in our business scope and risks.

Preventing and controlling legal risks

To strengthen the management of legal dispute cases and standardize the handling of legal disputes, we revised the *Legal Dispute Case Management Standards* in 2021, specifying the management principles and handling mechanism for legal dispute cases, management responsibilities of different levels of departments, and case review and approval process. We have also set a reward and punishment mechanism, which will reward units and individuals who help avoid or reduce the Company's loss through legal means and will punish those whose improper activities cause losses to the Company. In addition, to effectively protect the Company's legitimate rights and interests, we have updated the *Management Measures for External Lawyers*, which provides a list of external lawyers, specifies the conditions and methods for engagement of external lawyers, and imposes higher requirements for the qualifications, monitoring, and performance evaluation of any engaged lawyers.

While improving relevant procedures and rules, we try to promptly identify new legal compliance risks through an analysis of risks and legal compliance audit of projects. We also improve the compliance risk prevention and control measures and the database of legal compliance risks. These efforts aim to effectively mitigate legal risks.

In 2021, we provided 12 training sessions on compliance management, intellectual property rights, labour law, and other laws and regulations in the forms of online and offline training and legal publicity activity to improve the legal compliance awareness of all employees and build a good environment for law dissemination and education.

Number of legal cases accepted in 2021:

151

Number of legal cases closed in 2021:

147

Ensuring consistency in business ethics

To further ensure consistency in the Company's business practices and ethics, we developed the *Management Measures for Trade Secrets* and the *Management Measures for Secret-Related Personnel* in 2021, strengthening the protection of the Company's trade secrets and business interests. In addition, we published the *Trade Secrets Newsletters* to communicate the importance of trade secret protection and enhance employees' awareness in trade secret protection. We organized a study of the *CR Group Code of Business Conduct* as well as special trainings on business ethics such as anti-monopoly, anti-unfair competition, anti-commercial bribery, and anti-money laundering to improve all employees' understanding of business ethics.

Intensifying anti-corruption and integrity efforts

To ensure its stable development, CR Power takes a targeted oversight approach for greater efficacy of oversight and promotes the development of a mechanism that makes employees not dare, not be able and not desire to commit corruption.

Oversight system

We have in place a general oversight network that covers the Headquarters, regions, and regional companies as well as all functional departments and offices. We have released the *General Oversight Handbook* to guide all units in performing integrity oversight and management.

Oversight of selection and appointment of personnel

We appoint dedicated personnel to oversee managers and improve the mechanism for selection and appointment of personnel to ensure all newly-appointed managers are subject to integrity talks. We prioritize providing responses to requests for integrity comments with respect to personnel involved in duty or position adjustment. In 2021, we gave 3,818 responses to such requests.

Special oversight

We take special actions to address overseas corruption, tunnelling, rent-setting, rent-seeking, and other illegal activities to prevent or resolve corruption risks.

Integrity education

In 2021, we posted over 190 integrity publicity messages on the official website of the Discipline Inspection Committee and the WeChat Official Account of CR Power, organized literature, painting, calligraphy, and photography activities themed on integrity, and orchestrated and hosted activities such as Daily Discipline Inspection Knowledge Tips and Integrity Reminder Cards. All these actions contributed to the maintenance of a clean and upright culture. In addition, we convened two integrity education meetings for all employees to analyze hidden risks and violations in typical corruption cases from multiple dimensions and perspectives, with a view to enhancing the employees' awareness of integrity. Our anti-corruption and integrity awareness meeting was taken part in by 21,252 employees and 4 directors.

Whistleblowing

We have in place a well-established mechanism for receiving and handling whistleblowing reports, which ensures that any employee or stakeholder can, through reporting hotline, reporting email address, oversight website, or other channels, report alleged violations involving CR Power. We undertake to strictly protect the information and interests of whistleblowers, maintain the confidentiality of their identity, and ensure that they will not be unfairly dismissed or harmed or receive undeserved disciplinary sanctions due to their whistleblowing action.

In 2021, CR Power received the results of the investigation and trial of two corruption cases. In one of the cases, an employee was sentenced to 10 years of imprisonment and fined RMB500,000 for corruption; in another case, an employee received a concurrent punishment of 14 years of imprisonment and a fine of RMB800,000 for corruption, bribery and embezzlement. We have terminated employment with them according to CR Powers relevant rules, and established a retrospective study scheme to prevent repeat of similar cases. The above cases have no major effect on our business.

Our anti-corruption and integrity awareness meeting was participated by

21,252 employees

4 Directors

In 2021, CR Power witnessed a slump of **62.5%** YOY in the number of whistleblowing reports and

a decline of **12%** YOY in the number of persons subject to disciplinary actions.

Guarding against Operational Risks

CR Power has a well-structured Internal Control and Risk Management Committee (the ICRM Committee) with clearly defined functions, chaired by the President of CR Power, which is responsible for making general arrangements for, providing guidance on, reviewing, and coordinating and managing the Company's internal control and risk management tasks, and reports to the Senior Management of the Company and the ICRM of CR Group. The ICRM Committee has an administration office responsible for the establishment, operation, maintenance, inspection and evaluation of the Company's internal control and risk management system, including organizing internal control evaluation and major risk assessment, preparing the Company's annual *Internal Control System Report*, and tracking changes in major risks. At the same time, we have made it clear that the risk management structure of CR Power is independent of the business departments from the division of work to reporting mechanism to ensure independence between the Risk Management Department and business lines.

We provide risk management training for managers and employees to ensure their sensitivity and professionalism in risk management and control. On September 27, 2021, CR Power organized an ICRM Committee meeting to communicate risk control documents, management measures, and guidelines from the country and CR Group, which was attended by 34 participants and continued for 150 minutes. As at the end of 2021, CR Power has three Non-executive Directors with expertise in risk management.

Risk identification and management

Using the Committee of Sponsoring Organizations model as a reference, we integrate risk management into the actual business activities of all business units, achieve risk control objectives through setting control elements, and conduct an annual major risk assessment to effectively improve our risk prevention and control capabilities. In 2021, considering the requirements of China's policies for the energy and power industries, changes in market environment, our management and operation performance, and concerns of stakeholders, we identified five major risks, i.e., policy risk, work safety risk, staffing risk, investment risk, and market supply risk, and worked out targeted and actionable measures to deal with them.

Case Study

Management and Control of Major Risks for Renewable Energy Projects

In 2021, we launched an integrated program to investigate, analyze, and guard against major legal compliance risks for renewable energy projects. Focusing on major risks arising during the early-stage procedures, project management, and bidding management of the wind power and PV power projects, we developed a management and control form for legal compliance risks, which clearly defines the name, status, consequences of and responsibilities for each risk point. All regions were required to assess and analyze each risk point of the investigated business units and provide the investigation results according to the form, work out corrective actions, and input new risk points and new corrective actions to CR Power's legal compliance risk database to improve the legal compliance risk database and legal compliance management capabilities.

In addition, to standardize the reporting of major operational risks, we formulated the *Management Measures for Reporting of Major Operational Risks and Incidents* in 2021, which defines the scope of reportable major operational risks and creates an efficient reporting mechanism to ensure the timeliness, effectiveness, and completeness of reporting of major operational risks.

Internal audit management

To ensure consistency in audit procedures and reduce operational risks, we have formulated the *Internal Audit Management Procedures*, defining the audit principles, audit organization and its staffing and responsibilities. To keep the independence and objectivity of an internal audit organization and its audit personnel, we have set up an independent internal audit department. In terms of business, we make sure that the internal audit department and its personnel are not involved in any approval and decision making for business activities of the audited business units or any other tasks that may compromise the independent and impartial performance of their audit duty.

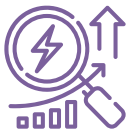
In 2021, we conducted 32 audits, including economic responsibility audits, operation and management audits, and other special audits. To promote the application of audit results, we combined the training and publicity activities with audits. At the audit kick-off meetings, we communicated the latest policies and documents related to audit and risk management. In 2021, we offered six training sessions at audit kick-off meetings, each involving more than 20 participants and lasting for about 120 minutes.

Innovation-Driven Growth

Committed to innovation-driven growth, we improve the technological innovation system, expand the scope of integrated energy services, and drive transformation and upgrading through innovation to achieve high-quality development.

Technological Innovation System

We have been improving the technological innovation system to consolidate the foundation for technological innovations and develop new growth drivers. In 2021, the CR Power Innovative Development and Intellectual Property Committee was renamed as the CR Power Technological Innovation Committee, with a change in its members; we established a technological innovation mechanism that covers the CR Power Technological Innovation Committee, Technology Research Institute/Technological Innovation Department/Technology Center, and regions/regional companies to coordinate and manage innovation efforts; to facilitate the high-quality and well-organized R&D and application of technologies, the Technology Research Institute set up an innovation research center, which is responsible for tracking cutting-edge technology research and macro policies and conducting research on energy storage, hydrogen energy, carbon peak and neutrality, wind energy, integrated energy and others, and as the executive arm of the CR Power Technological Innovation Committee, perform its routine tasks.



Total R&D expenditure: RMB **220** mn

Number of R&D personnel: **353** persons

Number of new patent applications: **243**

Total number of patent applications: **1,870**

Number of newly licensed patents: **346**

Total number of licensed patents: **1,090**

We increase efforts on talent cultivation and improve the talent equivalent through internal training and external introduction of talents. We have applied for the establishment of a provincial/ministerial-level engineering technology centre and built a talent cultivation and cooperation platform in the form of postdoctoral research centre and overseas talent program. All these efforts have contributed to the development of talent teams, the performance of technical experts' role, and the enhancement of innovation and R&D capabilities.

In 2021, we formulated the *Management Measures for Consultation with Technology Experts* to improve the management of talents; we provided two training sessions on technological innovation (i.e., training on the whole process of scientific research from project initiation and R&D to application of results "and training on hydrogen energy, energy storage and power semiconductor technologies for new R&D institutions") to the motivate innovation by scientific research talents; in addition, upon application, CR Power's Technology Research Institute was officially recognized as the Guangdong New R&D Institution in 2020-2021 and the Guangdong Smart Power Engineering Technology Research Center by Guangdong Science and Technology Department, which means that the Technology Research Institute is a high-level provincial technological innovation and R&D platform recognized by the competent government authority.

Intellectual property protection

CR Power strictly complies with the *Trademark Law of the People's Republic of China, Copyright Law of the People's Republic of China, Patent Law of the People's Republic of China*, and other legal and regulatory requirements. The CR Power Technological Innovation Committee is exclusively responsible for initiating technological innovation projects, managing experts, and protecting intellectual property rights. To provide strong protection for intellectual property rights including but not limited to patents and technical solutions, we require all employees to sign a non-disclosure agreement before their onboarding and participation in any projects and all project partners to do so. In 2021, we provided one intellectual property rights training session.

Provincial, ministerial, and power industry awards **26**

Including **5** provincial/ministerial scientific and technological progress awards

20 power industry awards

and **1** CR Group scientific and technological progress award

Innovation results

In 2021, we continued innovation efforts in wind power, thermal power, smart wind farm, and smart power plant to increase technological innovation capabilities.

In terms of wind power, we developed a wake flow and cable coupling optimization software for offshore wind power projects, which is used for the early development of offshore wind power projects and can effectively reduce wake flow loss and cable costs. For thermal power, we accelerated the research and application of smart control technologies for thermal power plants and developed three advanced control algorithms such as active disturbance rejection control (ADRC). Thanks to those algorithms, we narrowed the fluctuation range of average NO_x level by 30% and significantly increased the stability of reheat steam temperature control. With respect to smart wind farms, we launched the Xilin Gol League Smart Wind Farm Science and Technology Project with CR Power's one-million KW-class wind farm cluster as a pilot. The purpose of the project is to research and develop an Internet of Things (IoT)-based new-generation regional centralized control system for renewable energy projects and a cloud native-based new-generation smart operation system for renewable energy projects to develop digital and smart wind farms. As to smart power plants, we prepared and issued the *Smart Power Plant Development Plan* and commenced a pilot program of benchmark smart power plants in China Resources Power (Xiantao) Co., Ltd., China Resources Power (Yunfu) Co., Ltd., and China Resources Power (Shenzhen) Co., Ltd.

Integrated Energy Services

CR Power accelerates the efforts to optimize its energy structure during the 14th Five-Year Plan period and is committed to becoming a world-class green integrated energy service provider. In 2021, with a focus on two key energy services-energy storage technology and energy utilization management, we promoted the implementation of 11 new integrated energy service projects, with a total contract price of more than RMB100 million, by virtue of our smart energy management platform, smart heat network, smart energy storage, and other smart solutions.

In August 2021, we signed a strategic cooperation agreement with the Nanjing Airport Economic Development Zone (Jiangning) Management Committee for jointly developing the Nanjing Airport Economic Development Zone into a zero-carbon economic demonstration park. With a total construction area of about 2.78 million square meters, the project is proposed to develop distributed rooftop PV installations on residential buildings within the economic development zone as well as integrated energy projects such as energy storage systems, battery swapping and charging stations, and energy conservation of industrial and commercial energy conservation facilities.

- **Smart energy platform**

By modeling the life-cycle data and information of power, heating, cooling, gas, and other kinds of energy, CR Power's smart energy platform integrates all businesses and projects for unified management by using big data, cloud computing, IoT and other technologies, thereby enabling the provision of full services, including energy planning, supply, distribution, storage, and utilization, for users like industrial parks, distribution networks, and companies.

As of the end of December 2021, 1,102 industrial companies, 23 PV stations, three energy storage projects, and four smart industrial parks had been connected to the smart energy platform.

Case Study

Joining Hands to Build a Lean Energy Management Platform for CR Sanjiu

In 2021, CR Power and China Resources Sanjiu Medical & Pharmaceutical Co., Ltd. ("CR Sanjiu") co-developed a lean energy management platform for CR Sanjiu to combine the advanced energy management practices of CR Power with the pharmaceutical expertise of CR Sanjiu, creating a smart energy management platform and a lean energy management system for the pharmaceutical industry. The cooperation was a good example of a powerful combination of different business segments within the CR Group.

Relying on the platform, we will integrate the data of production, energy, equipment, and management to achieve deep fusion of energy and production activities and unified, whole-process management of different types of energy such as water, power, steam, and compressed air for a great improvement in the energy management capabilities of the pharmaceutical industry.

Interface of the Platform

24 MW Energy Storage FM System for Changshu Power Plant at China Resources Smart Energy Co., Ltd.

- **Smart heat network**

We build a smart heat network platform based on IT and automation technologies to coordinate, analyze and optimize various resources within the heat supply system by applying IoT, big data, artificial intelligence, modeling, simulation, and other technologies to significantly improve the business and technical capabilities of the supply system during production management, supply-demand interaction, customer service and ensure the safe, reliable, and energy-efficient operation of the system.

In 2021, we implemented the Bohai Smart Heat Network Project by building a heat network monitoring platform to achieve the unattended operation of heat exchange stations and improve the smartness and operational efficiency of the project.

- **Smart energy storage**

We focus on energy storage Frequency Modulation projects for thermal power plants and supporting energy storage projects for renewable energy power plants. Energy storage FM projects for thermal power plants involve the flexibility transformation of thermal power generation units, while supporting energy storage projects for renewable energy power plants requires the installation of a proportion of energy storage systems in compliance with local policies to support the grid connection of renewable energy power plants. In November 2021, China Resources Smart Energy Co., Ltd. officially put into operation the 24 MW energy storage FM system for Changshu Power Plant, which is the first of its kind in Jiangsu Province. The project achieved an operational rate of 100% for all equipment at the first attempt, with all operating indicators better than expected.

As of the end of December 2021, we had put into operation seven energy storage FM systems for thermal power plants, with a total installed capacity of 112 MW/68 MWh and a total estimated subsidy of RMB486 million; we had put into operation 12 supporting energy storage systems for wind farms, with a total investment of about RMB325 million and a total installed capacity of 127.8 MW/218.6 MWh.

Case Study

Building a Joint Laboratory for Power Storage with BYD

On April 12, 2021, CR Power and BYD Company Limited ("BYD") officially inaugurated the CR Power-BYD Joint Laboratory for Power Storage. The two sides will cooperate with each other in the following four areas to jointly promote the development of renewable energy technologies: Joint FM technologies for battery energy storage systems (BESS) and multiple energy storage systems; power grid FM batteries and energy storage FM products; multi-energy complementary virtual power plant technology research amid Internet of Energy; and open research on integrated application scenarios for multiple renewable energy power generation and storage technologies.

High-Quality Services

CR Power is committed to delivering services to customers with speed and passion to meet their demands accurately and satisfactorily. We undertake to practice responsible marketing without false publicity; enhance cyber and information security management and protect customer privacy to avoid leakage of customer information; and adopt an accurate service approach to improve service quality and customer satisfaction and create more value for customers.

Practicing Responsible Marketing

We take actions to contribute to the maintenance of orderly transactions in the power market and protection of consumers' interests and guide consumers in making rational consumption decisions. We publish consistent marketing information through our cloud-based power sales platform and online service centre. In addition, we have in place rules and procedures for telephone and text message marketing, which clearly require marketing information to not violate the principle of fair marketing and the provision of convenient, effective options to block promotional calls or text messages.

Training on responsible marketing

For employees We provide regular training on sales skills, marketing compliance, integrity and legal compliance, and other related topics to enhance the sense of responsibility of the marketing personnel and improve their professional competence.

For customers We regularly communicate with customers through discussions and follow-up calls to understand their business demands at different stages and address their actual issues. We arrange professional account managers to resolve on a one-to-one basis any issues for customers. In addition, we organize customer care activities and invite them to visit CR Power. As to the frequently raised issues, we give detailed explanations from professional perspectives of the electricity market, physical electricity, carbon emissions, integrated energy, and renewable energy trading.

Improving Services

Increasing service standards

In 2021, for further improvement of customer services, we revised the *Management Guidelines for Customer Services of Customer Service Centers for Power Sales* to maintain the accountability of the customer service receptionist who first receives a call from a customer and establish a closed-loop management process. This ensures that there is always someone following up on a customer problem until it is resolved. We have further revised the code of conduct and the code of routine operations for the customer service personnel. Meanwhile, we have optimized the customer service receptionist team and increased the timeliness of customer services to make sure that unanswered calls are called back on the same day and work orders are closed within a week. These efforts ensure the timely answering and callback of customer calls and the effective improvement of customer experience.

Taking in comments from customers

To increase customer engagement, listen to the voice of customers, and provide better customer services, we design customer satisfaction surveys based on critical issues raised by customers, such as power, green power, and integrated energy service demands. We conduct customer satisfaction surveys through phone calls, text messages, and online questionnaires and eventually prepare a customer satisfaction report based on the results of the surveys. Based on the report, we propose improvement suggestions and supervise the implementation of such suggestions to ensure responses to the demands of customers and mitigation of their issues for effective satisfaction of their actual demands. Through conducting customer satisfaction surveys for four consecutive years, we have seen an increase in customer satisfaction year by year.

Optimizing handling of complaints

We have in place a standardized and procedure-based mechanism for handling complaints, which ensures accurate management throughout the process from acceptance of complaints, analysis of causes, and handling of complaints to follow-up calls. Through the customer comment section on the online service centre, WeChat messages, 400 customer service hotlines, and 106 SMS platforms, we collect customer comments and promptly deal with customer concerns to ensure each single customer complaint will be resolved satisfactorily. As a result, there is a year-by-year increase in customer satisfaction. In 2021, we received zero customer complaint and achieved a customer satisfaction rate of 97.2%.

Number of customer complaints received

0

Customer satisfaction rate

97.2%

Protecting Information Security

To consolidate the foundation for information security management, we have set up a Cyber Security and IT Leadership Group, headed by the President of CR Power. The group is responsible for making important decisions, strategic plans, and coordination for cyber security and IT. The group has a cyber security management office responsible for managing and improving the Company's cyber security.

We have formulated the *Information System Incident Management Standards* and the *Cyber Security Incident Management Standards* to specify the process of handling relevant incidents and the allocation of responsibilities and improve the capabilities to manage and handle information and cyber security incidents. In addition, we have a clearly defined process for declaring announcements on information security issues, which ensures the timely and smooth transmission of information. We encourage all employees to report suspicious information security incidents through CR Group's Cyber Security E-Platform to ensure the early identification and handling of such incidents and eliminate information security issues at source.

Preventing cyber risks

We manage and improve cyber security and prevent cyber risks on an ongoing basis in accordance with the national risk assessment standards and the basic requirements for cyber security level protection. We conduct asset security evaluation through security check and risk test analysis of physical environment, network, and system platforms as a whole and monitoring of information asset inventory, vulnerability and threat identification, protective capability of current controls, and server and terminal vulnerability scanning. When any issues, hazards, or risks are identified, we develop a rectification plan. All these efforts are intended to improve the active and sustained defence capabilities of our information systems and ensure the overall security of our networks and systems.

Case Study

Establishing a Cyber Security Perception Platform

With increasingly complex cyber security challenges, traditional solutions cannot fully meet the requirements for analysis and unified management of security situations amid massive threats and higher security requirements. Based on multidimensional big data association analysis, CR Power has established a cyber security perception platform, with a focus on security visualization and collaborative defence, to monitor, report, and deal with security threats on a real time basis.

Based on a full traffic analysis of the Session Initiation Protocol architecture, we collect key data from the whole network through security components like probes, security devices, and third-party security devices. Then, with the cyber security perception platform as the core of the safe brain, we achieve business visibility and threat perception with respect to the whole network traffic by using advanced technologies (e.g., threat intelligence, behavior analysis, machine learning, and big data association analysis). This enables us to detect all potential security threats and effectively protect our information and cyber security.

Safeguarding information security

We strictly follow the principle of protecting customer information security. For the cloud-based power sales platform, we have a customer information management process to implement access control for all platform users. In addition, we maintain a log of all operations done by the platform users at the backend, and hide key customer information and contract information. Our *Management Measures for Use of 106 SMS Platform for Power Sales* sets explicit requirements for information security and confidentiality, customer information security management, and information publication approval, subjects any information to be published to strict review, and requires system operators to be registered with their real name, thus ensuring the security of customer information and strictly protecting customer privacy.

To ensure compliance of employees with confidentiality rules, we require all employees to sign a *Confidentiality Undertaking* that defines the scope of confidential matters. We sign a *Confidentiality Agreement* with each external supplier for protecting the information and privacy of our customers, which contains restrictive provisions binding upon them. We apply the same policy to all business lines and subsidiaries.

Providing information security training

We attach great importance to improving the information security awareness of employees. Considering the particular conditions of the Company and security scenarios, we provide online and offline training for all employees and organize Cyber Security Week activities to enhance the cyber security awareness of all employees.

In 2021, we offered over 40 training sessions on various cyber security topics, including but not limited to national laws and regulations, cyber security awareness, office network security, industrial control network security, data security, network security protection skills, and personal information security protection. Among them, the trainings on cyber security awareness and office network security were for all employees of CR Power, with a coverage rate of 100%.

Cyber security non-compliances 0	Customer information security non-compliances 0	IT system incidents 0
Amount of fines for information security non-compliances 0	Complaints from regulators and other external parties regarding infringement of customer privacy 0	

CR Power Pingdu Wind Farm in Shandong

Work Safety

CR Power adopts a work safety approach that puts safety first, focuses on prevention, and requires comprehensive management measures. We follow the national policy which requires joint responsibility of Party members and government officials for work safety, the performance of work safety responsibility of employees in addition to their job responsibilities, concerted efforts of all stakeholders for work safety, and accountability for breach of work safety duty. We also comply with the legal requirements that those who oversee industries, business activities, or production and operation activities must also oversee work safety. To effectively improve work safety management, we improve the safety management procedures and system and promote all-round and whole-process work safety management that involves all employees.

Work Safety Management

In 2021, we revised the *Work Safety Management Rules*, requiring affiliates at all levels to establish an EHS committee, chaired by one of their leaders, which is responsible for establishing a sound EHS protection and oversight system and managing work safety within their respective scope of business. Meanwhile, we defined the work safety management responsibilities and requirements for affiliates at all levels and set clear work safety objectives to consolidate the foundation for work safety management.

Work Safety Objectives of CR Power

- Ensuring that there is no major or above personal casualty accident, and general personal injury accidents are effectively reduced;
- Ensuring that there is no major or above equipment-related accident;
- Ensuring that there is no major or above fire accident;
- Ensuring that there is no extremely serious traffic accident for which the parties are equally liable or one of the parties is primarily liable.

To achieve these safety objectives, we have established and implemented a safety responsibility system for all employees, and required business units and individuals at all levels to sign a *Letter of Commitment for EHS Objectives* to specify the responsibilities of all levels, positions, and employees for work safety objectives. Through those efforts, we have established a work safety control system where basic-level enterprises control serious injury accidents, functional departments minor injury and attempted accidents, work teams abnormal situations, and individuals mistakes. These actions ensure that work safety responsibility is performed throughout the production and operation process. In 2021, 72 workdays were lost by employees due to work-related injuries occurring during their commutation to and from workplace and participation in team building activities.

	2019	2020	2021
Number of work-related deaths	1	0	0
Work-related death ratio	0.9197‰	0	0

Safety Risk Prevention

In 2021, we updated the *Management Measures for EHS Monitoring* to ensure that issues and hazards can be identified and eliminated in a timely manner. The updated version of such *Measures* specifies the forms of EHS monitoring and inspection, provides more monitoring and inspection methods, and establishes ways to deal with problems identified during the EHS monitoring and inspection. In addition, such *Measures* link the rectification of EHS risks and hazards by employees with their performance assessment and, through rewards and punishments, motivate the employees at all levels to identify and eliminate various issues and hazards. As to the prevention and control of work safety risks, we launched a three-year work safety initiative to promote the establishment of a dual safety risk prevention system by affiliates at all levels and enhance the EHS and safety accident emergency management of stakeholders, thus fully preventing and controlling safety risks arising during the production process.

Safety risk management of stakeholders

CR Power prioritizes the safety management of stakeholders by signing an *EHS Agreement* with them to explicitly require them to establish a proper EHS management system and clarify the safety management requirements for construction tools and equipment, working environment, and hazardous articles. We also require the stakeholders to provide regular EHS trainings for their construction personnel, who will not have access to construction sites until they pass our EHS examination. In addition, we set detailed rules for reward and punishment, according to which, we will reward stakeholders who earnestly perform their safety-related duties and achieve outstanding safety performance, and punish those who fail to perform the *EHS Agreement*. Through these actions, we full motivate stakeholders to perform their safety duties, thus effectively preventing and controlling their safety risks.

We incorporate the safety management of stakeholders in our safety management system to meet the integrated management requirements. We assign specialists to: attend the morning and evening shift meetings of stakeholders every day; gain an understanding of the safety skills of workers; check the implementation of safety measures; communicate the risks involved in the operations to be carried out and the safety skills requirements; and check the implementation of operations on site to identify risks, if any, as early as possible.

Lessons Learned from the Safety Accident of Liyang Dongfang.

On April 24, 2021, a personal casualty accident occurred to a stakeholder of CR Power, resulting in one death. Liyang Dongfang Power Construction Engineering Co., Ltd. ("Liyang Dongfang") was a contractor of China Resources Power (Changshu) Co., Ltd. During the overhaul of the #1 unit, one worker of Liyang Dongfang died after his chest was mechanically squeezed by a gate plate due to the inadvertent closing of a pneumatic shut-off damper (PC gate).

After being aware of the accident, CR Power made an immediate response. Upon investigation, CR Power found that the accident was caused by improper operation of the worker, poor management of unsafe behaviours by on-site supervisors, and a lack of dynamic identification of safety risks.

This accident was a lesson paid for with blood. We reviewed the accident, organized warning education activities, and took effective actions to ensure the performance of work safety responsibilities and prevent the occurrence of any similar safety accidents. These actions include strengthening the safety management and control of high-risk operations and the management of stakeholders, improving the intrinsic safety management of maintenance equipment, organizing anti-violation activities, and enhancing safety monitoring and inspection.

Safety accident emergency management

In 2021, we issued the *Management Measures for EHS Accidents and Incidents*, established an emergency management mechanism and plan for sudden safety accidents, and defined emergency management responsibilities at all levels; we strengthened efforts on monitoring, warning, and emergency decision-making, improved the allocation of emergency materials and equipment, promoted the building of emergency rescue teams, and organized regular emergency training and drills for employees. Following the principles of "Four Nos" (i.e., the investigation and handling of an accident or incident will not be closed without identifying the causes, punishing the responsible persons, implementing the corrective actions, and providing education to the involved persons) and in strict accordance with the investigation and handling procedures for work safety accidents and incidents, we hold accountable any individuals who fail to perform their duties during any accident or incident.

Creation of a Safety Culture

Recognizing the importance of safety education and training, we organize "Safety Day" and "EHS Snapshots" activities and promote the building of basic-level independent work safety teams to enhance the employees' safety awareness and competence and foster a safety culture.

In 2021, we included the building of independent work safety teams into our reward mechanism, guided basic-level business units to strengthen the safety management of work safety teams, and encouraged member companies to build distinctive work safety teams, thus fostering a safety culture where all employees take initiative to improve their safety awareness. We issued annual outstanding EHS awards, including the Work Safety Management Award and the Outstanding Independent Work Safety Team Building Award, to commend entities that had made remarkable achievements in safety management improvement and innovation as well as basic level work safety teams with outstanding safety performance. The I&C team of China Resources Power (Xuzhou) Co., Ltd., which developed three Apps for safety technology management and received eight national patents, won the Outstanding Independent Work Safety Team Building Award of CR Power.

Total EHS training hours

1,290,069 hours

Training hours for internal employees

476,175 hours

Training hours for personnel of stakeholders

813,894 hours

Case Study

Organizing an EHS Knowledge Contest to Develop a Safety Culture

To examine the application of EHS knowledge by employees at their actual work and foster a safety culture in an all-round way and through multiple channels, China Resources Power (Fuyang) Co., Ltd. organized an EHS knowledge contest during the Work Safety Month. The contest covered safety laws and regulations, power industry standards, EHS management standards of CR Power, previous accidents in the power industry, identification of hazards at production sites, among others. The contest enhanced the employees' understanding of EHS knowledge, helped them apply theoretical knowledge at work, and greatly improved employees' work safety competence.

China Resources Power (Fuyang) Co., Ltd. Organizes an EHS Knowledge Contest

Win-Win Cooperation

Through well-established procedures and processes, CR Power standardizes the management of suppliers and enhances strategic cooperation with them to promote performance of social responsibilities across the value chain. CR Power maintains communications with peers, seeks cooperation with partners from all sectors, values industry-university-research (IUR) collaboration, and participates in the development of standards to promote technological innovation and industry development.

Supply Chain Management

We are always committed to minimizing environmental, social, and governance risks across the supply chain. To this end, we have set up a Procurement Committee, which makes decisions on major procurement issues. The Procurement Management Department under the Procurement Committee is responsible for implementing procurement decisions and managing suppliers. In 2021, we revised the *Supplier Management Measures* to expand the scope of supplier management and evaluation and exercise unified management of suppliers from their selection to withdrawal in terms of procurement method, inquiry, and procurement process. We also completed the upgrading of our procurement information management system. By introducing the sharing function of suppliers, we remove the barriers between headquarters and regions in supplier information, thereby increasing procurement efficiency.

Procurement integrity

We abide by the industry's code of conduct and business ethics and take actions to ensure procurement integrity and compliance. We explicitly require all employees to strictly abide by the *Code of Integrity* to regulate their behaviours in procurement, compete in a fair manner, meet the avoidance requirements, and keep confidential procurement information. We also require the execution of a *Sunshine Declaration* by all suppliers, which clearly stipulates the responsibilities of both parties for integrity and their liabilities for integrity violations. The purpose is to establish and implement higher business ethics standards.

Management review

While fully protecting the interests of all suppliers, we require them to meet our expectations on environmental protection, employee health and safety, and labour standards. We have clear standards for the selection, admission, and performance assessment of suppliers. We manage the suppliers on our short list in a dynamic manner and have in place the *Management Procures for Suppliers with Misconduct*. Through unannounced inspection, third-party testing, remote video calls, we control the quality of suppliers and regularly organize member companies to evaluate suppliers in terms of contract performance, service quality, service responsiveness, and safety management. Based on the evaluation results, suppliers with misconduct will be subject to sanctions such as restrictions on procurement contracts and removal from the short list.

Education & Training

We provide regular training for suppliers to communicate our concept of social responsibilities in environmental protection, safety, health, and anti-corruption to them. We maintain close communication with suppliers through on-site EHS education and trainings, day-to-day technical exchange, integrity publicity, and other activities, thus improving the capabilities of partners across the supply chain to fulfill their obligations in good faith and voluntarily perform social responsibilities.

In 2021

Total number of suppliers

16,402

Certification ratio for quality management, environmental management, and occupational health and safety management systems

100%

Responsible procurement ratio

100%

Equipment localization ratio

100%

Number of suppliers by region:

Jiangsu	2,348
Henan	2,248
Guangdong	1,705
Hubei	941
Hebei	1,442
Shandong	1,198
Inner Mongolia	678
Liaoning	975
Guangxi	273
Zhejiang	485
Guizhou	188
Shanxi	497
Hunan	705
Anhui	536
Ningxia	204
Gansu	192
Heilongjiang	169
Shaanxi	431
Yunnan	150
Sichuan	358
Jiangxi	169
Fujian	221
Beijing	18
Qinghai	77
Tibet	17
Jilin	108
Shanghai	49
Xinjiang	8
Hainan	11
Tianjin	1

Cooperation and Communication

Focusing on frontier fields such as renewable energy development, energy storage research, smart energy, and CCUS, we actively cooperate with technologically advanced companies, universities, research institutions to complement each other and achieve common growth.

We keep pace with the trend of the industry and actively participate in the formulation of industry standards. In 2021, the *Technical Guidelines for Sludge Coupling Power Generation in Coal-Fired Power Plants*, a standard prepared under the leadership of CR Power, was approved by Guangdong Energy Research Society as a recommended standard. It is the first Chinese standard for sludge coupling power generation in coal-fired power plants, sets the threshold for sludge coupling power generation, and plays a good role in guiding other sludge coupling power generation projects in China. We have also completed the draft of the *Technical Guidelines for Smart Thermal Power Plants*, which has passed the review of the Power Generation Committee of Chinese Association of Automation, and have filed an application for proposing it as a national standard.

We attended many domestic energy sector conferences, including but not limited to the First National Carbon Neutrality and Green Development Conference hosted by Chinese Society for Environmental Sciences, China (Shenzhen) Urban Energy Conference 2021. At these conferences, we understood the trend of the industry, discussed major technology breakthroughs and their applications with other participants, and learned from others, thus improving our insights and sensitivity.

In terms of IUR collaboration, we have implemented three technology cooperation projects with well-known universities, research institutes, and technological innovation-based companies in China, including Amine Solvent-Based CCUS Technology R&D Project (with China University of Mining and Technology), CO_2 Utilization: Carbon Fixation by Microalgae Technology R&D Project (with Zhejiang University), and Carbon Peak and Neutrality Policy and Implementation Path Research Project (with Zhejiang University). We have signed a strategic cooperation agreement with the Institute of Engineering Thermophysics (IET), Chinese Academy of Sciences (CAS) to cooperate with each other in distributed energy system, solar heat utilization, and other fields.

Case Study

Promoting Smart Energy as an Active CSEIA Member

China Smart Energy Industry Alliance (CSEIA) was jointly initiated and established in 2019 by State Power Investment Corporation Limited (SPIC), China Electricity Council, and other domestic leading energy companies and research institutes; CSEIA focuses on the formulation of national standards and codes for the smart energy industry, R&D of core smart energy technologies, and industrialization of research results.

CR Power is one of CSEIA's initiators and serves as its Vice President. We are an active participant in Global Smart Energy Summit and have made contributions to the *Collection of Excellent Integrated Smart Energy Projects*. CR Power Fuyao Smart Energy Project and CR Power Hezhou Incremental Distribution Network and Smart Energy Project were selected as outstanding industrial park cases, and Energy Storage AGC Project of China Resources Power (Liyujiang) Co., Ltd. was selected as an outstanding platform service case. In addition, we participated in the Energy Sector and Information Technology Application Innovation Seminar and the preparation of the *White Paper on Information Technology Application Innovation + Energy Sector*.

By virtue of the platform resources of CSEIA, CR Power has promoted dialogues and cooperation within the industry, broadened horizons in smart energy technology innovation and development, and increased innovation capabilities in smart energy.

Stimulating Employee Growth with Concerted Efforts

Challenges

At a central conference on talent-related work in September 2021, President Xi Jinping proposed a strategy on developing a quality workforce in the new era, raising the importance of talents to a new level. Employees are a driving force of innovation for CR Power. How to select, hire, train, and retain talents is not only a basic guarantee for CR Power's sustainable development, but also its important task in responding to new challenges and necessary responsibility as a central SOE in promoting employment.

Our Actions

- Protecting the rights and interests of employees, following fair employment practices, establishing a reasonable compensation and benefit system, and ensuring the smoothness of communication with employees, and maintaining employee privacy;
- Improving employee competence through well-established training and job rotation systems and providing employees with extensive opportunities and clear promotion paths to share development achievements with them;
- Strengthening occupational health and safety management through regular physical examinations and various health and safety management measures to create a safe and secure workplace for employees;
- Organizing a variety of activities for employees to maintain a balance between their life and work; setting up a support fund to provide financial assistance to financially distressed employees and their families.

Key Performance

Total number of employees

21,252

Average training hours per employee

65.3

Total EHS training hours

1,290,069

SDGs

3
GOOD HEALTH AND WELL-BEING

5
GENDER EQUALITY

8
DECENT WORK AND ECONOMIC GROWTH

Rights and Interests of Employees

CR Power respects human rights and protects the rights and interests of every employee. We support the *Universal Declaration of Human Rights* (UDHR) and the *International Bill of Human Rights* and strictly abide by applicable laws and regulations, including but not limited to the *Labor Law of the People's Republic of China* and *Labor Contract Law of the People's Republic of China*. We are opposed to forced labor and child labor, maintain a fair and reasonable performance-oriented compensation and benefit system, provide democratic communication channels, and prioritize the protection of employees' privacy. All these efforts ensure full protection for the rights and interests of our employees. In 2021, CR Power was free of major labor disputes and child labor.

Rate of employment contracts signed

100%

Incidence of human rights complaints

0

Promoting Fair Employment

We provide diverse employment opportunities to the public and through various channels, hire a wide range of people who are needed for our development strategies and aligned with our corporate culture.

Recruiting a diverse array of talents

Committed to promoting fair employment, we implement an employment policy that does not discriminate against sex, nationality, religion, or age and undertake to eliminate all forms of employment discrimination. According to the *Management Measures for Recruitment*, we have specified the recruitment principles of fairness and impartiality and required the compliance of procedures, standardization of processes, and consistency of selection criteria during the recruitment. We comply with the human rights requirements of the International Labor Organization (ILO) and the United Nations Global Compact, and eliminate the employment of child labor and forced labor. If any of the above improper activities is found, we will immediately stop the activity and handle it in accordance with laws and regulations and relevant requirements.

We adopt a management approach which ensures alignment of responsibilities with positions. Based on the Company's business and human resources plans, staffing level, and business needs, we have established a flexible recruitment mechanism to make sure that the number, quality, and structure of the employees meet the Company's strategy and business requirements. With the business transformation of the Company, we have focused on discipline diversity during the recruitment. In addition to electrical and engineering professionals, we have started to attract professionals with background in carbon capture, agriculture and breeding, meteorology, technical economy, investment and development, which has, while ensuring the diversity of employees' professional background, met the needs of the Company in transitioning to clean energy in the context of the "dual carbon" goals

We hire talents through a variety of channels, such as on-campus recruitment, experienced hire, and talent introduction.

On-campus recruitment

We provide many employment opportunities to college graduates through online and offline channels. In 2021, we organized online career days and livestream on-campus recruitment events, attracting over 50,000 audiences and over 2,000 audiences, respectively. We also organized nearly 30 offline career days in colleges and universities across the country. Through these efforts, we recruited 235 college graduates.

Experienced hire

We also recruit experienced talents through the official website and WeChat official account of CR Power, job-hunting websites, head-hunting companies, social media platforms, and other channels.

New employees recruited in 2021

933

Proportion of vacancies filled by internal candidates

65.28%

In addition, through CR Group's "Spring Bamboo Program" and "Career Starter Program" for Hong Kong youth, we provide job positions in finance, safety, environmental protection, human resources, and others fields. For Hong Kong youth, we offer a compensation package composed of basic salary, benefits, commercial health insurance, mandatory provident fund contribution, and performance bonus. These efforts are intended to provide more employment opportunities for Hong Kong youth, boosting the development of the Greater Bay Area.

Employees of Dengkou Jinniu Power Plant in Northern China Region

Providing employment opportunities for the disadvantaged groups

As part of our social responsibility mission to promote employment and improve the people's livelihood, we offer numerous employment opportunities for veterans, migrant workers, and other disadvantaged groups to support the State Council's efforts to stabilize and expand employment. We also provide auxiliary job opportunities, such as labor dispatching, service outsourcing, labor outsourcing, for the disadvantaged groups to maximize their employment opportunities.

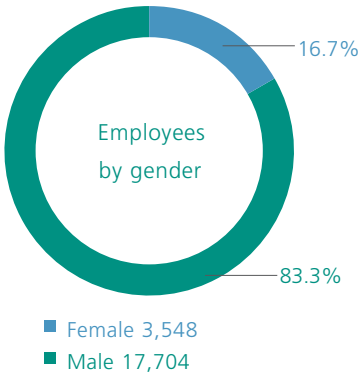
Veterans

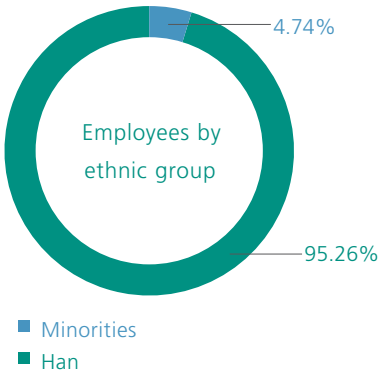
Every year, CR Power provides jobs for veterans to better support China's strategy to build a strong military through reform. In 2021, CR Power offered employment opportunities for 15 veterans and caused subsidiaries/regional companies to participate in the local interviews for veteran resettlement and receive veterans according to the local veteran resettlement requirements. CR Power has completed the employment of eight veterans.

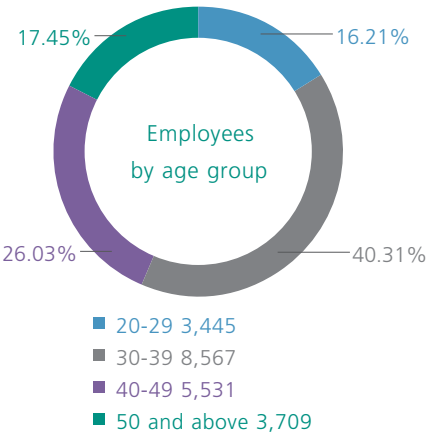
Migrant workers

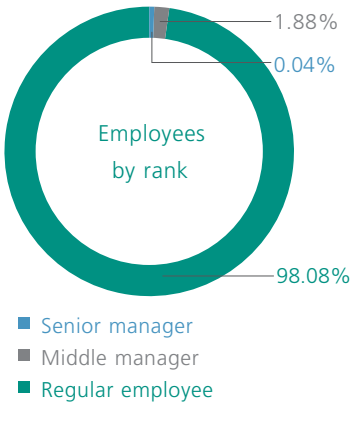
Due to their particular characteristics, electric power projects are mostly located in mountainous and other poverty-stricken areas. As part of its social responsibility mission to stabilize employment and benefit the people's livelihood, CR Power has provided many auxiliary jobs for local impoverished migrant workers in its wind farms and wind power projects, thus helping solve employment difficulties faced by migrant workers amid the pandemic. As at the end of 2021, CR Power had provided job opportunities for nearly 10,000 migrant workers.

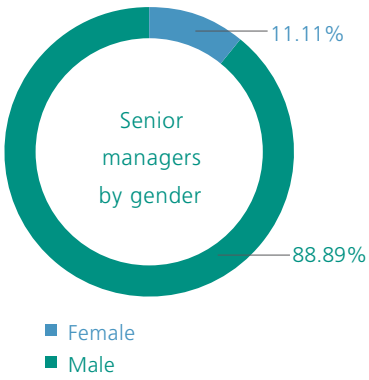
Total number of employees[1]	**21,252**
Turnover rate[2]	**2.67%**

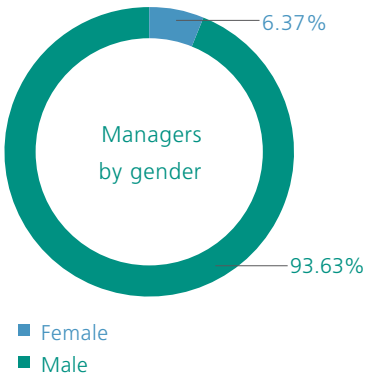


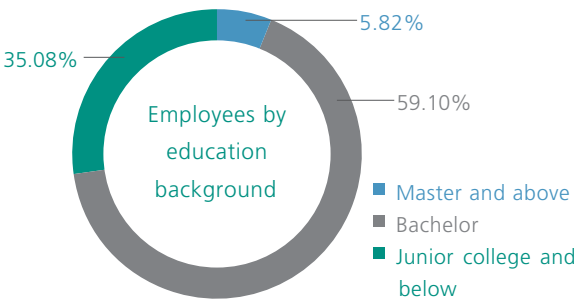


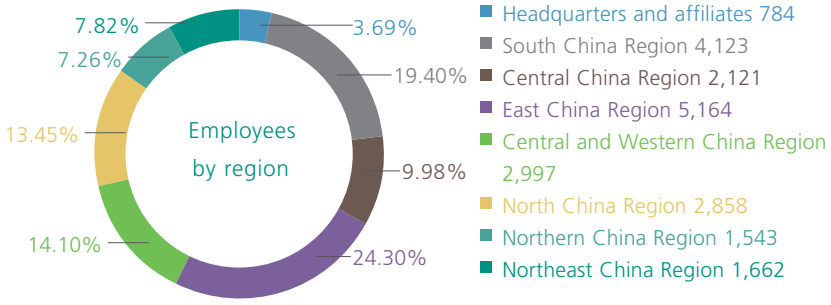






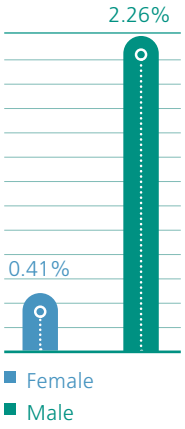




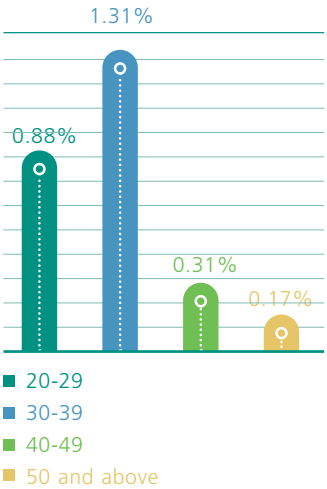


Note: 1. In 2021, all employees were employed on a full-time basis and none on a part-time basis.
2. Overall turnover rate = total number of leaving employees during the reporting period/total number of employees at the end of the reporting period; turnover rate of employees in a category = number of leaving employees in the category during the reporting period/number of employees in the category at the end of the reporting period.

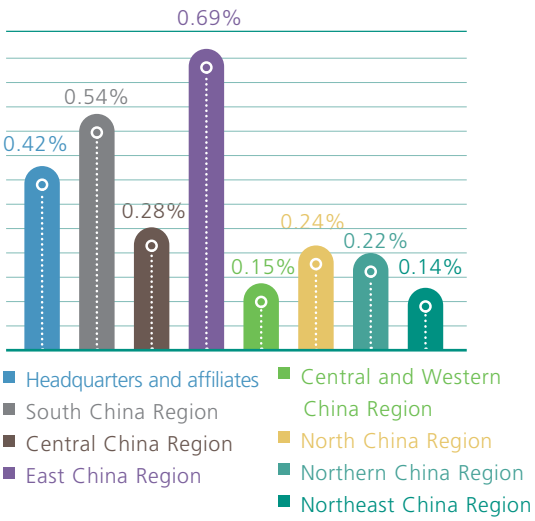
Turnover rate by gender



Turnover rate by age group



Turnover rate by region



Improving Compensation and Benefits

While ensuring internal fairness and external competitiveness, CR Power's compensation is based on position, performance, and competence. CR Power has formulated the *Program for Compensation and Benefits and the Medium and Long-term Strategic Incentive Plan* and other policies to maintain an efficient, reasonable, and competitive compensation and benefit system that is based on value contribution.

- **Compensation management**: CR Power associates the compensation of its employees with their competence and in principle gives higher compensation to employees with better knowledge, skills, behavioral attitude, and performance; CR Power offers a compensation package commensurate with its position in the market and, against the level of compensation prevailing the market, increase the personal compensation of well-performing employees by giving performance bonus.

- **Performance evaluation**: Based on the implementation of its strategies and business plan, CR Power adopts a performance-oriented approach that covers all of its employees; CR Power has in place an appeal process to timely and effectively respond to employees' complaints about their performance evaluation results, ensuring the fairness of performance evaluation. In 2021, CR Power implemented tenure limits for managers and managing them by contract. According to the policy, in addition to the annual evaluation, managers will be subject to a three-year term evaluation, which will enhance the link between performance evaluation results and compensation. CR Power will also link the compensation of managers with their sustainability performance evaluation results such as the quantity of installed capacity of renewable units energy projects to promote sustainability.

- **Incentive plan**: According to CR Group's overall arrangement, CR Power has developed the *Medium and Long-Term Incentive Plan*, which links the income of employees in key positions with the achievement of its business performance and strategic targets to motivate and retain such employees; CR Power also bases the short-term incentives of all employees on the Company's overall performance and their individual performance and stimulates employees through a combination of cash and non-cash, short-term and long-term, and material and non-material incentives.

- **Benefit guarantee**: In compliance with the *Social Insurance Law of the People's Republic of China, Regulation on Paid Annual Leave for Employees, Regulation on Work-Related Injury Insurance*, and *Law of the People's Republic of China on the Protection of Rights and Interests of Women*, CR Power has made contributions to pension, medical, unemployment, work-related injury, maternity insurance and housing provident fund for the benefit of its employees, provided with them additional commercial insurance and supplementary pension insurance coverage (i.e., corporate annuity), and maintained social and commercial insurance for dispatched workers; CR Power has released the *Headquarters Management Measures for Vacation Leaves* to ensure the employees' rights to vacation leaves.

"Youth Shock Brigade" of Nanre Project

Social insurance coverage rate

100%

Average number of paid leaves per employee

8 days

The Trade Union of CR Power Headquarters Holds the First Plenary Session of its First Member Representative Meeting

Strengthening Democratic Management

We implement a democratic management approach. We encourage open communication by allowing for various communication channels, such as home visits, seminars, leadership mailboxes, and annual performance interviews to receive input or suggestions from employees and respond to their demands. In 2021, the CR Power Headquarters established its trade union according to the *Trade Union Law of the People's Republic of China and the Constitution of the Chinese Trade Unions* to improve its democratic management system.

In 2021, we started to build a talent evaluation system based on comprehensive evaluation to further understand employees' satisfaction and demands. Aiming to reshape culture, identify and use talents, and improve team building, we organized the most extensive and thorough annual comprehensive evaluation of the managers and employees based on the complete sets of information. This evaluation involved nearly 5,000 persons and 90,000 evaluation relations, provided event presented all-round and multidimensional cross-validations, and ensured the fairness, impartiality, and objectivity of the evaluation results.

Protecting Privacy

We protect the privacy of employees by assigning dedicated personnel to manage employee's personal data (including resumes and family members, salary, and health status information) and strictly maintaining the confidentiality of such data during the recruitment, performance evaluation, and compensation management of the employees. We engage a third party to conduct an annual comprehensive evaluation and allow various evaluation results to be presented only by group to strictly keep confidential answers given by individuals.

Employee Development

CR Power adopts a talent development approach which respects the value of individuals, develops their potentials, and improves their minds. Through an all-round training system, CR Power provides targeted trainings for employees in different positions to help them improve their business skills. CR Power also offers clear career development paths, professional career guidance, and extensive job rotation opportunities to the employees, contributing to their career development.

Employee Training

We offer a well-established training system and extensive occupational skill improvement opportunities for employees. To promote employees' learning, development, and improvement, we have developed policies such as the *Management Measures for Participation of Employees in External Training, Management Measures for Internal Trainers*, and *Guidelines for Three-Year Training of Graduates*. We encourage employees to obtain work-related qualifications by providing monetary support based on their learning progress and whether they have eventually obtained the qualifications.

We have set up a Learning and Development Center, which has over 280 internal trainers available to provide systematic and diversified learning courses for employees, including over 300 offline courses and over 1,100 online courses. Every year, the Learning and Development Center works with the human resources department of each region to prepare an annual training plan and provides targeted trainings based on the requirements of positions and employees and the Company's development requirements. In addition, as a top priority, we provide special training for operational, management, technology, and skilled personnel to improve the Company's operational and management efficiency, independent R&D capability, and technology strength.

To support the Company's development strategy during the 14th Fiver-Year Period and transition to renewable energy, we have provided corresponding trainings for employees transferred from thermal power plants to renewable energy power plants to minimize the negative impact of such transition on such employees. We have taken actions to empower the employees of thermal power plants and help them better meet the development trends of CR Power and the market.

	Training Program	Audience	Content	Training Method	Number of Participants in 2021
New hire orientation training	Future Star Training Camp	Fresh graduates	CR Power's corporate culture, wind power knowledge, occupational skills, safety education, practices in power stations, micro-lecture contest themed on carbon peak and carbon neutrality, etc.	A combination of offline and online training	248
Professional skill training	Wind Power Talent Training	Employees participating in wind power plant development	Wind resources and site selection, design standardization of wind power projects, sharing of learned lessons on soil and water conservation; ensuring the continuity of a series of courses to prepare for the massive construction of wind power projects	12-hour online learning	88
	Trainings for Operation Personnel Related to Renewable Energy Operation, Central and Western China Region	Operational personnel related to renewable energy	Technical skill contest, on-site learning, sharing of equipment management practices, etc. during the development the Renewable Energy Training Center	15-day centralized training	58
	PV Project Construction Training, Central China Region	PV project construction personnel	Theory of PV power generation, functions and features of main equipment, PV project construction processes and procedures, etc.	A combination of offline and online training for 2 days	75
Leadership training	CR Leadership Program, North China Region	Managers of different regions	Helping managers establish talent management mindset, product thinking, and innovation awareness	Continuing for 9 months and ended with oral defenses	33

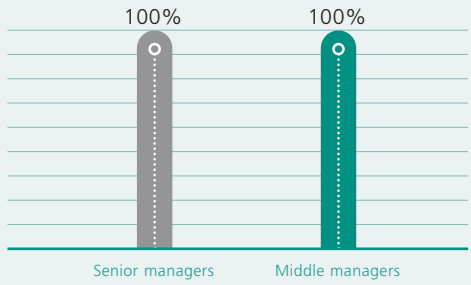
PV Project Construction Training for Professionals from Central China Region

Career Development

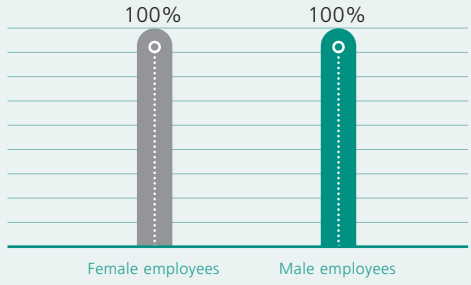
We have clearly set a dual career ladder, i.e., employees may choose to develop their career along the professional line or the managerial line according to their development needs. In 2021, we prepared and issued the *Organizational Chart 2021 (Tentative) of CR Power*, further specifying the structure and ranking of positions of the headquarters, regions, and areas, removing barriers for job rotation and mobility, and systematically improving the position and rank system.

- **Offering professional career guidance to boost value realization:** We provide guidance and consultation to address employees' confusion in career development, help them identify their career development directions, and give them career development advices. In March 2021, CR Power headquarters organized a one-to-one talk with each employee to introduce policies, understand their intentions to serve temporary positions, and discuss their career planning.
- **Providing extensive job rotation opportunities for better career development:** We launched job rotation programs, such as the personnel exchange program and management trainee development program. When employees serve temporary positions, their original title, compensation and benefits (including but not limited to commercial insurance, physical examination, holidays, and leaves), and employment relationship will remain unchanged. Also, such employees will be provided with accommodation by the unit in which the employees serve a temporary position and living allowances by the Headquarters. Employees with excellent performance may be transferred or promoted as long as such transfer or promotion conforms to the applicable requirements and a mutual agreement is reached.

Training Coverage Ratio For Managers

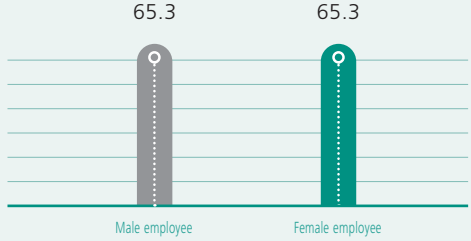


Training Coverage ratio For Employees



Average Training Hours Per Person By Rank And Category Of Employee

Average Training Hours Per Person By Gender



Total training expenditure

RMB **10.301** mn

Training coverage ratio for employees

100 %

Leadership training coverage ratio

100 %

Professional skill training coverage ratio

100 %

Total employee training hours

1,420,000

Offline training courses > 300

Online training courses > 1,100

Number of internal trainers > 280

Occupational Health and Safety

In compliance with the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases* and other applicable laws and regulations, CR Power has developed the *Occupational Health Management Standards*, which establishes a three-stage occupational health management process, including early prevention, in-process control, and evaluation & summary, and specifies the duties of each functional department and position in day-to-day occupational health management to ensure the occupational health and safety of employees.

Employee Health Goals

To achieve its employee health goals, CR Power has taken actions like improving the working environment, performing regular physical examinations, conducting occupational disease prevention and treatment publicity, providing occupational health training, and carrying out occupational health self-inspection to enhance employees' health awareness and maintain a healthy workplace.

New occupational disease case
0

COVID-19 case
0

Employee Health Protection

- **Improving the working environment:** CR Power has taken a wide spectrum of actions to improve the working environment, including establishing a sound personal protective equipment (PPE) distribution mechanism to ensure periodical distribution of sufficient PPE and maintain records of them, setting up medical rooms, health corners, employee health stations, etc. to ensure health services are readily accessible to employees, and purchasing air purifiers for employees, and providing them with simple fitness facilities, basketball courts, badminton courts in the recreational areas.
- **Conducting regular physical examination:** CR Power has arranged annual physical examinations for employees, including providing additional examination items or increasing examinations for different types of employees in different jobs. Based on the physical examination results, CR Power maintains health records for employees and identifies occupational health risks for every position to manage the health of employees.

Physical examination coverage ratio
100%

- **Offering employee health and safety training:** CR Power has worked with 3M Company to provide Security and Protection E-Learning trainings and examinations for 5,535 persons from CR Power and its stakeholders. In addition, CR Power has organized its employees to study the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, invited external experts to provide occupational health trainings for employees, and arranged employees to participate in external occupational health trainings, thus raising employees' awareness in preventing occupational diseases.

- **Providing warning education:** CR Power has organized occupational disease prevention and control publicity week activities to disseminate knowledge about occupational health protection, give lectures on how to use PPE for work teams, and provide free occupational health examinations; CR Power has offered warning education through occupational disease cases and organized employees to watch films and videos on occupational disease prevention and control, such as *At the Edge of Life*, to improve employees' awareness in occupational health protection.

Health and safety training coverage ratio

100%

CR Power and 3M Company Co-Organize an Occupational Health Roadshow

- **Performing occupational health self-inspection:** CR Power has mainly inspected the application of operating rules and procedures, maintenance of occupational health records for employees, use of protective facilities, use of PPE, and others; CR Power has taken actions to correct any issues identified; if immediate correction is not possible, CR Power has developed rectification plans that state clearly the responsible person and deadline for rectification. These efforts are intended to effectively eliminate any and all occupational health hazards at workplace. In 2021, CR Power identified 405 problems and hazards through such self-inspection and achieved a rectification rate of 100%.

Occupational Disease Prevention and Health Lecture at China Resources Power (Zhumadian) Co., Ltd.

Employee Care

CR Power always puts people first and is committed to creating an honest, united, open, and enterprising environment at workplace. CR Power cares for employees' lives and help them cope with work stress to make them feel the warmth and care of the Company and have a stronger sense of happiness and gain.

- **Offering a diverse spectrum of entertainment activities:** We have set badminton, football, photography, and other clubs for employees and organized hiking, sports game, flower arranging, and other activities to bring happiness to employees.

- **Helping employees and their families:** We have set up the CR Power Love Support Fund to provide financial assistance and care to on-the-job regular employees of CR Power and their immediate family members who have suffered accidental injuries or serious diseases to relieve their financial burden. In 2021, we spent RMB906,000 in providing financial assistance to employees, including 269 financially distressed employees, 98 financially disadvantaged employee families, eight employees' children, and 135 employees with diseases.

China Resources Power Shandong New Energy Co., Ltd. Organizes a Hiking Activity

- **Caring for female employees:** We have made it clear that no pregnant or breastfeeding employees should be arranged to do any operation that is harmful to themselves and their fetuses or babies; we have set up female employee care rooms and organized lectures on legal knowledge about marriage and family; we have also provided female employees with extra days off each month, and give holiday gifts such as skin care products and health products to female employees on International Women's Day; we have expanded the physical examinations of female employees to include gynecological and breast examinations and organized from time to time lectures on premarital, pre-pregnancy, and pregnancy care knowledge.

Flower Arranging Activity at CR Power Headquarters

Northeast China Region New Energy Company Hosts a Football Game for Employees

Northeast China Region Jinzhou Company Organizes Reading and Communication Activities for Female Employees

Building a Better Community through Joint Efforts

Challenges

In 2021, China accomplished its poverty alleviation target of the new era as scheduled, implying a shift in the country's focus on agriculture, rural areas, and farmers from poverty alleviation to all-round rural revitalization. For a long time to come, companies will primarily fulfill their social responsibilities by helping revitalize rural areas, while it is necessary for them to build a sustainable public welfare participation model according to their own strengths during their contribution to the public welfare.

Our Actions

- Implementing strategies for development of renewable energy and local industries to consolidate and expand the achievements of poverty alleviation and promote rural revitalization
- Organizing public welfare activities such as donations to needy students and ecological forest protection to contribute to a harmonious and stable community

Key Performance

Rural revitalization investment

RMB **6.646** mn

Total charitable donations

about RMB **15.43** mn

Participants in volunteer services

1,260

SDGs

Supporting Rural Revitalization

In 2021, in response to the national policy on consolidating, adjusting, expanding, and improving the results of poverty alleviation, CR Power carried out many forms of rural revitalization activities through building power stations, establishing joint ventures, supporting local industries to benefit the local people and promote the sustainable development of less developed areas.

Rural revitalization investment

RMB **6.646** mn

Number of people benefited

3,750

- **Developing clean energy**

Building upon our energy technologies and business, we have reasonably developed wind, solar, and other clean energy resources across the country by building power stations. We have been improving the operation and management of local power stations to train local residents and improve their lives, while securing sustainable and stable income for them.

On the basis of power station building, we have promoted innovative cooperation in energy development, environmental protection, urban services, and other fields, increased investment in renewable energy, integrated energy, solid waste disposal, and other fields, and explored multiple new models such as solar-fishery and solar-agriculture hybrid models to achieve win-win results in both energy investment and green development.

- **Creating sales channels for agricultural products**

Considering the livelihood of the local people, CR Power have supported local industries by participating in the planting, promotion, and purchase of agricultural products to help bring sustainable and stable income for the local people.

In June 2021, in response to the Jiangsu Provincial Government's call for "enterprises cooperating with villages for rural revitalization", China Resources Power (Zhenjiang) Co., Ltd. in East China Region organized a purchase of locally grown fruits by its employees to address the difficulties of the local communities in selling their agricultural and sideline products. The employees purchased 2,483 kg of fruits in total, worth RMB67,996, during the activity.

Employees of China Resources Power (Zhenjiang) Co., Ltd. Purchased Locally Grown Fruits

- **Making stable investment**

CR Power has adopted a two-thronged approach to support the local development, i.e., establishing joint ventures with local governments and making charitable donations. In March 2021, China Resources New Energy (Tanghe) Co., Ltd. established a joint venture with Tanghe Poverty Alleviation and Development Investment Co., Ltd. with the dividends attributable to the latter to be distributed as a part of rural revitalization funds to improve the local people's lives and local economic development. By the end of 2021, RMB17,235,600 had been distributed, which could cover the daily expenses of about 5,667 local households. In the future, around RMB15 million could be distributed every year.

Case Study

China Resources Chibi Yangtze River Economic Belt Rural Revitalization Demonstration Zone

In March 2021, the China Resources Chibi Yangtze River Economic Belt Rural Revitalization Demonstration Zone was officially launched, which is a new focus of Chibi City's 14th Five-Year Plan and Vision 2035. The demonstration zone has a planned area of 62.02 square kilometers and a proposed investment of RMB50 billion.

To boost the development of the demonstration zone, CR Power has set up a leading group to coordinate the construction of the demonstration zone. Up to now, an environmental pollution survey and a conceptual plan for the entire demonstration zone have been completed. The plan covers ecological & environmental management and restoration, modern agriculture, PV energy storage integration, integrated energy, incremental distribution network, wellness care & medical care, cultural tourism, China Resources Industrial Park, and other projects. The first batch of projects kicked off on November 15, 2021.

With an aim to build a "beautiful rural demonstration base for integrated development of high-quality industries", CR Power will prioritize the ecological & environmental management and the improvement of rural living conditions for agricultural upgrading, rural landscaping, and growth in farmer's income. CR Power will strive to build a green development demonstration zone for rural revitalization that is characterized by a beautiful ecological environment, wonderful landscape resources, well-established production and living facilities, and integrated development of industries.

Ceremony for the Commencement of Preparation of a Plan for the Demonstration Zone and the Kick-off of Project

Commencement Ceremony of the First Batch of Projects

Pilot Agricultural Demonstration Base in the Demonstration Zone

Map of the Existing National Land in the Demonstration Zone

Participating in Public Welfare Activities

In 2021, CR Power updated the *Management Rules for Charity and Public Welfare Activities* in line with its culture of "Making Money in the Right Way and Spending Money for Society"; CR Power helped address various social issues by participating in activities such as eco-environment protection, donation to needy students, and community public welfare to bring warmth to the local community.

Volunteer activities
59 times

Participants in volunteer services
1,260

Total charitable donations
15.43 RMB mn

Contributing to eco-environment protection

To implement the national green development philosophy that "lucid waters and lush mountains are invaluable assets", CR Power has started non-commercial forest programs in Yishui (Shandong), Haiyuan (Ningxia), and other places to prevent soil erosion and improve the ecological environment.

It is our commitment that, upon the completion of each China Resources wind farm, CR Power will donate RMB2 million to support Haiyuan County in developing the China Resources Non-Commercial Forest Program (mainly composed of economic forests). As at the end of 2021, we had donated a total of RMB20 million to Haiyuan County for the development of the program, contributing to the improvement of the local eco-environment.

China Resources Non-Commercial Forest

Helping needy students

As part of its social responsibility, CR Power is committed to helping students in need. We have helped address the life and education problems of needy students by providing student aids and donating learning and living supplies to them.

CR Power has, for three consecutive years, participated in the "one-on-one" assistance program for 300 impoverished college students in Haiyuan County organized by CR Group. During the three years, CR Power has donated RMB176,000 to 44 students. In 2021, 29 managers from CR Power participated in the program, donating RMB46,000 in total. They also donated and mailed "care packages against the pandemic" (containing anti-pandemic supplies, books, handwritten postcards, etc.) to the impoverished college students for their healthy growth.

Spreading knowledge about electric power

CR Power has set up a research and learning base to spread knowledge about safe use of electricity and electric power science to the public through activities like courses themed on power industry knowledge and safety knowledge, open-day events, and popular science exhibitions. The base has also made contribution to the nation's efforts in development of talents.

Based on its professional strengths and the characteristics of the region, the Central and Western China Region has developed 12 courses, such as the *Theory of Power Generation: Special Mission of Coal and Water* and the *Perception of Power Generation Equipment*, for teachers, students, and citizens with different education background from primary schools to colleges. In 2021, Henan China Resources Power Shouyangshan Co., Ltd. received 555 visitors for research and study and was selected as one of the first social practice bases for primary and secondary schools in Luoyang City.

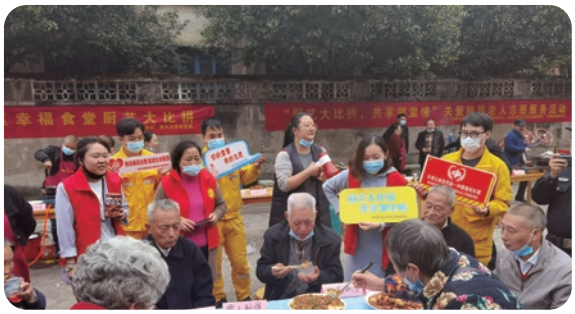
Electric Power Classroom

Giving back to the community

As a solid step to help improve the people's wellbeing and give back to the community, CR Power's regions and project companies have set up volunteer teams to organize public welfare activities, such as fighting the COVID-19 pandemic, helping the needy, the elderly, and the young, and improving urban environment, to boost the harmonious and healthy development of the community.

In 2021, Runxing Love Service Team from China Resources Power (Tangshan) Co., Ltd. in the North China Region organized activities like caring for the disabled and visiting the elderly in welfare houses to bring love to the disadvantaged groups. The Volunteer Service Team from the Central China Region hosted activities in Guihuashu Community, Xianning, including but not limited to anti-fraud publicity, lectures on safe use of electricity for left-behind children in summer, DIY handcrafting activities for the elderly, cooking competition for the elderly, visit to left-behind elderly, and community environment management, with an aim to effectively improve the life quality of the community.

Volunteers from China Resources Power (Tangshan) Co., Ltd. Visited an Old People's Home



Volunteers from the Central China Region Organized a Cooking Contest for the Elderly

A Glance at the Future

The year 2022 is a critical juncture for the implementation of the 14th Five-Year Plan. During the year, CR Power will seek to make great leaps and breakthroughs by reinventing itself in four areas: values, business, organization, and ethos. With a new beginning, we will seize strategic opportunities for renewable energy development during the 14th Five-Year Plan period, improve quality and efficiency while expanding business, constantly promote high-quality growth, and work with all stakeholders towards a more sustainable future.

According to the new development philosophy of innovation, coordination, green growth, openness and sharing and in response to China's "dual carbon" goals, we will expand core business and improve development strategies to create an ecosystem for high-quality development. We will increase investment in clean energy and boost the installed capacity of high-quality clean energy projects in order to increase the installed capacity of renewable energy projects by 40 GW over the next five years or less, We will invest more in R&D of technologies, with a focus on the development of hydrogen energy, energy storage, carbon reduction, CCUS, and other technologies, for a transition from a scale growth model to a technological innovation-driven growth model. With the help of innovative technologies, we will further research on integrated energy services and expand efforts on distributed energy, virtual power plants, smart heat supply, integrated production and storage of hydrogen from wind and PV power, zero-carbon industrial parks, and other areas. We will make breakthroughs in transformative development and improve both quality and efficiency to strive towards becoming a globally competitive and leading provider of integrated energy services and clean energy services.

In 2022, we will complete growth tasks with high quality according to the development blueprint during the 14th Five-Year Plan period. Embarking on a new journey toward the future, we will, with the enterprising CR Power spirit and a determination to succeed and based on the low-carbon, clean development strategy and pioneering technological innovations, provide inexhaustible green energy for the sustainable development of the society.

Appendix

Major Social Responsibility Awards Received

Award	Conferred by	Recipient	Date
Ranked First in the Central SOE Pioneer 50 Index Rated a Five-Star Company	SASAC China Social Responsibility 100 Forum	China Resources Power Holdings Co., Ltd.	September 2021
Included as an excellent case in the Blue Paper	Research Group for the Blue Paper on ESG of Listed Central SOEs (2021)	China Resources Power Holdings Co., Ltd.	December 2021
Eco-friendly Award under the CSR Golden Bull Award	State-owned Assets Supervision and Administration Commission of the State Council China Social Responsibility 100 Forum	China Resources Power Holdings Co., Ltd.	December 2021
Ranked 7th in the Greater Bay Area Business Sustainability Index	CUHK Centre for Business Sustainability (CBS) CUHK Hong Kong SGS Hong Kong	China Resources Power Holdings Co., Ltd.	June 2021
Included to Hang Seng ESG 50 Index for two consecutive years Included to Hang Seng Corporate Sustainability Benchmark Index for two consecutive years	Hang Seng Indexes Company Limited	China Resources Power Holdings Co., Ltd.	August 2021
ESG Excellence Awards 2021	Chamber of Hong Kong Listed Companies Centre for Corporate Governance and Financial Policy of Hong Kong Baptist University	China Resources Power Holdings Co., Ltd.	December 2021
Corporate Green Governance Award – Corporate Leadership Environmental, Health and Safety Award – Platinum Green Management Award – Corporate – Gold	Hong Kong Green Council	China Resources Power Holdings Co., Ltd.	December 2021
Best Corporate Governance and ESG Awards – ESG Special Mention in 2021	Hong Kong Institute of Certified Public Accountants	China Resources Power Holdings Co., Ltd.	December 2021
Award for Outstanding Performance in Electric Work Safety 2020	Jiangsu Supervision Office of National Energy Administration	China Resources Power (Zhenjiang) Co., Ltd.	January 2021
Award for Water Conservation in Shandong	Shandong Housing and Urban-Rural Development Department Shandong Development and Reform Commission Shandong Industry and Information Technology Department	China Resources Power (Heze) Co., Ltd.	January 2021
Shenzhen Green Company Award	Shenzhen Ecology and Environment Bureau	China Resources Power (Shenzhen) Co., Ltd.	March 2021
Excellent Pollution Management Project 2020	Pollution Management Project Leading Group of Shenzhen	China Resources Power (Shenzhen) Co., Ltd.	March 2021
Included in Case Studies of National Excellent Creditworthy Companies in 2020	Commercial Credit Center Enterprise Management Magazine	China Resources Power (Shenzhen) Investment Co., Ltd.	March 2021
Award for Outstanding Performance in Electric Work Safety	Hunan Supervision Office of National Energy Administration	China Resources Power (Liyujiang) Co., Ltd.	March 2021
Comprehensive Heat Supply Optimization Project included in the Case Studies of Excellent Cogen and Smart Heat Supply Projects in 2021	Energy Branch of China Electronics Enterprises Association	China Resources Power (Xuzhou) Co., Ltd. China Resources Power (Tongshan) Co., Ltd.	April 2021
Award in the Guizhou's Third Creditworthy Company Model Awards	Development and Reform Commission of Guizhou Province	China Resources New Energy (Liping) Wind Power Co., Ltd.	April 2021
China Excellent Electric Power Project in 2021	China Electric Power Construction Association	China Resources Power (Changzhou) Co., Ltd.	May 2021
CR Power's Centralized Monitoring and Analysis Expert System for Reliability of Electric Equipment ranked top among Equipment Management and Technological Innovations in the Power Industry	China Association of Plant Engineering	China Resources Power Technical Research Institute Co., Ltd.	June 2021
Pioneer in China Urban Heat Supply Industry	China District Heating Association	Cangzhou Heating Co., Ltd.	June 2021

Award	Conferred by	Recipient	Date
BOCHK Corporate Environmental Leadership Awards – Manufacturing Sector – Bronze Award	Federation of Hong Kong Industries and Bank of China (Hong Kong) Limited	China Resources Power (Shenzhen) Co., Ltd.	August 2021
One of the First Outstanding Contributors to Pollution and Carbon Emissions Reduction of Guangdong Province	Guangdong Ecology and Environment Department	China Resources Power (Shenzhen) Co., Ltd.	August 2021
Primary Frequency Regulation Capability Forecast and Improvement Technology for Stabilizing Network Frequency – Second Prize Winner of Safety Technology Progress Award	China Association of Work Safety	CR Power Energy Science and Technology Co. Ltd.	August 2021
Third Prize Winner in China Electric Power Science and Technology Progress Award 2020	China Electric Power Science and Technology Award Office China Society for Electrical Engineering	Guangzhou China Resources Thermal Power Co., Ltd.	October 2021
#1 Unit recognized as Annual Benchmark Unit in the Power Industry	China Electric Equipment Management Association	China Resources Power (Panjin) Co., Ltd.	October 2021
AAAAA Rating, National Wind Farm Production and Operation Indicators – Shandong Province (2020)	China Electricity Council	CR Power Kenli Wind Farm	May 2021
#3 unit recognized as the Best Generator by Generation Coal Consumption in 300 MW-Class Subcritical Pure Condensing Liquid-Cooled Generators (2020) #2 and #3 units recognized as AAAAA-Grade Generator in 300 MW-Class Pure Condensing Liquid-Cooled Generators (2020)	China Electricity Council	China Resources Power (Xuzhou) Co., Ltd.	August 2021
#5 unit recognized as AAAAA-Grade Generator in 300 MW-Class Subcritical Heat Supply Liquid-Cooled Generators (2020)	China Electricity Council	Nanjing Chemical Industrial Park Thermal Power Co., Ltd.	September 2021
National Benchmark Generator by Reliability (2020)		China Resources Power (Wenzhou) Co., Ltd.	October 2021
AAAAA Rating, National Wind Farm Production and Operation Indicators (2020)		China Resources New Energy (Fuxin) Wind Power Co., Ltd.	October 2021
AAAA Rating, National Wind Farm Production and Operation Indicators of 2020		China Resources New Energy (Beipiao) Wind Power Co., Ltd.	October 2021
AAAA Rating, National Wind Farm Production and Operation Indicators of 2020		China Resources New Energy (Nong'an) Wind Power Co., Ltd.	October 2021
AAAA Rating, National Wind Farm Production and Operation Indicators – Shandong Province (2020)	Science and Technology Development Service Center of China Electricity Council	CR Power Zijing Wind Farm	January 2021
AAAA Rating, National Wind Farm Production and Operation Indicators – Shandong Province (2020)		CR Power Haiyang Wind Farm	January 2021
AAAA Rating, National Wind Farm Production and Operation Indicators – Hebei Province (2020)		CR Power Qiuxian Wind Farm	September 2021
Ranked among Top 10 Cases of Public Participation in Ecological and Environmental Protection	Hunan Ecology and Environment Department	China Resources Power (Hunan) Co., Ltd.	June 2021
Environmental Protection Credit Award of Hunan Province	Hunan Ecology and Environment Department	China Resources Power (Hunan) Co., Ltd. China Resources Power (Liyujiang) Co., Ltd.	August 2021
Green Management Award – Corporate – Silver	Hong Kong Green Council	Guangzhou China Resources Thermal Power Co., Ltd.	December 2021
Environmental, Health and Safety Award – Silver	Hong Kong Green Council	China Resources Power (Xuzhou) Co., Ltd. China Resources Power Bayin Xile Wind Power Co., Ltd.	December 2021

Key Performance Indicators[1]

Development performance

	Unit	2017	2018	2019	2020	2021
Total assets	HKD bn	220.972	208.223	215.736	259.632	287.355
Net generation volume of subsidiary power plants	GWh	159,395	157,019	149,186	154,944	177,300
Total heat supply	kTJ	73.83	92.04	102.48	112.00	115.24
Attributable operational generation capacity	MW	36,077	37,438	40,392	43,365	47,997

Economic performance

	Unit	2017	2018	2019	2020	2021
Turnover	HKD bn	73.31	76.94	67.76	69.55	89.80
Operating profit	HKD bn	12.48	11.35	12.89	14.09	5.48
Net profit[2]	HKD bn	4.62	3.95	6.59	7.58	1.59
Return on invested capital (ROIC)	%	5.3	6.0	6.9	6.8	1.6
Return on equity (ROE)	%	7.7	9.5	12.7	12.3	2.8
Asset-liability ratio	%	63.5	62.9	59.8	59.2	62.7
Interest-bearing debt ratio	%	55.7	55.6	52.1	50.5	55.7
Value appreciation of state-owned assets	%	109.0	103.6	109.1	112.7	101.0
Net operating cash flow	HKD bn	18.56	18.10	20.51	20.70	7.40
New patent licenses	Licenses	51	198	225	132	346

Environmental performance

	Unit	2017	2018	2019	2020	2021
Proportion of Attributable Operational Generation Capacity of Renewable Energy Projects	%	17.1	20.1	23.3	25.9	32.2
Total environmental investment	RMB bn	1.957	1.518	1.828	1.499	1.477
Investment in efficiency and emission upgrade	RMB bn	1.697	1.283	1.511	1.270	1.096
Energy consumption per RMB10,000 industrial added value	tce	10.79	11.04	8.90	8.57	13.13
Water consumption per RMB10,000 industrial added value	t	98.83	90.56	67.98	56.88	85.19

1 Datas marked with "*" have been assuranced by a third party. Please refer to pages 4-5 for the third party assurance report

2 Refers to net profit attributable to owners of the Company

3 Renewable energy include wind power, photovoltaic power and hydroelectric power.

	Unit	2017	2018	2019	2020	2021
Total greenhouse gas emissions[4]	Mt	137.29	133.30	134.02	140.71	153.08*
Total direct greenhouse gas emissions (scope 1)	kt	/	/	/	/	153,037
Total indirect greenhouse gas emissions (scope 2)	kt	/	/	/	/	43
Carbon emission intensity in power generation[5]	g/kWh	780	755	728	726	692*
Carbon emission intensity in thermal power generation[6]	g/kWh	844	834	834	834	837*
Comprehensive energy consumption	k tce	30,051.5	29,064.1	27,251.6	27,233.7	30,094.3
Net generation standard coal consumption rate (subsidiary coal-fired power plants)[7]	g/kWh	303.2	299.5	296.6	296.0	296.8*
Natural gas consumption[8]	Mm^3	198.21	193.64	259.88	285.72	281.27*
Diesel consumption	kt	14.9	11.0	11.2	12.9	15.1*
Coal consumption	kt	78,150.3	77,589.1	73,489.0	74,813.7	83,795.9*
Purchased electricity[9]	MWh	106,343.60	92,117.60	79,682.09	104,513.67	78,080.11*
Oil consumption for power generation	g/MWh	86.90	59.10	62.90	69.70	71.05
Power consumption rate of power plants	%	4.99	4.97	4.93	4.85	5.01
Power consumption rate of factories	%	5.67	5.82	5.88	5.85	5.98
Comprehensive water consumption for power generation	kt	275,161.6	238,433.9	208,088.7	180,671.2	195,185.1
Comprehensive water consumption rate for power generation	t/MWh	1.60	1.42	1.32	1.12	1.11
Wastewater discharge	kt	3,324.0	4,855.9	4,770.6	3,195.0	1,652.0
Wastewater discharge rate[10]	g/kWh	19.30	28.82	30.06	17.53	9.36
Chemical oxygen demand (COD)	t	153.79	138.03	118.53	55.02	50.86
Nitrogen oxide emissions	kt	28.6	22.6	19.6	19.7	22.0*
Nitrogen oxide emission rate[10]	g/kWh	0.17	0.13	0.12	0.12	0.13*
Sulfur dioxide emissions	kt	17.2	13.6	11.2	10.6	12.3*
Sulfur dioxide emission rate[10]	g/kWh	0.10	0.08	0.07	0.07	0.07*
Particulate emissions	kt	2.3	1.8	1.4	1.3	1.4*

4 Total greenhouse gas emissions include carbon emissions from burning fossil fuels and from purchased electricity. The calculation is based on the *Greenhouse Gas Emissions Accounting Methodology and Reporting Guidelines for Power Generation Enterprises in China (2014)* issued by the National Development and Reform Commission and the *Greenhouse Gas Emissions Accounting and Reporting Requirements Part I: Power Generation Enterprises* (GB/T 32151.1-2015, implemented since June 1, 2016) issued by the General Administration of Quality Supervision, Inspection and Quarantine and the Standards Administration. The emission factors used to calculate carbon dioxide emissions from fossil fuels are from the annual Carbon Emission Supplementary Data Accounting Report issued by the Ministry of Ecology and Environment, and the calculation of carbon dioxide emissions from purchased electricity refers to the Notice on the Priorities of the Management of Enterprise Greenhouse Gas Emission Reporting in 2022 issued by the Ministry of Ecology and Environment on March 15, 2022. The grid emission factor is adjusted from 0.6101 tCO_2/MWh to 0.5810 tCO_2/MWh. Considering CR Powers Shanghai Project and Zhuhai Project (heat supply units) were not included in the national list of carbon trading participants, greenhouse gas from the two projects were excluded from CR Powers total greenhouse gas emissions in 2021. In the future, we will expand the calculation of greenhouse gas emissions to optimize the management of greenhouse gas emission reductions.

5 Carbon emission intensity in power generation = Total greenhouse gas emissions/total power supply.

6 Carbon emission intensity in thermal power supply = Total greenhouse gas emissions/total thermal power supply.

7 Refers to the amount of standard coal consumed per unit of power generation, calculated according to the *Calculation Method of Technical and Economic Indicators for Thermal Power Plants (T 904-2015).*

8 Refers to the total amount of energy actually consumed by the Company in production and non-production processes, calculated based on the *Calculation Method of Technical and Economic Indicators for Thermal Power Plants (T 904-2015).*

9 Purchased electricity refers to electricity purchased by the Company from the grid or other power companies.

10 Wastewater discharge rate = wastewater discharge/thermal power generation; Nitrogen oxide emission rate = total nitrogen oxide emissions/thermal power generation; Sulfur dioxide emission rate = total sulfur dioxide emissions/thermal power generation; Particulate emission rate = total particulate emissions/thermal power generation.

	Unit	2017	2018	2019	2020	2021
Particulate emission rate[10]	g/kWh	0.01	0.01	0.01	0.01	0.01*
Installation rate of desulfurization equipment in coal-fired power plants[11]	%	100	100	100	100	100*
Installation rate of denitrification equipment in coal-fired power plants[12]	%	100	100	100	100	100*
Total amount of hazardous waste created	kt	4.2	3.1	4.5	4.0	5.9
Density of hazardous waste created	g/MWh	24	18	25	22	28
Total amount of non-hazardous waste created	kt	20,055.3	19,544.7	19,227.6	19,552.5	23,502.3
Density of non-hazardous waste created	t/MWh	0.12	0.12	0.12	0.12	0.11
Comprehensive ash and slag utilization	kt	15,653.2	17,589.7	14,802.8	14,201.7	17,962.3
Comprehensive ash and slag utilization rate	%	94.55	95.91	96.46	88.96	92.81

Social performance

	Unit	2017	2018	2019	2020	2021
Total tax paid	RMB bn	7.712	7.040	6.334	6.137	4.570
Major equipment incident(s)	Incident(s)	0	0	0	0	0
General equipment incident(s)	Incident(s)	0	0	0	0	0
Employee personal injury and fatality incident(s)	Incident(s)	2	0	2	0	0
Unplanned outage	Times	25	20	19	19	21
Equivalent availability factor	%	92.77	91.62	92.28	91.78	92.25
Certified safety engineers	Person	209	173	287	366	403
Total headcounts	Person	29,827	21,629	21,746	21,611	21,252
Female employees	Person	5,277	4,161	3,987	3,710	3,548
Ethnic minority employees	Person	934	909	901	959	1,008
Social security coverage ratio	%	100	100	100	100	100
Total expenditure for employee training	RMB mn	11.16	12.80	15.25	4.39	10.30
Training coverage	%	100	100	100	100	100
Physical examination coverage ratio	%	100	100	100	100	100
Paid holidays per person	Days	8	8	8	8	8
New graduates employed	Person	297	489	331	319	235
Newly added employees	Person	2,252	1,639	855	790	933
Charitable donations	RMB mn	4.69	6.07	117.40	175.40	15.43
Volunteer activities	Participants	3,787	6,109	4,315	2,793	1,260

[11] Installation rate of desulfurization equipment in coal-fired power plants = the number of coal-fired power units with desulfurization equipment/ the number of coal-fired power units.

[12] Installation rate of denitrification equipment in coal-fired power plants = the number of coal-fired power units with denitrification equipment/the number of coal-fired power units.

Key Policy List

ESG Indicator	Key Policy
A1 Emissions	*Environmental Protection Management Standards*
A2 Energy Consumption	*Energy Conservation Management Standards* *Energy Conservation Supervision Standards for Thermal Power Plants Units* *Work Guidelines for Power Generation Efficiency Improvement in Wind Power Units* *Management Measures for Energy Conservation* *Measurement Measures for Energy Conservation Technology Supervision* *Management Rules for Energy Efficiency Benchmarking*
A3 Environment and Natural Resources	*Carbon Asset Management Standards* *Management Rules for Ecological and Environmental Protection*
A4 Climate Change	*Research Report on Action Plan of CR Power for Achieving Carbon Peak and Carbon Neutrality* *Carbon Asset Management Standards (Tentative)*
B1 Employment	*Management Measures for Employment Contracts* *Headquarters Management Measures for Vacation Leaves* *Management Standards for Recruitment* *Management Standards for Organizational Performance* *Management Standards for All Employee Performance at Regional Companies* *Management Measures for Compensation and Benefit Audits* *Medium and Long-Term Strategic Incentive Plan*
B2 Health and Safety	*EHS Accident and Incident Management Standards (Tentative)* *Work Safety Education and Training Management Standards* *Occupational Health Management Standards* *EHS Supervision Management Standards* *EHS Post Responsibility System* *Integrated EHS Emergency Response Plan* *EHS Risk Assessment Criteria for Thermal Power Companies* *EHS Risk Assessment Criteria for Wind Power Companies* *EHS Risk Assessment Criteria for Solar Power Companies* *EHS Risk Assessment Criteria for Hydropower Companies* *Safety Risk Classification and Control Work Guidelines* *Management Measures for EHS Rewards* *Management Guidelines for Isolation and Control of Hazardous Energy* *Violation Management Guidelines (2021)* *Management Measures for EHS Monitoring* *Management Measures for EHS Accidents and Incidents* *Work Safety Management Rules* *Management Measures for Fire Protection* *Management Guidelines for Work Safety Education and Training (2021)*

ESG Indicator	Key Policy
B3 Development and Training	*Management Measures for Talent Coordination and Exchanges* *Management Standards for Employees' Participation in External Training* *Management Measures for Mentors of New Recruits* *Management Measures for Training of Dispatched Employees (2011)* *Management Measures for Participation of Employees in External Training* *Management Measures for Internal Trainers* *Guidelines for Three-Year Training of Graduates* *Organizational Chart 2021 (Tentative)*
B4 Labor Principles	*Management Measures for Employment Contracts* *Management Standards for Recruitment* *Management Measures for Recruitment (2021)*
B5 Supply Chain Management	*Guidelines for EHS Management of Stakeholders in Bidding* *EHS Management Standards for Stakeholders* *Procurement Management Standards* *Procurement Center Management Guidelines* *Management Standards for the Certification of Procurement Personnel* *Management Measures for the Recording, Announcement, and Investigation of Interference in Bidding Procedures and Engineering Projects by Managers* *Rules for the Periodic Rotation of Procurement Personnel* *Guidelines on the Management of Improper Conduct of Bid Evaluation Experts (Blacklist) (Tentative)* *Supplier Management Measures* *Procurement Management Procedures (2021)*
B6 Product Liability	*Post-Construction Evaluation Method for the Quality of Thermal Power Projects* *Post-Construction Evaluation Method for the Quality of Wind Power Projects* *Knowledge Management Standards* *Information Security Management Standards* *Information System Security Management Standards* *Cyber Security Incident Management Standards* *Information System Incident Management Standards* *Legal Dispute Case Management Standards* *Guidelines on Risk Management in Electricity Sales* *Management Measures for Reporting of Major Operational Risks and Incidents* *Management Measures for Consultation with Technology Experts*
B7 Anti-Corruption	*Management Measures for Audits* *Management Measures for the Integrity and Self-Discipline Information of Managers and Key Personnel* *Confidentiality Rules for Discipline Inspection and Supervision Programs* *Implementation Measures on Anti-Corruption Talks* *Internal Audit Regulations* *Basic Rules of Internal Control and Risk Management* *Procurement Management Standards* *Code of Integrity* *Sunshine Declaration* *Management and Evaluation Method for the Chief Financial Officers of Affiliate Companies* *General Oversight Handbook* *Disciplinary Inspection Handbook* *Management Measures for Connected Transactions by Managers (Tentative)* *Tentative Management Measures for Equity Investment and Running of Businesses by Managers and Key Personnel* *Compliance Management Procedures (Tentative)*
B8 Investment in Communities	*Management Standards for Charity Activities* *Social Responsibility Program Management Standards* *Guidelines for Models of Poverty Alleviation through Wind Power Projects*

中国企业社会责任报告
评级专家委员会
Chinese Expert Committee on CSR Report Rating

Rating Report of Sustainable Development Report 2021 of China Resources Power Holdings Co., Ltd.

Entrusted by China Resources Power Holdings Co., Ltd., the Chinese Expert Committee on CSR Report Rating selected experts to form a rating team to rate *Sustainable Development Report 2021 of China Resources Power Holdings Co., Ltd.* (hereinafter referred to as "the *Report*").

I. Rating Criteria

Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) of the Chinese Academy of Social Sciences and *China Corporate Social Responsibility Report Rating Standards (2020)* of "Corporate Social Responsibility Report Rating Expert Committee of Chinese Enterprises".

II. Rating Process

1. The rating team reviews and confirms the *Process Data Confirmation of Corporate Social Responsibility Report* submitted by the report writing group and relevant supporting materials;

2. The rating team conducts evaluation on the preparation process and the content disclosed by the *Report*, and then drafts the rating report;

3. The Vice Chairman of the Rating Expert Committee, the leader of the rating team, and the experts of the rating team jointly sign the rating report.

III. Rating Results

Process (★★★★★)

The Company's sustainable development committee has led the establishment of report preparation work group in which the independent non-executive director serves as the chairman of the committee to controls the overall direction of the Report. The board of directors is responsible for the final review of the *Report*; the *Report*, with definite function value position, is taken as an important tool for displaying annual work progress, responding to compliant disclosure requirements and strengthening the communication between stakeholders; substantive issues are identified based on the national macro policies, international and domestic social responsibility standards, capital market requirements, industry benchmarking analysis, company development planning and stakeholder investigation; the affiliated Guangxi Branch of China Resources Power is promoted to prepare the social responsibility report independently to promote the vertical integration of the social responsibility work; the Report is planned to be published on the official website and to be presented in electronic version, printed form, Chinese and English version, webpage version, H5 version and long figure version, with excellent performance in process.

Materiality (★★★★★)

The *Report* systematically discloses the key industrial issues such as implementation of macro policy, guarantee of power supply, safety production, development of green power, EIA of construction projects, saving resources and energy, development of circular economy, reduction of emission of "three wastes" and addressing climate change, with detailed and full description and excellent performance in materiality.

Integrity (★★★★★)

The main body of the *Report* systematically discloses 93.72% of the core indicators of the industry from the perspectives of "green development and serving national strategy", "stable operation and deepening value creation", "being united and motivating the employees to grow", and "working together to create a beautiful community", with excellent performance in integrity.

Balance (★★★★★)

The *Report* reveals negative data such as "customer complaints", "employee turnover rate", "network security violations", "work-related fatality cases of employees" "work-related fatality rate of employees" and "unplanned shutdown" and describes the reasons for the occurrence of safety accidents of relevant parties and reflections summarized in details, with excellent performance in balance.

Comparability (★★★★★)

The *Report* discloses the comparative data of 71 key indicators such as "heat supply", "installed capacity of operating rights and interests", "total tax payment", "total amount of public welfare and charitable donations", "investment in technological transformation of energy conservation and emission reduction", "carbon dioxide emissions" for three consecutive years, and makes a horizontal comparison on the data such as "No. 74 place among Top 250 Global Energy Companies Rated by Platts", with excellent performance in comparability.

Readability (★★★★★)

The *Report* takes "green energy and wonderful life" as the theme continuously and systematically expounds the progress of annual performance fulfillment from four chapters, with a clear framework structure and prominent topics; each chapter starts with "challenges to be faced", "our actions" and "main performance" with well-organized outline and strong leading role, which can help the related parties to grasp the key information rapidly; the cover design adopts cartoon illustration style and integrates main business elements and characteristic logos, enhancing the identification and vividness of the Report; "Extended Reading" column is established, and the QR code is embedded to extend the interpretation of the report content, strengthening the communication and dissemination value of the Report, with excellent readability performance.

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Innovation (★★★★★)

The *Report* sets up two major responsibility themes of "struggling forward, persistence and transformation for 20 years" and "full guarantee of supply, serving people's livelihood and keeping development", showing the Company's efforts for 20 years and the highlighted practice of ensuring energy supply, highlighting the responsibility of state-owned enterprises; actively responds to the latest standards and requirements of sustainable development, and systematically discloses the management and practice of climate change issues according to the TCFD framework, which enhances the sense of the times of the *Report*; establishes a sustainable development report indicator system, covering 14 major topics namely climate change, energy management, biodiversity, environmental governance, emissions management, water resources, human rights, anti-corruption, corporate governance, employee management, community engagement and development, information security and privacy protection, customer relations/fair competition and supply chain management and establishes 291 specific indicators, improving the systematicness and standardization of information disclosure; releases "Special Issue on Rural Revitalization", forming a multi-level and multi-form reporting system with excellent performance in innovation.

Overall Rating (★★★★★+)

According to the rating team's assessment, *Sustainable Development Report 2021 of China Resources Power Holdings Co., Ltd.* is of five-star plus rating in the process, materiality, integrity, balance, comparability, readability and innovation and is the model of corporate social responsibility (CSR) report.

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The Sustainable Development Report of China Resources Power Holdings Co., Ltd. had been rated five stars for four consecutive years and was rated five-star plus for the third year in succession.

IV. Improvement Suggestions

Enhance the disclosure of the core indicators of the industry and improve the integrity of the *Report*.

Scan QR Code to View Enterprise Rating Files

Vice President of Chinese Expert Committee on CSR Report Rating	Leader of the Rating Team	Expert of the Rating Team

Issuance date: April 27, 2022

Report Index 1 – Environmental, Social and Governance Reporting Guide of the Stock Exchange of Hong Kong Limited

Subject Areas, Aspects, General Disclosures and KPIs			Report Section
A. Environmental			
Aspect A1: Emissions	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.		• Environmental Management • Pollution Prevention and Control
	KPI A1.1	The types of emissions and respective emissions data.	• Key Performance Indicators
	KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	• Key Performance Indicators
	KPI A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	• Key Performance Indicators
	KPI A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	• Key Performance Indicators
	KPI A1.5	Description of emission targets set and steps taken to achieve them.	• Environmental Management
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction targets and steps taken to achieve them.	• Pollution Prevention and Control
Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials.		• Resources Conservation
	KPI A2.1	Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g., per unit of production volume, per facility).	• Key Performance Indicators
	KPI A2.2	Water consumption in total and intensity (e.g., per unit of production volume, per facility).	• Resources Conservation • Key Performance Indicators
	KPI A2.3	Description of energy use efficiency targets set and steps taken to achieve them.	• Environmental Management • Resources Conservation
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency targets set and steps taken to achieve them.	• Resources Conservation
	KPI A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.	N/A
Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimizing the issuer's significant impacts on the environment and natural resources.		• Pursuing Green Development to Support the National Strategies
	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	• Pursuing Green Development to Support the National Strategies

Subject Areas, Aspects, General Disclosures and KPIs			Report Section
Aspect A4: Climate Change	General Disclosure Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.		• Climate Change
	KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	• Climate Change
B. Social			
Employment and Labor Practices			
Aspect B1: Employment	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.		• Rights and Interests of Employees • Key Policy List
	KPI B1.1	Total workforce by gender, employment type (for example, full – or part-time), age group and geographical region.	• Rights and Interests of Employees
	KPI B1.2	Employment turnover rate by gender, age group and geographical region.	• Rights and Interests of Employees
Aspect B2: Health and Safety	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.		• Occupational Health and Safety • Work Safety
	KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	• Work Safety
	KPI B2.2	Lost days due to work injury.	• Work Safety
	KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	• Occupational Health and Safety
Aspect B3: Development and Training	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.		• Employee Development
	KPI B3.1	The percentage of employees trained by gender and employee category (e.g., senior management, middle management).	• Employee Development
	KPI B3.2	The average training hours completed per employee by gender and employee category.	• Employee Development
Aspect B4: Labor Standards	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.		• Rights and Interests of Employees • Key Policy List
	KPI B4.1	Description of measures to review recruitment practices to avoid child and forced labor.	• Rights and Interests of Employees
	KPI B4.2	Description of steps taken to eliminate child and forced labor practices when discovered.	• Rights and Interests of Employees

Subject Areas, Aspects, General Disclosures and KPIs			Report Section
Operating Practices			
Aspect B5: Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.		• Supply Chain Management
	KPI B5.1	Number of suppliers by geographical region.	• Supply Chain Management
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	• Supply Chain Management
	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	• Supply Chain Management
	KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	• Supply Chain Management
Aspect B6: Product Responsibility	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.		• High-Quality Services
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	N/A
	KPI B6.2	Number of products and services related complaints received and how they are dealt with.	• High-Quality Services
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	• Innovation-Driven Growth
	KPI B6.4	Description of quality assurance process and recall procedures.	N/A
	KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	• High-Quality Services
Aspect B7: Anti-corruption	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.		• Legal Compliance
	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	• Legal Compliance
	KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	• Legal Compliance
	KPI B7.3	Description of anti-corruption training provided to directors and employees.	• Legal Compliance
Community			
Aspect B8: Community Investment	General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.		• Participating in Public Welfare Activities
	KPI B8.1	Focus areas of contribution (e.g., education, environmental concerns, labor needs, health, culture, sport).	• Building a Better Community through Joint Efforts
	KPI B8.2	Resources contributed (e.g., money or time) to the focus area.	• Building a Better Community through Joint Efforts • Key Performance Indicators

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