

Powering Life with  
Green Energy

China Resources Power Holdings Company Limited

# Sustainable Development Report 2020

# About the Report

This is the 11th annual Sustainable Development Report published by China Resources Power Holdings Company Limited ("CR Power") for the year from January 1 to December 31, 2020.

## 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-CSR4.0) – Basic Framework* of the Chinese Academy of Social Sciences
- *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises - Power Production Industry (CASS-CSR3.0)*
- *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 13), referred to herein as "We," "the Company," or "CR Power."

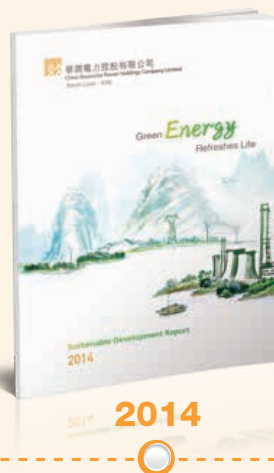
We have engaged an independent third party to provide assurance of 16 performance indicators in this Report. See pages 4-5 for the Assurance Report.



2010



2012



2014



2011



2013



2015

## Access to this Report

This Report is available on the HKEx website ([www.hkexnews.hk](http://www.hkexnews.hk)) and the CR Power website ([https://www.cr-power.com/power\\_en/SocialResponsibility/Sustainable/](https://www.cr-power.com/power_en/SocialResponsibility/Sustainable/)).

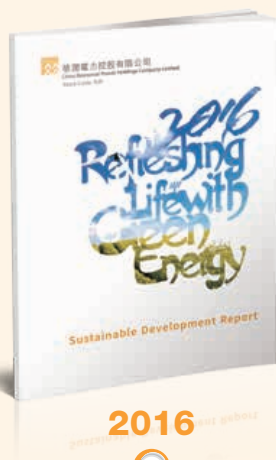
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## Feedback

For any comments or suggestions, please send an email to [crp-ir@crc.com.hk](mailto:crp-ir@crc.com.hk) or [cr-power@crpower.com.cn](mailto:cr-power@crpower.com.cn), or scan the QR code below to help us improve this Report.



2016



2018



2020

2017

2019



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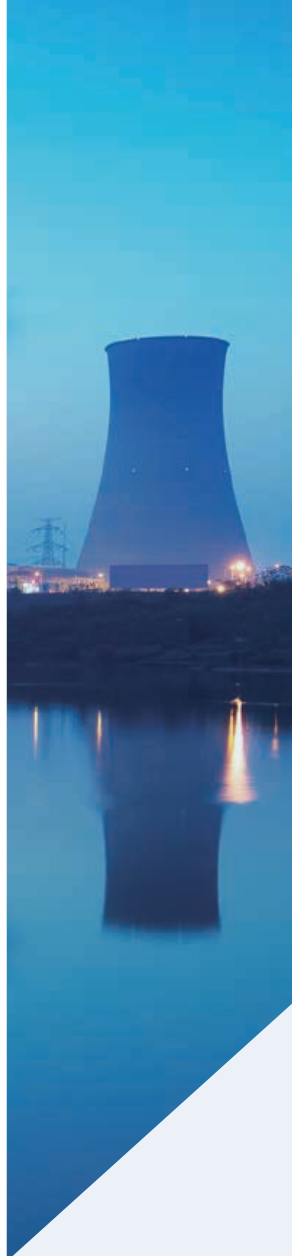
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# Assurance Report



## 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 77 to 79 (the "Selected Sustainability Information") in the Company's Sustainability Report for the year ended 31 December 2020 (the "2020 Sustainability Report").

## Selected Sustainability Information

The details of the Selected Sustainability Information are listed below:

### Selected Sustainability Information<sup>#</sup>

- 1 Nitrogen Oxides (NO<sub>x</sub>) emissions (kt)
- 2 Nitrogen Oxides (NO<sub>x</sub>) emissions rate (g/kWh)
- 3 Sulphur Dioxide (SO<sub>2</sub>) emissions (kt)
- 4 Sulphur Dioxide (SO<sub>2</sub>) 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 Carbon dioxide emissions (kt)
- 15 Carbon emission intensity in power generation (g/kWh)<sup>^</sup>
- 16 Carbon emission intensity in thermal power generation (g/kWh)

<sup>#</sup> Assurance scope refers to the power plants indicated by Δ on page 14 – 15 in the "About Us" section, and also the Zhuhai Heating Unit.

<sup>^</sup> 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 2020 Selected Sustainability Information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2020 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 77 to 79 of the 2020 Sustainability Report (the "Reporting Criteria").

## Responsibilities of the Board of Directors

The Board of Directors is responsible for preparing and presenting the 2020 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 2020 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 2020 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 2020 Sustainability Report against the Reporting Criteria;
- Establishing acknowledgement of Selected Sustainability Information regarding the 2020 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  
26 April 2021

# Letter from the Chairman



**Wang Chuandong**  
Chairman of the Board of Directors

2020 was an extraordinary year; it was a year CR Power made tremendous progress and breakthroughs in fighting against the COVID-19 pandemic, securing grid connection, maintaining stable growth, promoting reform and innovation, and at the same time strengthening corporate governance. Only in hard times can courage and perseverance be manifested, and only after polishing can a piece of jade be finer. During the year, in addition to stepping up efforts toward a globally competitive, world-class clean energy provider, we voluntarily assumed our social responsibilities and strived to maximize comprehensive economic,

social and environmental values for all stakeholders. In 2020, we further increased the proportion of renewable energy in our business, accelerated the shift towards an integrated energy service provider, and gained significant growth in our operating results over 2019 and made remarkable achievements in supporting poverty alleviation. We also won a number of honors, including but not limited to Asian Power Awards, Hong Kong Green Award and China Research Base for Energy High-Quality Development, and was incorporated into the Hang Seng ESG 50 Index and the Hang Seng Corporate Sustainability Benchmark Index for the first time.

## Low-carbon development: Expanding clean energy investment

Given China's commitment to achieve carbon neutrality by 2060, we have been making active efforts to seize major opportunities for the energy and power industries brought about by the country's peak carbon emission and carbon neutrality targets and strategic ones created by the nation's energy restructuring, and to promote the transition to renewable energy for a clean and low-carbon energy structure. In 2020, attributable operational generation capacity of our new grid-connected wind and photovoltaic power projects hit a record high of 4,447 MW; attributable operational generation capacity mix of our renewable energy projects rose to 25.9% from 13.1% in 2015; average standard coal consumption rate decreased by 11g/kWh compared with 2015; and all coal-fired generating units realized ultra-low emissions. We also enhanced research on our carbon emission reduction and carbon neutrality strategy and plan, incorporated energy conservation and emission reduction targets and measures into the Company's 14th Five-Year Plan, and discussed and formulated the Company's roadmap and schedule for achieving peak carbon emissions and carbon neutrality. In addition, the carbon capture test platform (CCTP) established by us, the first international multi-technology CCTP for coal-fired power plants in Asia, successfully captured more than 10,000 tons of high-purity carbon dioxide, providing valuable practices in the research and application of carbon capture and storage technologies. During the year, the Company invested RMB1.499 billion in environment protection, including RMB1.27 billion in energy conservation and emission reduction transformation.

## Bold attempts at innovation: Accelerating the transition toward innovation-driven development

We have been accelerating the shift towards innovation-driven development by moving into new areas and mastering new technologies. In 2020, we invested around RMB151 million in R&D and were granted 132 new patents. To improve energy efficiency, we put into operations or under construction 17 distributed energy projects and participated in eight energy storage projects and eight integrated energy service projects. We were actively involved in China's power system reform and endeavored to expand our power sales market by signing contracts with 7,804 customers and holding an equity interest in 15 provincial power trading centers around the country. In addition, we set up a work team to research on hydrogen energy and its long-term strategic direction. We have been focusing more on driving industry progress through our own development. To this end, we have been seeking to establish extensive strategic alliances and close partnerships with government authorities, companies, and universities to develop more highly skilled talents, offering fresh impetus for the development of the industry. We have been integrating our projects more with the local and surrounding communities and implementing the circular economy by encouraging the subsidiary thermal power plants to explore the application of biomass coupling power generation technology in treating industrial and environmental wastes. As at the end of 2020, 14 of our coal-fired power plants have implemented waste incineration, achieving a symbiotic balance between their own and social development.

## Pursuit of excellence: Maintaining growth through cohesion

We have been strengthening safe production management. For this purpose, we have built a strong awareness of safe production and safety risk prevention, consolidated the foundation of safe production management, and enhanced the performance of safe production responsibilities of our subsidiary companies. In 2020, we invested about RMB143 million in safety production and 90% of our corporate safety indicators reached advanced levels of the industry. Following a people-oriented and meritocratic policy, we recruited diverse talents and provided promotion channels and training systems for the employees, enabling all of them to receive leadership and professional skill trainings, with an average training time of 49.5 hours per employee. In addition, we have been optimizing the organizational structure to create an environment that is more conducive to the growth of both the Company and the employees.

## A better society: Creating harmony through joint efforts

During the critical moments of the COVID-19 pandemic in 2020, as an immediate response to the country's call for pandemic prevention and control, we took measures according to local conditions to ensure power and heat supply. At the same time, we leveraged on our own resource strengths to donate relief supplies to help defeat the pandemic. We also made best efforts to protect the lives and health of the employees. As a result, no case of infection was reported among our employees across the country. Ensuring employment of residents was a top priority for the nation during the year. In strict compliance with the country's policies and requirements, we continued with our efforts on preventing and

controlling the pandemic, resuming work and production, and maintaining stable growth. In particular, we recruited 790 employees via online and offline channels to bolster employment in areas where our construction or operational projects are located, and led upstream and downstream companies in creating employment opportunities for about 10,000 migrant workers. In 2020, the final year for a decisive victory in poverty alleviation, we took many measures, such as supporting distinctive industries, improving roads and other infrastructures, and promoting agriculture and animal husbandry in poor areas, local employment, and agricultural product processing and sales, to help improve the living standards of the impoverished people, achieving sustainable poverty alleviation. During the "13th Five-Year Plan" period, we contributed more than RMB200 million in poverty relief funds, covering more than 18,000 impoverished families. In 2020, the Company made donations of about RMB175 million through pandemic prevention and control, poverty alleviation, student aid, support for the elderly, environmental protection, community co-building, and other efforts, as well as participating in the establishment of schools by CR Group in poverty-stricken areas around China.

The growth and development of CR Power are built upon the hard work and efforts of each employee and are highly expected and followed by all stakeholders. In 2021, which is a year for us to continue to move forward, we will capture development opportunities, stimulate organizational vitality, improve core competitiveness, and increase operating efficiency to strive towards our targets; we will also continue to create value and contribution for all stakeholders and take practical actions to contribute to the green and sound development of the society.



April 2021

## CR Power in 2020



# *Environmental Performance*



Total Assets

HKD **259.63** bn



Attributable Operational  
Generation Capacity

**43,365** MW



Turnover

HKD **69.55** bn



Profit Attributable to Owners of  
the Company

HKD **7.583** bn



Net Generation Volume of  
Subsidiary Power Plants

**154,944** GWh



Total Heat Supply

**112.00** kTJ



# *Social Performance*



Net Generation Standard Coal Consumption  
Rate (Subsidiary Coal-fired Power Plants)

**296.0** g/kWh



Investment in Efficiency and Emission Upgrades

RMB **1.270** bn



Sulfur Dioxide Emission Rate

**0.07** g/kWh



NOx Emission Rate

**0.12** g/kWh



Particulate Emission Rate

**0.01** g/kWh

# *Economic Performance*



Safety Investment

RMB **143** mn



New Graduates Employed

**319**



Total Number of Employees

**21,611**



Total Tax Paid

RMB **6,137** mn



Charitable Donations

RMB **175** mn

# About Us

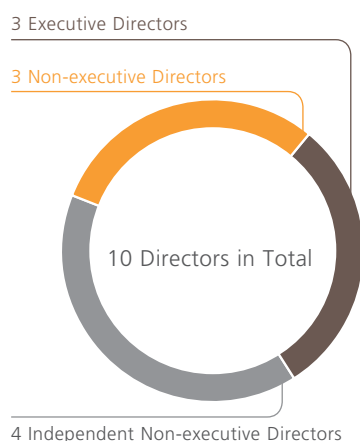
CR Power was established in August 2001 and listed on the Main Board of the HKEx in November 2003 (stock code 836). CR Power's businesses mainly cover wind power, thermal power, hydroelectric power, photovoltaic power, distributed energy, power sales, integrated energy services, and coal mining.

As at the end of December 2020, CR Power had total assets of HKD259.63 billion and total controlled generation capacity of 55,371 MW, with its businesses covering 30 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 14 consecutive years, ranking 109th and 1,043rd, respectively, in 2020.





As of the end of 2020

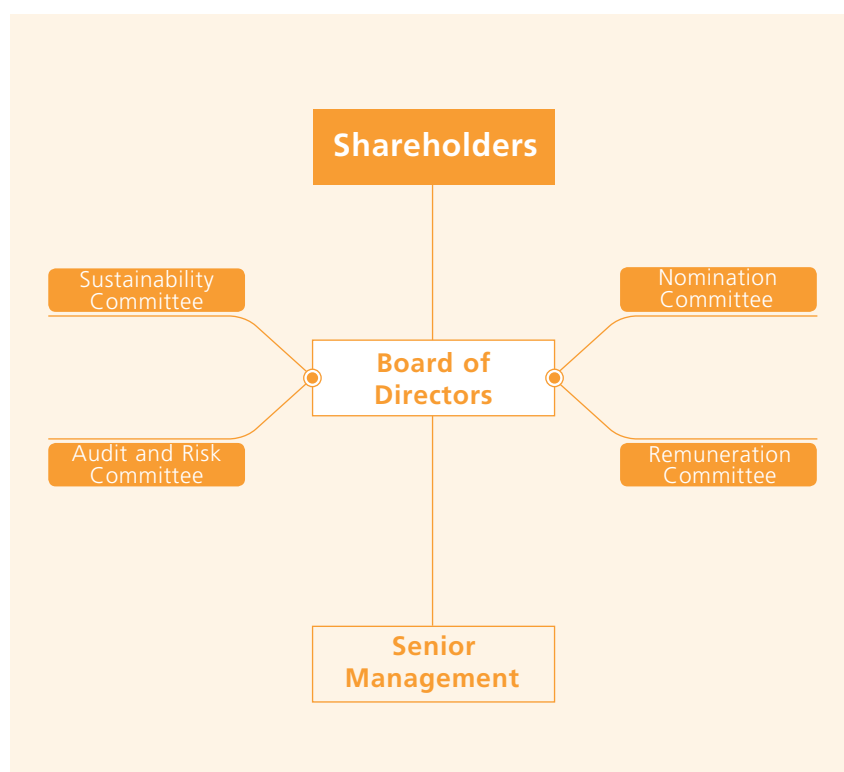


CR Power has been improving its governance structure and management system in line with the *Corporate Governance Code* in Appendix 14 of the *Main Board Listing Rules* of the HKEx. CR Power's Board of Directors is mainly responsible for improving the governance framework, making overall strategic plans, setting long-term performance and management targets, supervising the performance of the Senior Management, assessing the operations of the Company and auditing various risks.

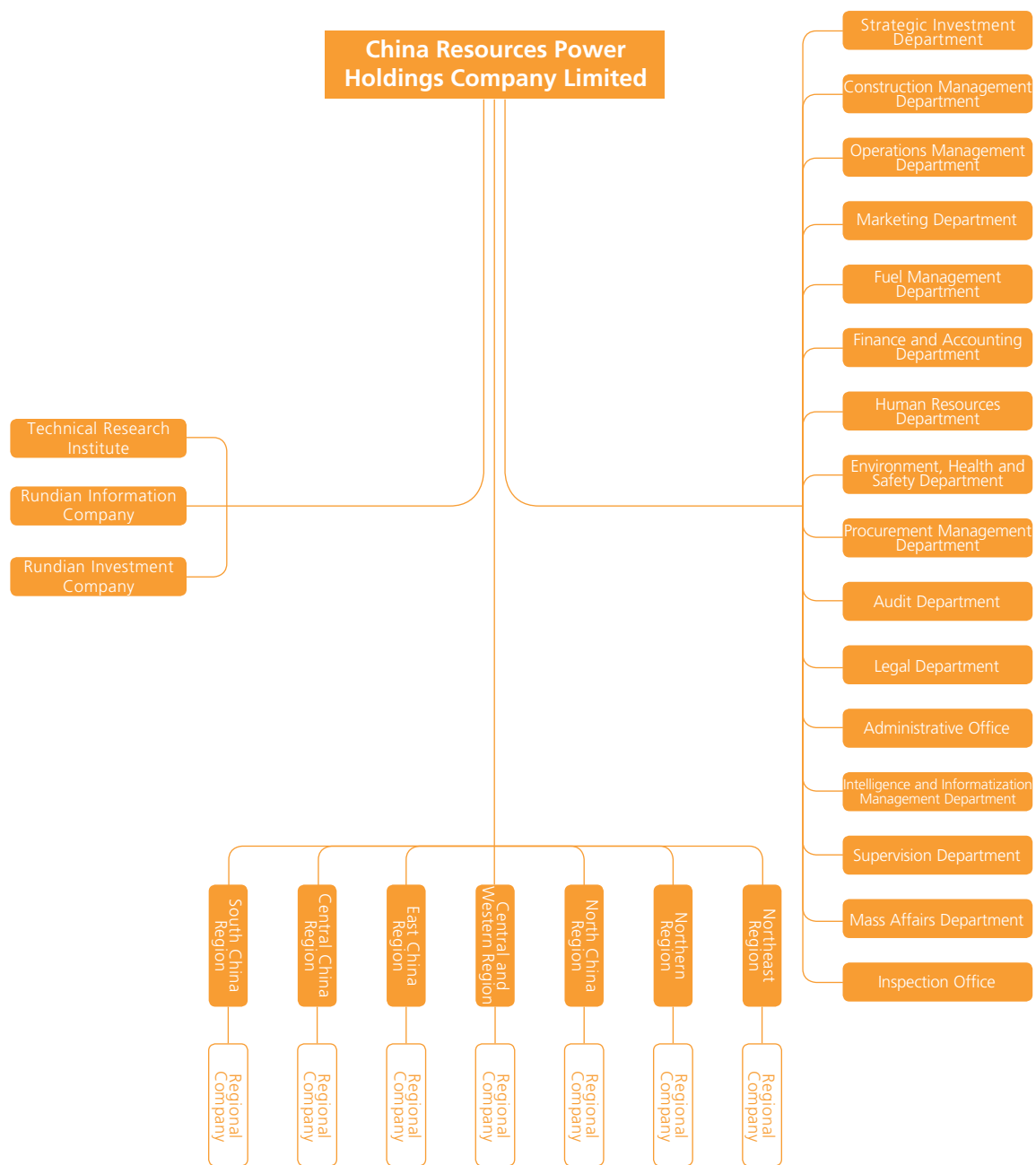
The diversity of members of the Board of Directors is one of the important contributing factors for the sustainable development of the Company. The Board of Directors are required to consider the Board of Directors' diversity policy, including but not limited to the requirements on gender, age, cultural and educational backgrounds, professional experience, skills, knowledge and service tenure, when reviewing the composition and selection criteria of the Board of Directors and seeking qualified candidates of directors. The Company has two female directors.



## Governance Structure



## Organizational Structure



## Business Distribution

### Jiangsu

Changshu (1,950.0MW) △  
 Changzhou Gas (103.0MW) △  
 Huaxin (660.0MW) △  
 Nanjing Bangqiao (660.0MW) △  
 Nanjing Chemical  
 Industry Park (670.0MW) △  
 Nanjing Thermal (1,200.0MW) △  
 Tongshan (2,000.0MW) △  
 Xuzhou (1,280.0MW) △  
 Yangzhou No.2 (1,260.0MW)  
 Zhenjiang (1,540.0MW) △  
 Nantong Wind (65.5MW)  
 Yancheng Wind (44.0MW)  
 Huai'an Photovoltaic (10.0MW)  
 Suqian Photovoltaic (20.4MW)

### Henan

Dengfeng (1,840.0MW) △  
 Gucheng (600.0MW) △  
 Jiaozuo Longyuan (1,320.0MW) △  
 Shouyangshan (1,200.0MW) △  
 Anyang Wind (241.4MW)  
 Biyang Wind (183.5MW)  
 Dingbian Wind (50.0MW)  
 Fengqiu Wind (40.0MW)  
 Huaxian Wind (194.0MW)  
 Linying Wind (65.0MW)  
 Luohe Wind (30.0MW)  
 Lushan Wind (28.6MW)  
 Neihuang Wind (410.0MW)  
 Queshan Wind (40.6MW)  
 Shangqiu Wind (20.0MW)  
 Tanghe Wind (192.7MW)  
 Wugang Wind (36.0MW)  
 Xinye Wind (12.5MW)  
 Yanshi Wind (30.0MW)  
 Yexian Wind (60.7MW)  
 Zhoukou Wind (2.5MW)  
 Zhumadian Wind (2.0MW)

### Guangdong

Guangzhou Thermal (600.0MW) △  
 Haifeng (2,000.0MW) △  
 Huilai Wind (133.5MW)  
 Leizhou Wind (100.0MW)  
 Lianzhou Wind (300.0MW)  
 Lianzhou Wind Phase II (20.0MW)  
 Lufeng Wind (66.0MW)  
 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 (29.2MW)  
 Zhuhai Photovoltaic (4.2MW)

### Hubei

Hubei (600.0MW) △  
 Hubei Phase II (2,000.0MW) △  
 Yichang (700.0MW) △  
 Guangshui Wind (109.8MW)  
 Suixian Tianhekou Wind (404.8MW)  
 Suizhou Fengming Wind (76.5MW)  
 Suizhou Wind (49.8MW)  
 Yichang Wind (190.2MW)  
 Zaoyang Bailu Wind (40.0MW)  
 Zaoyang Wind (161.3MW)  
 Zhongxiang Wind (9.0MW)

### 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)  
 Mulanweichang Wind (150.0MW)  
 Qinhuangdao Wind (100.0MW)  
 Caofeidian Photovoltaic (11.4MW)

### Shandong

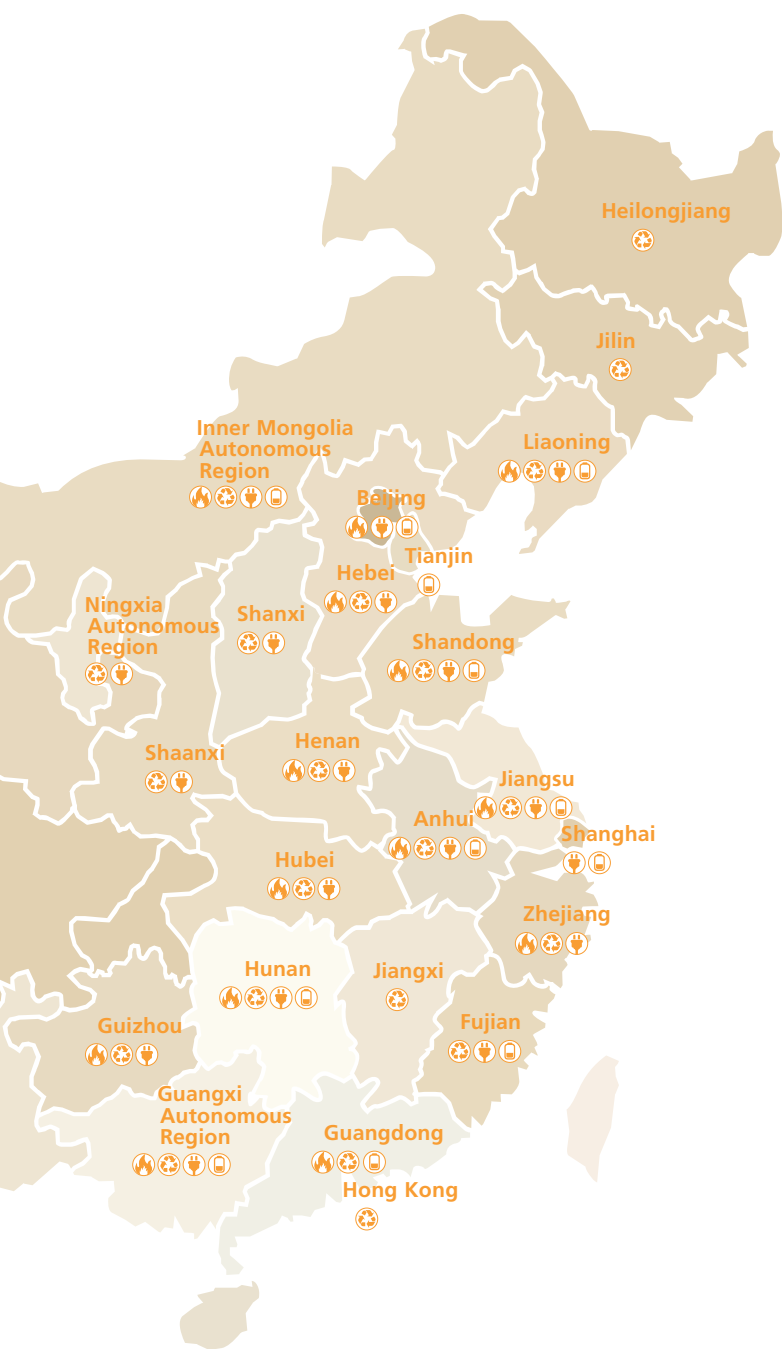
Heze (1,200.0MW) △  
 Dezhou Wind (50.0MW)  
 Dongying Wind (100.0MW)  
 Feixian Wind (119.4MW)  
 Haiyang Wind (267.5MW)  
 Jining Wind (49.5MW)  
 Juxian Wind Phase I (50.0MW)  
 Juxian Wind Phase II (50.0MW)  
 Linyi Wind (86.0MW)  
 Linyi Wind Phase II (50.0MW)  
 Penglai Dalujiang Wind (49.8MW)  
 Penglai Daxindian Wind (49.8MW)  
 Qingdao Wind (118.0MW)  
 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 (46.6MW)  
 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)  
 Wulanchabu Hongmu Wind (49.5MW)

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





#### Liaoning

Panjin (700.0MW) △  
Jinzhou Thermal (660.0MW) △  
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)  
Rongxian Wind (130.0MW)  
Yulin Wind (8.9MW)  
Hezhou Photovoltaic (6.0MW)

#### Zhejiang

Cangnan (2,000.0MW) △  
Wenzhou Telluride (660.0MW)  
Wenzhou Photovoltaic (12.1MW)  
Zhejiang Photovoltaic (6.1MW)

#### Guizhou

Guizhou Liuzhi (1,320.0MW)  
Jianhe Wind (152.0MW)  
Jinping Wind (22.0MW)  
Kaili Wind (50.0MW)  
Liping Wind (254.0MW)

#### Shanxi

Datong Guangling Wind (100.0MW)  
Datong Wind (198.0MW)  
Datong Yanggao Wind (129.0MW)  
Guxian Wind (19.5MW)  
Linfen Wind (99.0MW)  
Xinrong Wind (60.0MW)  
Xinzhou Wind (120.0MW)  
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)  
Mingguang Wind Phase (50.0MW)  
Suixi Wind (50.0MW)  
Huabei Photovoltaic (5.9MW)  
Huoshan Photovoltaic (18.0MW)

#### Ningxia Autonomous Region

Haiyuan Wind (300.0MW)  
Haiyuan Photovoltaic (90.0MW)

#### Gansu

Guazhou Wind (201.0MW)  
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 (50.0MW)

#### 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 (49.5MW)  
Ganzhou Nankang Wind (64.0MW)  
Ruichang Wind (36.0MW)  
Xiajiang Wind (82.0MW)

#### Fujian

Changting Wind (46.0MW)  
Hui'an Wind (26.0MW)  
Longyan Wind (48.0MW)  
Mingqing Wind (30.0MW)  
Fuqing Photovoltaic (14.2MW)  
Fuzhou Photovoltaic (8.1MW)  
Jingwei Photovoltaic (7.0MW)

#### Beijing

Beijing Thermal (150.0MW) △

#### Qinghai

Dachaidan Wind (50.0MW)  
Delingha Photovoltaic (20.0MW)

#### Tibet Autonomous Region

Jiangzi Photovoltaic (20.2MW)

#### Jilin

Nong'an Wind (40.0MW)

#### Shanghai

Shanghai Gas (2.4MW) △

Proportion of attributable operational generation capacity of renewable energy projects

25.9%

Total environmental investment

RMB 1.499 bn

Investment in efficiency and emission upgrades

RMB 1.27 bn

Comprehensive ash and slag utilization rate

88.96%

Carbon emission intensity in power generation

726 g/kWh

Carbon emission intensity in thermal power generation

834 g/kWh

## Low-Carbon Development

## Expanding Clean Energy Investment

Climate change has become a key concern to be reckoned with by the world and will have a profound impact on global economic and social development. At the 75th Session of the United Nations General Assembly, Chinese President Xi Jinping announced that China will scale up its Intended Nationally Determined Contributions by adopting stronger policies and measures, aiming to have CO<sub>2</sub> emissions peak by 2030 and achieve carbon neutrality by 2060. CR Power is well aware that each company has the obligation and responsibility to take measures to respond to climate change. For this reason, we have incorporated the impact of climate change into the Company's decision-making, continuously increased the proportion of renewable energy business, and strengthened environmental stewardship and pollution control to support the development of green and low-carbon industries and provide green power for the green and low-carbon development of society.

### UN Sustainable Development Goals



1



2

### CR Power Actions

1

- During the 13th Five-Year Plan period, we invested heavily in renewable energy, mainly in wind power, and the attributable operational generation capacity of renewable energy grew at a 5-year CAGR of 19.9% from 4,535 MW in 2015 to 11,238 MW in 2020 and the proportion of its installed capacity grew from 13.1% in 2015 to 25.9% in 2020;
- We have discussed and developed an action plan for achieving peak carbon emissions and carbon neutrality. According to the plan, the Company will continue on a clean and low-carbon development path to optimize its asset structure and further raise the proportion of installed capacity of renewable energy projects.

2

- The Company has been strengthening carbon asset management, tracking policy and operational risks related to climate change, engaging in carbon trading, and developing carbon capture technologies. Runtan Technology Co., Ltd., one of its subsidiaries, has completed carbon verification and is qualified and capable to independently carry out third-party carbon verification; the Carbon Capture Test Platform (CCTP) at Haifeng Power Plant has successfully captured more than 10,000 tons of high-purity carbon dioxide;
- We have fully identified and responded to potential climate risks and opportunities by drawing up risk mitigation measures for climate change.

# Responding to Climate Change

As a firm supporter of China's peak carbon emissions and carbon neutrality targets, CR Power has been transitioning toward renewable energy to achieve a low-carbon energy structure and increasing energy efficiency to reduce carbon emissions.

At the same time, CR Power has been tracking policy and operational risks related to climate change, engaging in carbon trading, and developing carbon capture technologies, in a bid to drive the transformation of the Company through technologies.

## Identifying Risks and Opportunities

By identifying and assessing climate change risks, the Company has identified risks associated with laws and regulations, technology, market, reputation, and other risks and opportunities arising from climate change. In 2020, through risk identification and assessment, external threat and internal weaknesses assessment, control measures assessment, and risk confirmation, the Company fully identified the impacts and challenges of climate change, formulated risk mitigation measures for climate change, and regularly reviewed risks and applicability of response measures for them, thereby forming a closed-loop control process for climate change risks.

### Case Study

#### Responding to Flood Risk in the Yangtze River Basin

In July 2020, the heavy rainfall for days elevated the water level of the Yangtze River. CR Power's power plants along the Yangtze River basin immediately made flood prevention arrangements according to their corresponding emergency plans. To ensure safe production, they enhanced on-site safety management and potential risk investigation, performed monitoring, early warning and information reporting, strengthened information sharing, and maintained the availability of emergency supplies and an emergency shift system.

Thanks to its accurate predictions, the shipping division of Jiangsu Banqiao Power Plant started the 24-hour on-duty shift for berthed ships one week in advance. The marine engineers increased inspection of ship equipment, and the dispatchers strengthened detection of leakages in the inner slope of the dikes. Potential hazards to equipment were eliminated in a timely manner to ensure that the equipment was functioning well.

Changshu, Zhenjiang, Changzhou and Huaxin Power Plants in Jiangsu Province as well as Xiantao Project and Yichang Power Plant in the Central China Region took precautions by setting up a task force for flood control and rescue to ensure their immediate involvement in flood control and disaster relief work. Through efforts such as special and training for flood control, they strived to maintain continuous, stable, safe, and reliable power supply to the public during flood prevention.

## Risks and Opportunities from Climate Change

### Identified Risks and Opportunities

Carbon trading and other policies to be released by China will add carbon emission costs to coal-fired power plants

### Solutions

- Strictly controlling investment in high-carbon emission projects such as coal-fired power plants
- Strengthening the R&D, application and promotion of green production technologies
- Continuing with the R&D of carbon capture technologies
- Institutionalizing and standardizing measures on energy conservation and emission and carbon reduction

China's targets of carbon neutrality by 2060 and peak carbon emissions by 2030 may push up the Company's operating costs, especially environment-related costs for coal-fired power plants

- Tracking progress in the formulation of China's 14th Five-Year Plan for the energy and power industries and timely following the development of important policies by the competent industry authorities
- Incorporating policy risks that may affect the operation and development of coal-fired power plants, into the risk management process

Policy on tightening renewable energy subsidies will lower investment returns

- Regularly following changes in the policies on renewable energy subsidies
- Pre-reviewing potential projects in a more professional, accurate and forward-looking manner, carefully reviewing boundary conditions, and revealing the key risk points of the projects
- Seriously performing the internal decision-making procedures of the Company and managing the process for investment projects and timely following up the review of the invested projects

### Risks

### Opportunities

Expecting significant potential growth in installed wind and photovoltaic capacity in the next five years

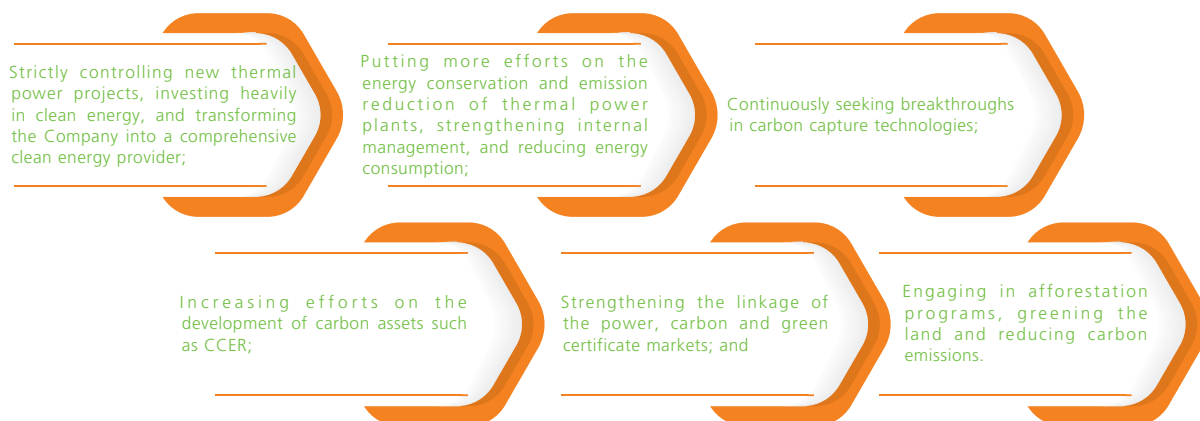
- Expanding renewable energy projects in all target markets to rapidly increase the proportion of their installed capacity

## Making a Clear Action Plan

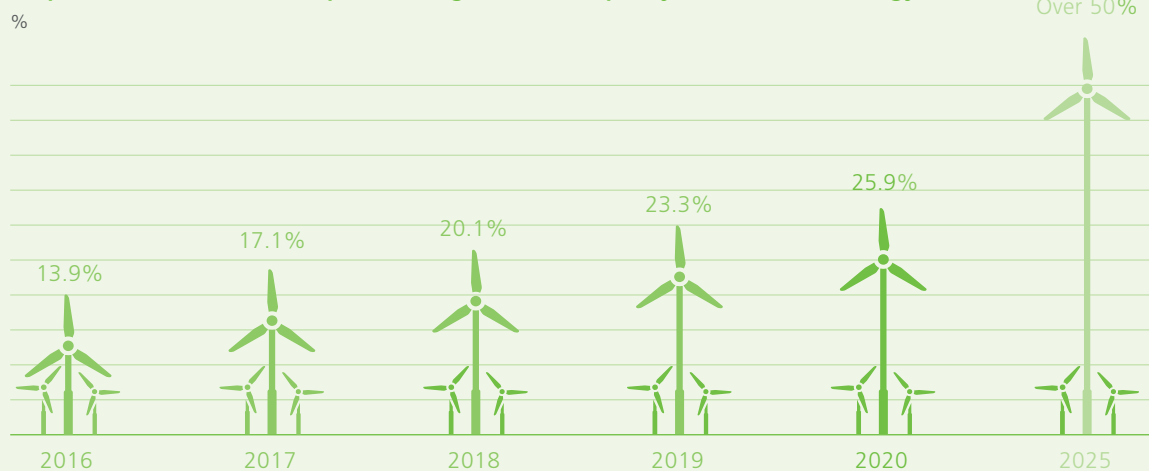
With carbon emission control as its top priority, CR Power has developed the *Action Plan for Peak Carbon Emissions and Carbon Neutrality* by mapping out the path according to its own particular conditions and incorporating the intended targets and measures into its 14th Five-Year Plan. Estimated to reach peak carbon emissions in 2025, CR Power strives to increase

the installed capacity of its renewal energy projects by 40 GW, making the proportion of such installed capacity exceed 50% by the end of 2025. CR Power will continue on a clean and low-carbon development path to optimize asset structure and further raise the proportion of installed capacity of renewable energy projects for a quick transition in energy structure.

## CR Power's Action Plan for Peak Carbon Emissions and Carbon Neutrality



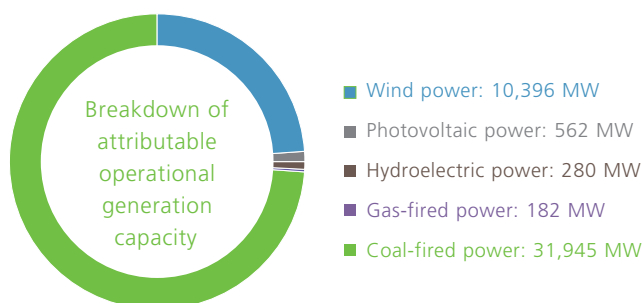
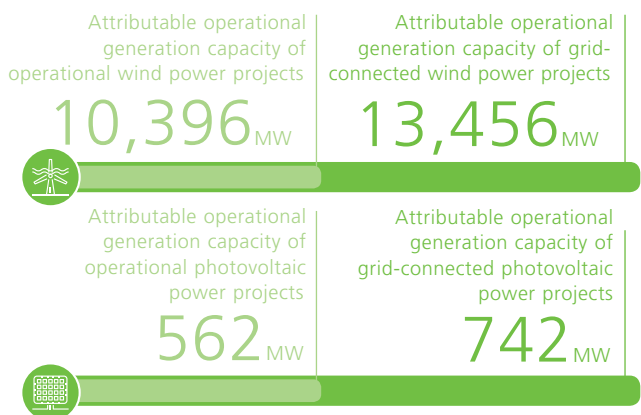
Proportion of attributable operational generation capacity of renewable energy



## Advancing Strategic Transition

CR Power is committed to strategically transitioning to renewable energy by continuously creating economic and social value during this process and investing more in wind, photovoltaic and other clean energy projects. CR Power's attributable operational generation capacity of renewable energy projects<sup>1</sup> surged by 147% from 4,535 MW in 2015 to 11,238 MW in 2020, representing 25.9% of its total installed capacity, up from 13.1% in 2015. Based on its current installed capacity and forecast of new capacity in the next five years, CR Power's total carbon emissions is expected to peak by 2025.

CR Power has greatly promoted the construction and commissioning of onshore wind farms and the development of a pipeline of potential offshore wind projects, recording an annual growth of 4,168 MW in grid-connected wind capacity; in terms of photovoltaic power generation, CR Power has hastened efforts to develop, stockpile, construct, and connect to grid projects, reporting an annual growth of 279 MW in grid-connected photovoltaic capacity. As of the end of 2020, the projects filed by CR Power amounted to more than 5 GW.

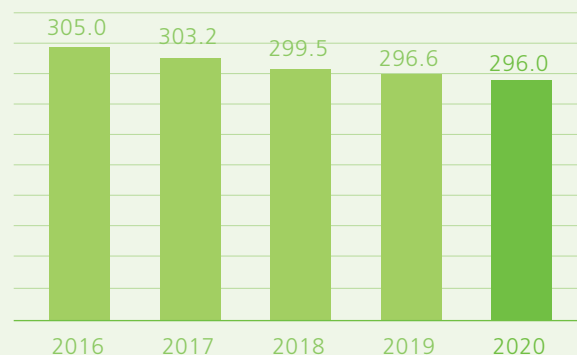


<sup>1</sup> Renewable energy includes wind, photovoltaic, and hydroelectric power.

## Further Improving Energy Efficiency

To build a safe and efficient energy system, cut carbon emissions, and increase energy efficiency, we have developed and implemented the *Supervision and Management Rules for Energy Conservation and Emission Reduction Programs* and established a leading group to oversee energy conservation programs and to set energy conservation goals.

**Net generation coal consumption rate  
(subsidiary coal-fired power plants)**  
g/kWh



### Organization building

The leading group is responsible for overseeing energy conservation programs and supervising and evaluating their implementation. Each regional company and project company has also set up corresponding positions responsible for daily management and supervision. The Strategic Investment Department of the Company is responsible for setting new energy targets.

### Target management

CR Power has formulated energy-saving plans and, in view of industry characteristics and domestic and international benchmarks, set appropriate management and evaluation targets, which are cascaded down to subsidiary companies, departments and teams. CR Power monitors and periodically reviews energy consumption data to continuously enhance energy management.

### Case Study

#### Energy Conservation Technology Transformation of Guangzhou Power Plant

In 2020, CR Power's Guangzhou Power Plant modified the flow path of the steam turbine of its generating units by adopting the latest steam turbine design technology to the high-, medium- and low-pressure flow paths of Turbine No.1, which is estimated to save about 13,600 tons of standard coal per year; and using an electromechanical speed controller for the first time in the world to control the speed of the generating units' feed pump, projected to save around 4,088 tons of standard coal per year.

## Strengthening Carbon Asset Management

Carbon trading is a market-based approach for reducing greenhouse gas (GHG) emissions worldwide and promoting the global transition to a low-carbon economy. In November 2020, the Ministry of Ecology and Environment issued the *Measures for the Administration of National Carbon Emissions Trading (for Trial Implementation)*, further specifying the management rules and supportive system for carbon market development. In view of China's regulations on carbon asset management, CR Power has prepared and promulgated its *Carbon Asset Management Standards, Guidelines for Preparation of Carbon Emission Reports*, and other internal rules. They are intended to standardize carbon asset verification and management and improve the professionalism of carbon asset management practices such as assessing, verifying and monitoring carbon emissions and tracking, meeting and trading emission quotas.

In 2020, CR Power consolidated organization and capacity building and launched regional pilot carbon trading in order to fully engage in carbon trading and promote the national carbon market.

### Organization building

CR Power has a carbon asset management model and standardized the performance of carbon reduction obligation by its thermal power projects and the development and management of its new energy-based carbon emission reduction projects. CR Power's Headquarters, regional companies and project companies have set up dedicated or part-time staff positions to manage carbon assets. Under a multi-

level management model, the Headquarters is responsible for formulating rules and regulations, supervising services, allocating resources, and conducting internal and external collaboration, while regional companies and project companies independently complete accounting of carbon assets, performance of carbon reduction obligations, and carbon trading under the unified supervision and guidance of the Headquarters.

### Capacity building

CR Power has periodically organized trainings on carbon asset policies, capacity building, and major trading processes of the national carbon market including the calculation and

allocation of emission quotas, trading, and performance, allowing for easier entry into the carbon market and more effective management of carbon trading.

### Pilot trading

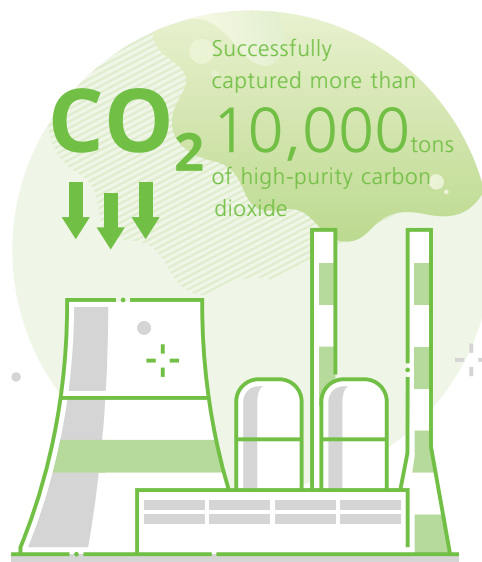
All regional companies have innovated in carbon trading models and reasonably allocated their carbon assets to reduce their performance costs. In 2020, CR Power had five pilot carbon trading projects, namely Guangzhou Power Plant, Haifeng Power Plant, Puqi Power Plant, Yichang Power Plant, and CR Golden Concord (Beijing) Thermal Power Plant, which provided experience for CR Power to fully engage in carbon trading.



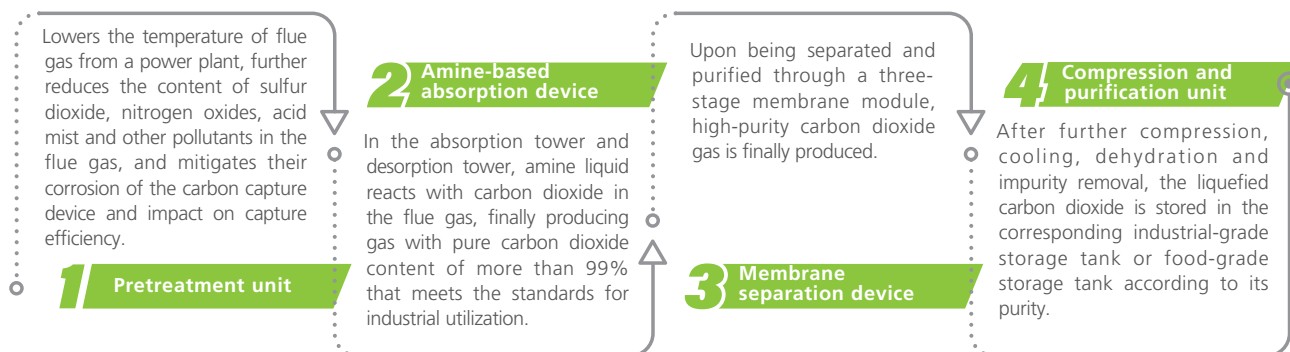
## Exploring CCUS Technology

To date, carbon capture, utilization and storage (CCUS) is one of the technologies that allow us to substantially reduce GHG emissions. The UN Intergovernmental Panel on Climate Change (IPCC) has identified CCUS as one of the most important technologies for coal-fired power plants to achieve their 2050 GHG emissions reduction goal. Keeping up with international GHG emission policies and technologies, CR Power has established its first international multi-technology CCTP for coal-fired power plants in Asia at Haifeng Power Plant to explore the practical application of CCUS.

The CCTP at Haifeng Power Plant, composed of pretreatment, amine-based absorption, membrane separation, and compression and purification systems, has successfully captured more than 10,000 tons of high-purity carbon dioxide.



## Technical Process for CCUS



### Our Cutting-Edge Explorations:

While profit maximization is not part of its commercial goal, the CCTP at Haifeng Power Plant has publicly introduced new carbon capture technologies for testing and demonstration with partners, in order to seek the best solution to reduce the cost and technical risks of the project. Under an industry-university-finance-research collaboration model, the project has cooperated with institutions – China Energy Engineering Group Guangzhou Electric Power Design Institute Co., Ltd., UK-China (Guangdong) CCUS Centre, Technology Centre Mongstad (TCM) in Norway, and US National Carbon Capture Center – in producing world-leading technological achievements and exploring sustainable CCUS business models.

The CCTP will continue to conduct research on low-carbon industries in Guangdong Province as well as in the rest of China. It will also look for potential corporate, university and institutional partners, hold regular seminars on CCUS, and invite representatives from upstream and downstream companies and experts to discuss potential development opportunities and plans for the project. In addition, the CCTP will apply to become a provincial and national engineering laboratory, strive to develop itself into a high-quality and representative industry-university-research collaboration project, build CCUS industries in Guangdong Province and in the rest of China, and integrate industry-university-research resources for technology demonstration.

# Improving Environmental Management

Committed to the philosophy of “seeking economic development not at the cost of ecological environment”, we have been doing our utmost to protect and improve the environment while providing the society with safe and stable power and heat supply. For harmonious coexistence with nature, we have set environmental management indicators, established a sound environmental management system, and developed innovative environmental protection technologies.

## Environmental Management Indicators

CR Power sets quantitative annual environmental management indicators, breaks down its strategic goals into actionable tasks in day-to-day operations, reviews the annual achievement of the goals, and timely adjusts the priority and direction of future operations.

### Environmental Management Indicators

	Proportion of renewable energy (%)	Net generation standard coal consumption rate (subsidiary coal-fired power plants) (g/kWh)	Pollution incident of major or higher impact
2020 Goals	29%	0.1% lower than in 2019	0
2020 Achievements	25.9% for operational renewable energy and 31.1% for grid-connected renewable energy; goal achieved	296 g/kWh (-0.6 g/kWh or -0.2% YoY); goal achieved	0; goal achieved
2021 Goals	Proportion of operational renewable energy (%): 31%	YoY decline	0
	SO <sub>2</sub> emissions	NO <sub>x</sub> emissions	Particulate emissions
2020 Goals	2% lower than in 2019	2% lower than in 2019	9.5% lower than in 2019
2020 Achievements	-9.84% YoY (on a comparable basis); goal achieved	-5.49% YoY (on a comparable basis); goal achieved	-14.18% YoY (on a comparable basis) goal achieved
2021 Goals	Lower than in 2020	Lower than in 2020	Lower than in 2020
	Chemical oxygen demand (COD) emissions (tons)	Comprehensive energy consumption rate per RMB 10,000 of output value (tons of standard coal)	Comprehensive energy consumption rate per RMB 10,000 of industrial added value (tons of standard coal)
2020 Goals	Lower than in 2019	3% lower than in 2019	2% lower than in 2019
2020 Achievements	55.02 tons (-53.58% YoY); goal achieved	3.67 tons (-8.19% YoY); goal achieved	8.57 tons (-14.47% YoY); goal achieved
2021 Goals	Lower than in 2020	3% lower than in 2020	2% lower than in 2020

- Note: 1 As of the end of 2020, the attributable operational generation capacity of wind, hydroelectric and photovoltaic power projects added up to 11,238 MW, accounting for 25.9% of the total. Some wind and photovoltaic power projects were grid-connected near the end of 2020 and have been put into commercial operation after passing trial operations in early 2021. The substantive construction and grid connection of these projects were completed before the end of 2020. As a result, by grid-connected capacity, the attributable operational generation capacity of renewable energy projects reached 31.1%. In 2021, the Company will aim to increase the attributable operational generation capacity of renewable energy projects by 3.9 GW.
- 2 NO<sub>x</sub> emissions in 2020 amounted to about 19,700 tons , a slight YoY increase, if including those from Caofeidian Phase II project, Cangzhou Yundong Power Plant project and Wujiangfang project. The above data has excluded the impact of the above three projects.

## Environmental Management System

CR Power has in place the *CR Power 6-Star Environment, Health, and Safety Management System*. Incorporating many of the elements of international standards such as ISO 14001 and covering all phases of the PDCA (Plan-Do-Check-Act) model, this system is more applicable to its organizational management process and business priorities. CR Power and its subsidiaries are required to observe this system in their environmental management. In accordance with international agreements such as the *Paris Agreement* and the *Convention on Biological Diversity*, CR Power has formulated internal policies such as *Environmental Protection Principles*<sup>1</sup>, *Ecological Protection Standards*, *Detailed Supervision and Management Rules for Energy Conservation and Emission Reduction Programs*. In addition, CR Power has encouraged and supported its subsidiaries to become ISO 14001 certified for environmental management systems ("EMS"). This has been achieved by subsidiaries including CR Power Northeast Power Engineering Co., Ltd.

The Board of Directors is responsible for CR Power's environmental strategy and performance. Each year, CR Power conducts periodic environmental reviews on its subsidiaries to ensure that they implement environmental management programs and comply with environmental management standards. In 2020, CR Power launched a comprehensive investigation of ecosystem protection risks, covering all of its subsidiaries. During the investigation, CR Power focused on issues such as fulfillment of responsibilities, compliance with laws and regulations, implementation of pollution control programs, and responses to the public's environmental demands,

identified 1,194 issues, and proposed rectification measures for all of them. For key projects, CR Power took a host of measures, such as environmental compliance review and demonstrative ecosystem protection inspection.

CR Power has set up an environmental training system, covering all levels of entities from the Headquarters to project companies, to ensure all employees receive such training. In 2020, CR Power raised the environment protection awareness of all employees by organizing trainings on special ecosystem protection inspection and related laws and regulations and issuing environmental cases for warning purpose.

Coverage of ecosystem protection risk investigation in 2020:

100%

Proportion of operational coal-fired generating units achieving ultra-low emissions in 2020:

100%

Hours of trainings for employees:  
596,024

Hours of trainings for employees of stakeholders:  
705,945

Total hours of EHS trainings organized by CR Power in 2020:  
1,301,969



<sup>1</sup> The *Environmental Protection Principles* provide CR Power with guidance on biodiversity protection and GHG emission reduction, and hazardous waste reduction, covering in whole CR Power's scope of operations and suppliers ([Learn more about the Environmental Protection Principles](#)).

## Environmental Impact Management

In accordance with the *PRC Environmental Impact Assessment Law*, CR Power has ensured that various pollution control facilities are competently constructed, operated, and managed in strict compliance with the “Three Simultaneous” requirements<sup>1</sup>. Moreover, in line with the *Interim Measures for the Administration of Contingency Plans for Environmental Emergencies*, CR Power has conducted risk screening and developed the emergency plans for responding to various types of pollution before putting a project into operation. In 2020, CR Power revised the *Management Rules for Ecosystem Protection*, setting new standards for environmental protection and pollution prevention.

### Air Pollution

In accordance with the *PRC Air Pollution Prevention and Control Law*, the Company has upgraded its thermal power plants to achieve ultra-low emissions and coal yard enclosure so that pollutant emissions can be reduced at source. In addition, the Company has a real-time online monitoring system to closely monitor pollutant emissions.

#### Ultra-low emissions by thermal power plants

According to China’s *Action Plan for the Upgrade and Retrofitting of Conservation and Emission Technologies in Coal-Fired Generating Units (2014-2020)*, CR Power has conducted a phased upgrade of its thermal power generators to achieve ultra-low emissions. This program has lowered the concentrations

of sulfur dioxide, nitrogen oxides, and particulates in emissions to below 35 mg/Nm<sup>3</sup>, 50 mg/Nm<sup>3</sup>, and 10mg/Nm<sup>3</sup>, respectively, meeting the corresponding national standards (GB13233-2011). In 2020, CR Power upgraded its two 200 MW coal-fired generators in Shenyang to achieve ultra-low emissions. By November 2020, all coal-fired power generation units run by CR Power had achieved ultra-low emissions.

#### Daily monitoring:

Flue gas emission monitoring system is installed at all of CR Power’s thermal power plants in accordance with MEE’s *Specifications for Continuous Emissions Monitoring of SO<sub>2</sub>, NO<sub>x</sub> and Particulates in the Flue Gas Emitted from Stationary Sources*. This system transmits real-time pollutant data to local environmental authorities. In the event of abnormality, on-site personnel can be contacted at any time to take emergency measures. For added insurance, power plants periodically compare the data manually to ensure the integrity and validity of the transmitted data.

#### Fully-enclosed coal yards:

In order to further control pollution to the air and environment, CR Power carried out the transformation of 12 power plants with enclosed coal yards to promote the treatment of dust emissions from coal yards, and at the same time reducing the risk of water pollution caused by rainwater carrying coal water.

#### Environmental technologies:

CR Power embeds the supervision and management of energy-conservation and emission-reduction technologies in the power generation process. It also supervises, adjusts, and evaluates parameters, performance, and indicators crucial to the economic operation of generators, in order to achieve the lowest overall consumption of coal, electricity, oil, steam and water.



<sup>1</sup> “Three Simultaneous” requirements: Environmental facilities are to be designed, constructed, and operated concurrently with the principal facilities.

## Water Pollution

CR Power has strictly controlled the treatment and discharge of industrial wastewater in accordance with the *PRC Water Pollution Prevention and Control Law* and local discharge standards. In 2020, CR Power formulated a technical roadmap and action plan for wastewater treatment and completed the comprehensive treatment of wastewater for 16 thermal power projects. As a result, the COD emissions of Jiangsu Xuzhou Power Plant and Shandong Heze Power Plant dropped by 11.69 tons and 39.07 tons, respectively, year on year.

### ■ Classification and collection of wastewater:

All water used for repair and maintenance of generating units and cleaning of various machinery and equipment is collected and recycled. All wastewater from chemical cleaning and shutdown protection is collected and recycled by each project company, or treated by their authorized qualified entities, in accordance with the pre-determined disposal plan.

### ■ Wastewater treatment facilities:

Each project company has, based on its own operations, set up facilities for treatment of sewage, chemical wastewater, desulfurized wastewater, coal-containing wastewater, and oily wastewater to meet applicable wastewater discharge standards.

## Solid Waste Pollution

In strict accordance with the *PRC Law on the Prevention and Control of Environmental Pollution by Solid Wastes*, we take actions to reduce the creation of wastes, and supervise its collection, storage, transportation, utilization, and disposal to prevent pollution incidents. Pursuant to the requirements of this Law as revised in 2020, we have organized relevant personnel to understand and study this Law to ensure that the Company always complies with the updated national, local and industry requirements for solid waste management.

### ■ Disposal of non-hazardous wastes:

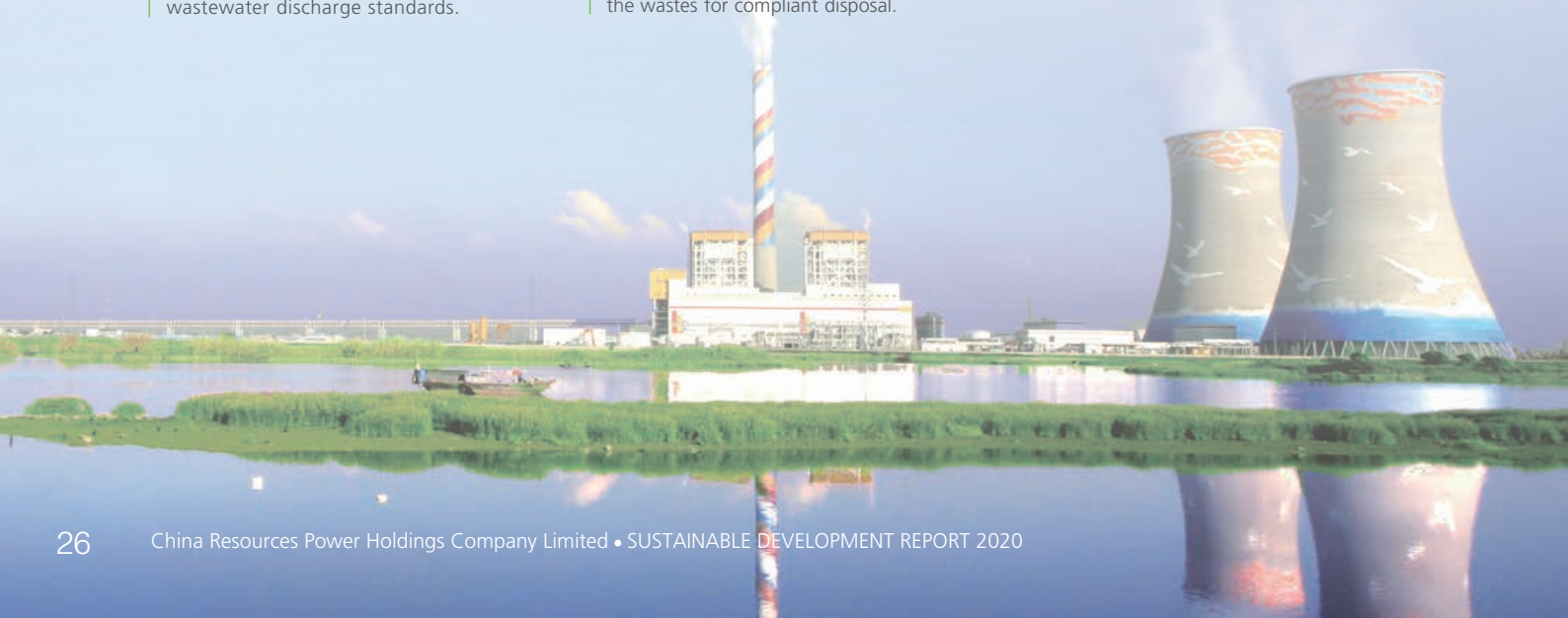
At our power plants, non-hazardous wastes mainly comprise furnace by-products such as fly ash, slag, and desulfurized gypsum. Through an integrated utilization approach, we have increased the recycling of non-hazardous wastes as harmless resources.

### ■ Disposal of hazardous wastes:

Hazardous wastes generated by power plants mainly include waste grease, catalysts, and lead batteries. Pursuant to the *Technical Specifications for the Collection, Storage, and Transportation of Hazardous Wastes* and the *Multi-Receipt-Based Management of Hazardous Wastes*, and other rules, we have implemented multi-receipt-based management by engaging qualified third parties to transport the wastes for compliant disposal.

## Green Office

CR Power has actively promoted employees' awareness of environmental protection, strengthened office water and electricity management to reduce waste. We have reduced greenhouse gas emissions from employee travel through extensive use of video conferencing systems. We launch afforestation activities during Arbor Day every year. All local subsidiaries have actively carried out vegetation restoration and site greening, planted trees according to soil characteristics while using water cellars to collect rainwater for tree irrigation. We hope to promote the realization of personal low-carbon life and the sustainable development of the Company by guiding and motivating employees to create a good atmosphere of energy saving, emission reduction and green office.



## Protecting the Ecosystem

In accordance with the *Regulations on Land Reclamation* and the *Provisions on the Protection of the Geologic Environment of Mines*, CR Power has formulated its *Plan for the Protection of Geologic Environment of Mines and Land Reclamation* to restore subsidence land caused by coal mining. In 2020, through specific measures such as leveling land, improving the physical and chemical properties of soil, and growing plants, Tianneng Coal Mine in Xuzhou established a new land use ecosystem and formed fresh artificial and natural green landscapes, ecologically restoring 3,990 mu of coal mining-induced subsidence land.

For hydroelectric power projects, CR Power maintains a stable aquatic ecosystem by carrying out ecological fish planting and artificial breeding, building fish passages and artificial spawning grounds, and protecting fish habitats. CR Power strictly prohibits the dumping of excavated excess soil into rivers and streams, and has set up pipe and box culverts to help amphibians

and reptiles pass under roads. In 2020, CR Power organized a fish planting activity in the reservoir area of Sichuan Yazui River Buxi Hydropower Station, planting 3,000 *schizopygopsis malacanthus fry* to enhance fish reproduction in the Yazui River basin and further improve the aquatic ecosystem.

For wind power projects, CR Power carries out ecological environmental protection and water and soil conservation as early as during the site selection stage. CR Power avoids areas requiring more efforts on preventing and controlling water and soil erosion and develops a water and soil conservation plan for minimum soil disturbance and vegetation damage. After a wind farm is built, CR Power conducts ecological remediation on an ongoing basis, such as restoration of vegetation, conservation of water and soil, and maintenance of biodiversity, in accordance with its *Ecosystem Protection Standards*. In 2020, CR Power had 28 new energy projects passing environmental protection acceptance and 35 projects passing soil and water conservation acceptance.

### Our green efforts

CR Power's Nankang Qingtian Wind Farm, has an installed capacity of 64 MW, equipped with 32 wind turbines and covers a land area of 63.25 hectares. The stratum mainly consists of muddy clay, silty clay, gravel soil and weathered siltstone. The slopes are steep, some of which are as high as 30 meters. Due to the combined effect of multiple factors, the original water and soil conservation plan of the wind farm (i.e., direct spray-seeding grass plan) experienced setbacks, affecting the vegetation restoration of the slopes.

The project has innovatively developed various vegetation restoration test areas according to local conditions, including improved soil test area, spray seeding test area, three-dimensional geotextile mat test area, and steel wire gauze test area for upper slopes, to seek the best solution through comparative analysis. After the design institute, supervision, and construction units conducted on-site surveys and organized special seminars, a new implementation plan for re-greening was formed, taking

into consideration the effects of the test area.

According to the new plan, different vegetation restoration options have been selected based on the different geological conditions of each site and the vegetation restoration results of each test area: three-dimensional geotextile mat-based external-soil spray seeding for excavation side slopes, steel wire gauze-based external-soil spray seeding for high and steep stone side slopes or unstable soil-rock side slopes, and three-dimensional geotextile mat-based external-soil spray seeding or man-made horizontal groove planting for earth fill slopes depending on the slope ratio and geological conditions.

We have endeavored to plant 27,300 square meters of grass in the booster station area, 525,000 square meters of grass on road side slopes and wind turbine platforms, as well as 45,000 climbing plants such as ivies and creepers and 3,000 seedlings such as cedars.



High side slope with weathered rocks before vegetation restoration



Side slope after vegetation restoration

# Promoting Circular Economy

In accordance with the *PRC Circular Economy Promotion Law*, CR Power has fully implemented the reduce-reuse-recycle paradigm and has been continuously improving the utilization of water and solid wastes to reduce dependence on natural resources and protect and improve the environment.

## Lowering Water Use

CR Power highly values the management of water resources during its production and operation process. The Board of Directors has set up the Sustainability Committee to supervise and urge the Management Team to perform duties in ecological protection, including in formulating strategies for and improving performance in water resource management. In 2020, CR Power explored the application of advanced water conservation technologies, strengthened water management and reduced fresh water consumption. It also encouraged all of its power plants to cut down on water usage at the source, look for alternative water sources, and improve water use efficiency.

### Reducing the use of fresh water:

According to the actual conditions, we preferentially use reclaimed water (i.e., treated wastewater) in our operations and apply technologies such as closed-loop water cooling system and flue gas dehydration to increase impurity concentration in circulating waters and reduce the loss of fresh water. With reclaimed water as its main water source, Jiaozuo Power Plant uses the discharged sewage of the circulating water system to produce desalted water, realizing the plant-wide cascade utilization of wastewater. In 2020, our application of the reclaimed water reuse technology resulted in a total consumption of 33.89 million tons of reclaimed water and a decrease of 36.6% in comprehensive water consumption for power generation since 2015.



### Innovating in water-conservation technologies:

Considering its raw water quality and raw water treatment process for thermal power generation, Fuyang Power Plant has innovatively flowed the clean water of its sludge sedimentation tank back to its reaction sedimentation tank, conveyed the sludge water to its sedimentation tank for coal water treatment, and then used the precipitated sludge and coal ash for furnace combustion. This can provide a water source for and dispose of solid wastes from coal water treatment facilities. In addition, some power plants have, in view of the similar water quality of desulfurized wastewater and seawater, reused desulfurized wastewater in their electrolyzed seawater chlorination devices to integrate water conservation with wastewater disposal.



## Integrated Use of Solid Wastes

CR Power has been promoting integrated use of solid wastes through sludge-coupling power generation, utilization of ash and other by-products and recycled use of industrial solid wastes in multiple projects, gaining experience in the integrated use of solid wastes in the power industry.



Haifeng Power Plant Sludge-Coupling Mixture Project

### Sludge-coupling power generation:

We have applied the sludge-coupling power generation technology, where sludge is mixed with coal before incineration. This technology makes large-scale treatment of sludge become possible, and the resulting additional heat can also be used for power generation. In 2020, we put into operation the world's largest sludge-coupling power generation project, which has a daily sludge disposal capacity of 6,000 tons (80% moisture content). A total of 14 coal-fired power plants in Jiangsu, Guangdong and Hubei processed 750,000 tons of sludge during the year through this technology.

### Enhancing the utilization of by-products:

Jiaozuo Power Plant has built a fully enclosed storage facility for ash and slag, raising the overall utilization rate of the by-products to 100%. Northeast China, Inner Mongolia and others regions have limited capacity to absorb solid wastes like fly ash, slag, and gypsum. For this reason, CR Power has cooperated with local governments and building materials companies to open up green channels for transporting solid wastes to other regions and improve their multiple use efficiency.

### Recycling industrial solid wastes:

Guangxi Hezhou Power Plant has recycled marble waste slurry for flue gas wet desulfurization. Since 2016, it has consumed 450,000 tons of marble waste slurry. Likewise, Dengfeng Power Plant has been conducting research on the desulfurization technology which replaces limestone power with calcium carbide slag, a waste by-product from the chlor-alkali industry, in order to address the disposal of by-products in the chlor-alkali industry. Since 2019, Dengfeng Power Plant has reduced solid wastes from the chlor-alkali industry by 50,000 tons, carbon dioxide emissions by over 20,000 tons, and mined limestone by about 50,000 tons.



Signing rate of CR Code of Business Conduct

100%

Number of integrity trainings for all employees

1,527

Safety training coverage ratio

100%

Total number of hours of safety training

1,301,045

Total number of safety training participants

263,379

Safety investment

RMB 143 mn

Number of emergency drills

1,718

Number of emergency drill participants

27,541

## Risk and Safety Management

## Solidifying Development Foundation

We always believe risk and safety management is the guarantee of sound development. Hence we build the awareness of compliance management, increase the capability to prevent and control risks, improve internal control, and focus on preventing and diffusing major risks. We also create an all-encompassing safety network that enhances safe production and the accountability of our subsidiary companies, laying a solid foundation for our sustainable and healthy development.

### UN Sustainable Development Goal

12 Responsible Consumption and Production



### CR Power Actions

- Setting up the Internal Control and Risk Management Committee as part of the internal control and risk management system to strengthen compliance and risk management;
- Requiring every employee to sign a letter of commitment to the *CR Code of Business Conduct*, to regulate the behavior of employees and raise their awareness of compliance;
- Creating the *CR Power 6-Star Environment, Health, and Safety Management System* to ensure sustainable production; and
- Making 90% of subsidiary companies' safety indicators reach industry-leading levels

# Boosting Compliance

CR Power follows the concept of governing the enterprise according to law, conducts business in good faith, strengthens the construction of corporate compliance, integrates the concepts of legal compliance and risk prevention into all aspects of corporate production and operation, and gives full play to the synergies between of integrity, legal system, and internal audit compliance to promote the scientific and stable development of the Company.

## Creating a Compliance System

CR Power continues to ensure that our operations and employees comply with laws, regulations, regulatory rules, industry norms, our articles of association and systems, as well as international conventions and rules. Specifically, we establish the Compliance Committee to organize and coordinate compliance management activities, and launch a legal risk management program, which comprises ten compliance risk manuals covering employment and all business lines, including thermal power, photovoltaic, wind power, and heat supply.

Each year, we select areas of top concern based on our business management and operations, refine and summarize the compliance risks involved, and develop guidelines to enhance the Company's compliance management. In 2020, CR Power implemented compliance management in environmental compliance, regulatory review, and connected transactions management.



## Consistent Business Ethics

In 2020, CR Group released the *CR Code of Business Conduct*<sup>1</sup> (the "Code") to guide the business activities of its subsidiaries and employees. As a CR subsidiary company, we and our affiliates have since required our directors, managers, and employees to observe the Code, in addition to external regulatory requirements and applicable laws and regulations. We define and regulate the behavior of employees in line with the Code and undertake to act in accordance with its compliance requirements wherever applicable.

As of the end of 2020, our staff had signed the Code online or offline and completed corresponding compliance training. A culture calling for compliance on everything by everyone at any time was fostered, further reinforcing our compliance awareness.

<sup>1</sup> The *CR Code of Business Conduct* specifies the requirements on CR Group and its subsidiary companies and their responsibilities for violating such requirements, including anti-trust and unfair competition, anti-commercial bribery, gifts, and entertainment, anti-bribery regulation during engagement with governments and regulators, ethical handling of personal and professional conflicts of interest, information security and privacy management, etc. (Please refer to The CR Code of Business Conduct for details).



## Strengthening Anti-Corruption Safeguards

In accordance with *the Company Law of the People's Republic of China*, *Supervision Law of the People's Republic of China*, *Anti Unfair Competition Law of the People's Republic of China*, and other anti-corruption and anti-bribery regulations, as well as internal rules such as the *Management Measures for the Integrity and Self-Discipline Information of Managers and Key Personnel*, and *24 Rules for the Conduct of Managers*, we standardize and intensify supervision over key managers, and create a general supervision network led by the Company, overseen by the Safety Supervision Department, and supported by all departments.

We created a multi-dimensional, company-wide integrity education platform that consists of bulletin boards, internal Supervision Briefing, and WeChat Public Account "Anti-Corruption in CR Power". The platform delivers regular training and education sessions to the staff. During the reporting period, no lawsuit was brought against CR Power for commercial bribery, blackmailing, fraud, or money laundering.

We have a Whistleblowing Policy<sup>1</sup>, according to which the Supervision Department conducts investigations into the reported matters and, if applicable, takes proper follow-up actions.

### Providing Smooth Whistleblowing Channels

We provide smooth whistleblowing channels, including hot-line, email, website, and WeChat Public Account "Anti-Corruption in CR Power," to receive information in an orderly manner.

### Treating Whistleblowers Fairly

We ensure that whistleblowers who report information truthfully and appropriately will be treated fairly and will not be subject to dismissal, injury, or improper disciplinary measures.

### Protecting Whistleblower Privacy

We protect the privacy of whistleblowers to the best of our ability. In case the identity of a whistleblower is required or likely to be disclosed, we will inform the whistleblower in advance wherever possible and get his/her consent. It is forbidden to disclose the personal information of any whistleblower.

### Handling Whistleblowing Cases Properly

We put in place a complete handling process composed of seven steps, i.e., registration, lead analysis, evaluation, acceptance, investigation, disposal, and closure. Every case is treated seriously.

### Facts & Figures:

#### Identifying Corruption Risks:

Through a thorough investigation, we identified **174** risks in corruption-prone areas and processes, and developed over **200** preventive measures.

#### Responding to Integrity Suggestions:

We launched a consultation on keeping the integrity record and information of managers and key employees, receiving responses from 1,674 people.

#### Enhancing Professional Training:

We organized centralized and hands-on training to constantly improve the capability of the supervisory team. During the year, we provided four face-to-face training sessions to **240** inspection cadres.

#### Promoting Regular Staff Education:

We launched the Grassroots Level Integrity Education Program and customized a series of trainings. A total of **1,527** training sessions were organized, with a total of **37,000** participants.

<sup>1</sup> The Whistleblowing Policy stipulates that employees and relevant third parties such as customers and suppliers who have business dealings with the company may, anonymously or with confidentiality, report any misconduct, fraud, and violation in the company's financial reporting, internal control, or other matters (please refer to the Whistleblowing Policy for details).

# Preventing Operational Risks

Through risk identification and response, the establishment of an internal control system, and the protection of information security and intellectual property rights, we continue to strengthen management and control of operational risks. To ensure the risk management department is not influenced by the business departments, our risk management structure functions independently from division of duties to reporting mechanism.

## Risk Identification and Response

CR Power has established a risk standards assessment system covering all business units which conducts annual risk assessments and requires all units to fill in a quarterly major risk monitoring forms every quarter, allowing response measures to be formulated in a timely manner. The top five major risks identified in 2020 include: EHS protection risks, policy change risks and macroeconomic risks, procurement management risks, investment and M&A risks as well as human resources risks. In addition, we analyzed policies on China's 2060 carbon neutrality target, consolidation of coal-fired power companies, and power market reform, and evaluated the existing and potential impacts of market changes on our operations, management, and profitability. We have also developed corresponding mitigations and promoted the implementation of relevant plans.

## Internal Control Evaluation

To ensure internal controls are conducted and evaluated by separate teams, we established the Internal Control and Risk Management Committee in 2020. Headed by the President of the company, the Committee is responsible for developing plans and systems for internal control and risk management, tracking and collecting major risk changes and risk management information, and organizing annual major risk evaluation, self-evaluation of internal controls, and relevant supervisions and inspections.

CR Power conducts special audits for key management issues across the organization annually. In 2020 our special audits focused on the economic responsibility of leaving managers, infrastructure projects, technological transformation, renewable energy operations, and project closures, covering both us and our affiliates. Suppliers are also included in internal control. In 2020 supplier compliance audits included economic responsibility and project operations.

## Intellectual Property Protection

Based on 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 applicable laws and regulations, we formulated the *Standard for Research and Innovation Management*, providing practical guidance for approving research and innovation projects, transferring project results, managing experts, protecting intellectual property, and issuing awards. Also, we released the *Measures for Patent Application Management*, which specifies patent application procedures and requirements, as well as application drafting standards, aiming to improve the quality and standard of patent applications.

In 2020, we redefined the responsibilities of the Innovation, Development and Intellectual Property Committee. Its responsibilities include providing intellectual property protection suggestions to the Company and providing effective references to assist the decision-making process of the Company. We also conducted patent value risk management, including reviewing patent grading and classification reports, identifying legal risks, and analyzing existing technologies in the industry.

### Case Study

#### Developing Audit Risk Warning

Recognizing technology empowers auditing, we independently developed and launched an off-site audit system. Supported by basic functionalities of data search and verification, automatic modeling and analysis, and statement presentation, the system can sample and analyze all purchasing data, and quickly identify major issues and risks, improving auditing efficiency. The system will then share the auditing results or give out a warning, so that relevant departments can take prompt countermeasures. It is helpful in establishing an internal control and risk management mechanism that features online monitoring, early warning, and continuous improvement.

# Enhancing Safe Production

The safety and lives of employees are always our top priority. We create an all-encompassing safety network from the aspects of organizational structure, systems, risk management, emergency response, monitoring and feedback, and safety culture. The aim is to reduce potential safety and health risks in the workplace and create a safe working environment for employees and other stakeholders.

## Practicing Safety Management

We created the unique CR Power 6-Star EHS Management System, carried out safety management and safety risk prevention according to the *CR Power EHS Management Plan 2016-2020*, and signed *Safe Production Accountability Statement* with subsidiary companies to ensure that clear safety responsibilities are assigned to corresponding jobs and cover the entire production process. In 2020, we caused 90% of subsidiary companies' safety indicators to reach industry-leading levels.

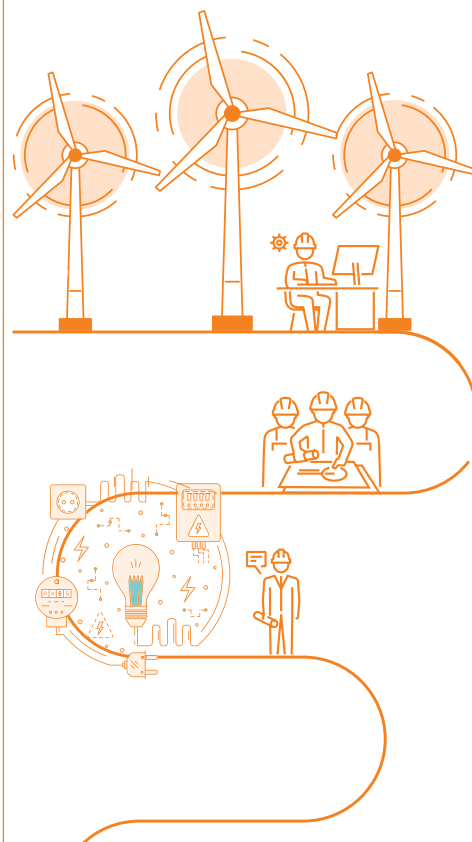
All levels of CR Power companies regularly identify and assess operating, regional, and job safety risks, and develop preventive and control measures according to risk level. We continue to conduct safety inspections for production, pandemic prevention and resumption of work and production, safe production month, and major holidays, to identify potential safety hazards and clarify

accountabilities. In 2020, we formulated the *Three-year Action Plan for Safety Production*, under which we took various actions targeting operations, construction, information, and hazardous chemicals. We also fully reviewed the 6-Star EHS Management Systems of subsidiaries and audited their EHS performance on a trial basis, to improve the EHS system and promote EHS implementation.

In accordance with the *Guidelines for Standardized Maintenance Management of Generating Units*, we continue to promote standardized equipment maintenance, enhance preventive maintenance of equipment, intensify control over on-site equipment defects and hazards, and comprehensively implement technical supervision. In this way, we increase the safety level of equipment and ensure safe and reliable operation. In addition, we provide operators with suitable safety products and personal protective equipment to safeguard their health and safety.

### In 2020

We evaluated the safety of 14 wind and thermal power plants, conducted EHS inspections for 118 lower-level companies, and issued 136 inspection and support reports. We identified 1,661 issues during the safe production inspections, of which 98.52% have been addressed, carried out repair and maintenance on 50 generating units, and eliminated 98.96% of the defects identified. There were neither normal nor major equipment accidents during the year.



Days of safe operation (D)	Number of subsidiary companies
D≥4,000	13
3,000≤D<4,000	8
2,000≤D<3,000	21
D<2,000	39

Note: In the past 5 years, many new projects have been put into operation.

## Fostering Strong Safety Culture

CR Power carries out various forms of safety publicity and education, encourages setting up independent safety teams, and uses a strong safety culture atmosphere to consolidate the foundation of safety culture construction.

### Safe Production Month and Safety Journey Programs

Through safety hazard detection and control, lessons learned from accidents, and general safety inspections, we raised the safety awareness of employees as the basis for better risk management.

### Collecting Typical Production Accidents

We completed and published the *Compilation of Typical Production Accidents* and organized our affiliates to learn lessons from the accidents, conduct detection and remediation, and prevent similar accidents.

### Creating 3-2-1 Safety Training Model

We require lower-level companies to arrange one safety training session for general managers, two for department heads, and three for team leaders each year.

### Cloud Training for Safe Production

The cloud platform offers programs on safety-related laws and regulations, safety concepts and systems, as well as safety quiz games and comic contests. The number of training programs and attendance increase by 32% and 30% over the last year, respectively.

## Our Safety Explorations:

As the first line of defense in safety accidents, safety teams are the basic link in corporate safety management. Accordingly, strengthening these teams is not only essential to better safety management, but also the most practical and effective means to reduce accidents.

CR Power started to build safety teams since early 2018. In 2019 we enhanced routine supervision over stakeholders' work and managed their teams as our own safety teams to create closed-loop management. The year 2020 marks the start of our safety management system, further reinforcing our safety teams as the basis for safety management.

In 2020, we strengthened the safety teams at our thermal

power plants and even set an example for the industry. We turned this experience into 12 reports to the National Energy Administration. Our renewable energy division explored the way to build safety teams under centralized operation and maintenance. With our guidance and supervision, our affiliates tracked the monthly progress of regional and lower-level companies in building safety teams, and urged the regional companies to carry out safety team evaluation and rating according to the three-year controlling interest plan. In addition, we created the *CR Power Five-Star Safety Team Rating Standard* based on the *CR Power Interim Measures for the Maturity Evaluation of Safety Teams*, for the purpose of improving the autonomous safety management capacity of lower-level teams through closed-loop management.



## Improving Stakeholders' Safety Management

CR Power formulated the *Stakeholder EHS<sup>1</sup> Safety Management Rules* to control stakeholders' safety risks arising from their business dealings with us, arranged regular inspections and reviews, and exercised safety management through the entire process from safety accountability and objective management to supervision and evaluations. Furthermore, we conducted training sessions to help the personnel of stakeholders develop safety awareness and skills and improve suppliers' safety management capacity. In 2020 we offered 705,945 hours of EHS training to stakeholders.

We further intensified control over the dynamic risks in stakeholders' work process from stakeholder selection and site admission, to commencement, operation, and completion.

In 2020, one accident occurred with one of our stakeholders, resulting in one fatality. After the accident, we immediately formed an investigation team according to the *EHS Accident and Event Management Standards* to look into the accident and analyze its cause through on-site investigation, CCTV footage review, data search, and witness interviews. Based on the findings, we impose punishments on the liable company and individuals in accordance with the *Accountability Rules for EHS Accidents and Incidents*, *EHS Award and Penalty Standards (Tentative)*, and *Accountability Standards for EHS Accidents and Incidents (Tentative)*. To prevent similar accidents from occurring in the future, we issued accident notification and accident investigation reports for affiliated companies to draw lessons and conduct self-inspection and self-correction, and reviewed their performance during inspections.

### Selection

In accordance with the *Requirements for EHS Section of Engineering Project Bidding Documents*, contractors with stronger safety management capabilities are selected during the bid review.

### Site admission

Stakeholders are subject to reviews on their qualifications and licenses, safety track record, personnel, equipment, occupational health and training system, work plans, risk identification reports, and contingency plans.

### Start of work

Before commencing work, stakeholders need to attend safety training courses, pass the safety exam, and duly obtain the work commencement approvals.

### Operation

We implement consistent operational standards and manage stakeholder's teams as our own safety teams. We carry out random on-site inspections to detect potential problems and require timely rectifications, especially for high-risk operations. The entire process is tracked down to ensure end-to-end management.

### Completion of work

After work is completed, we will rate a stakeholder on its adherence to EHS commitments as reference for future selection processes.



<sup>1</sup> EHS means environment, health, and safety.

Total Assets

HKD 259.63 billion

Net Generation Volume of Subsidiary Power Plants

154,944 GWh

Attributable Operational Generation Capacity

43,365 MW

Annual R&D Expenditure

RMB 151 mn



## Bold Attempts at Innovation

# Accelerating the Transition toward Innovation-driven Development

CR Power has been actively adjusting its energy mix to improve its power quality and energy efficiency and exploring new integrated energy models through technological innovation. While accelerating business transformation, we also help customers shift from a traditional energy mix to the integrated model, meeting their higher demands for green energy and promoting the high-quality and steady development of the Company.

## UN Sustainable Development Goal



### CR Power Actions

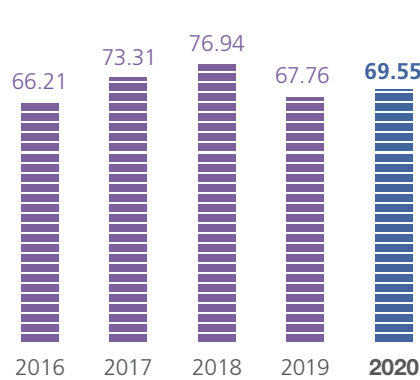
- In 2020, we invested more than RMB151 million in R&D to improve the innovation management system and adopt innovations to transform from a traditional energy mix to an integrated energy model that is clean, low-carbon, intelligent, eco-friendly, and efficient;
- We set up the Technology Management Committee to coordinate and promote management in project construction, technological transformation, technological innovation R&D, and energy technology research;
- Based on our experience in energy structural reform, green power transformation, and technological innovation, we provided our input to the 14th Five-Year Plan for the power sector; and
- We launched a range of energy management products, including the CR Smart Energy Platform, Energy Storage Cloud Platform, AGC Online Simulation Tool, Lingxi cooling and heating energy utilization products, smart industrial park energy planning software, smart business system, and smart operations and maintenance.

# Improving Competence

## Improving Quality and Efficiency

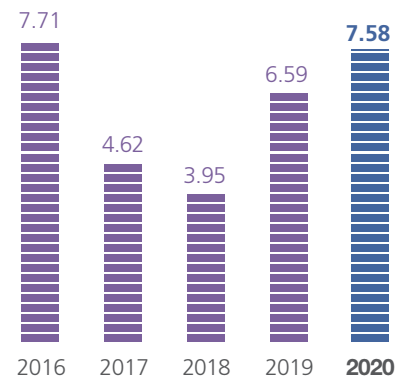
In 2020, the attributable operational generation capacity of CR Power’s renewable energy increased rapidly. Grid-connected renewable energy capacity increased by a record high of 4,447 MW. In addition, we sped up the restructure of coal assets by closing 2 mines in 2020, shedding 750,000 tons of annual output to further improve the asset quality.

Turnover (HKD bn)

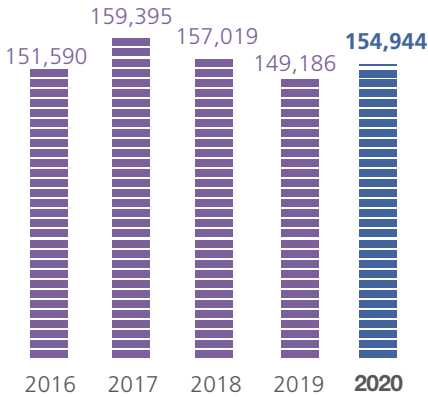


Profit Attributable to Owners of the Company

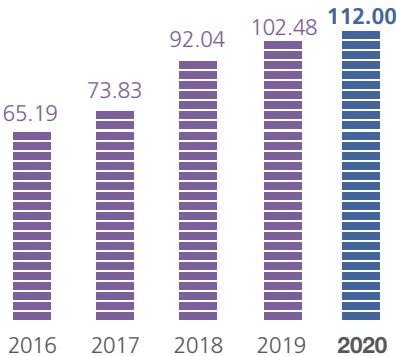
(HKD bn)



**Net Generation Volume of  
Subsidiary Power Plants**  
(GWh)



**Total Heat Supply (kJ)**



## Stimulating Vitality through Innovation

CR Power has been improving its innovation management system to underpin innovation. In 2020, we set up the Technology Management Committee to coordinate and promote management in project construction, technological transformation, technological innovation R&D, and energy technology research; redefined the responsibilities of the Innovation, Development and Intellectual Property Committee; and participated in and guided the formulation of innovation and entrepreneurship systems, resource coordination, expert pool creation, selection and incubation of innovation projects, etc. Furthermore, we optimized the organizational structure by establishing innovation teams in the Headquarters, regional and lower-level companies to ensure efficient innovation.

In 2020, we revised the *Standard for Research and Innovation Management*,

*Measures for R&D Expenditure Management*, and *Measures for Patent Application Management*, and set out to formulate the *Measures for R&D Evaluation and Rewarding*. These measures motivate innovations by providing additional financial support to R&D activities.

We enhance technological innovation to reduce the impact of traditional thermal power plants on the surrounding environment and communities. We carried out Theoretical Research and Development of Key Anticorrosion Technologies for Thermal Systems, and Control and Removal of Sulfur Trioxide in Coal-Fired Flue Gas, and significantly improved the operating efficiency of generating units, while reducing energy consumption and pollutant emissions.

In addition, by combining our innovations with cutting-edge

technologies such as big data, Internet of Things, and artificial intelligence, we developed a range of innovative products related to power generation. For example, the Centralized Supervision and Analysis Specialist System (CSASS) provides real-time monitoring and early warning, optimization plans, and decision-making support to ensure the safe and economic operation of thermal power generating units. The Smart Wind Farm increases the generation capacity of wind power plant through continuous optimization of turbine control strategy and digital management of smart equipment. The Order-Based Power Technology Service Platform promotes online, smart, and shared power technology services. And the RUY optimization system delivers unattended operation through the digital transformation, storage, passing, and application of thermal power plants' operating experience.

### Facts & Figures:

Number of R&D personnel:

336

New patent applications filed:

181

Total patent applications filed:

1,257

R&D expenditure:

RMB 151 million

Patents granted in the year:

132

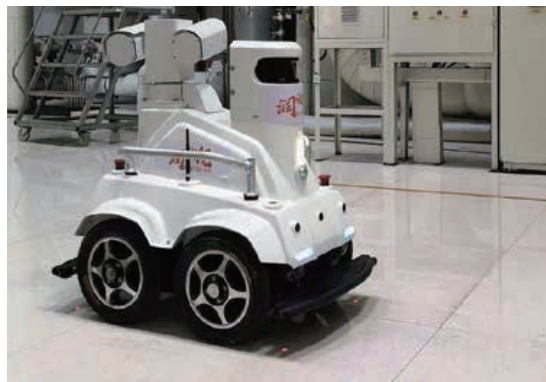
Total patents granted:

752

## Our Innovation Explorations:

The Runyoushi Intelligent Safety Control System provides a comprehensive power plant monitoring solution that integrates remote monitoring, video analysis, unattended security protection, and intelligent early warning. In 2020, CR Power Technology Research Institute upgraded the system, focusing on optimizing algorithms and platforms, and adding new functionalities such as integrating intelligent safety control with intelligent inspection.

- Increasing the algorithm running speed by 25% through upgrading the scheduling platform and adjusting the algorithm architecture;
- Updating key functionalities of the intelligent safety control platform, including upgrade of user interface and data transmission network architecture, and creating five software platforms such as intelligent contactless body temperature monitoring;
- Developing intelligent LEC risk assessment to control major risks;
- Exploring intelligent process control for ammonia unloading, absorption tower maintenance, and fuel transportation;
- Testing on-track robot for the coal transfer system at Hubei Puqi Power Plant; and
- Developing the second-generation wheeled robot, which features higher stability and inspection algorithm accuracy,



Second-generation Runyoushi Wheeled Robot

and optimized inspection platform. Its 5G intelligent inspection functionality was tested at Hebei Fengrun Power Plant.

By the end of 2020, the Runyoushi system had been installed in Hubei Puqi Power Plant, Hebei Fengrun Power Plant, Hebei Cangzhou Yundong Power Plant, and Central China Wind Farm.

## Promoting Business Transformation

To meet higher user demands for value-added services and energy efficiency and economy, we sped up the transformation from a traditional energy mix to an integrated energy model that is clean, low-carbon, intelligent, eco-friendly, and efficient. In 2020, building on existing smart distribution network, smart industrial parks, and industrial energy efficiency technologies, we renewed our focus on business types and scenarios, i.e., energy management platforms, application of energy storage technology, smart heating networks, smart industrial parks, and hydrogen energy.

In 2020, we launched a range of energy management products, including the CR Smart Energy Platform, Energy Storage Cloud Platform, AGC Online Simulation Tool, Lingxi cooling and heating energy utilization products, smart industrial park energy planning software, smart business system, and smart operations and maintenance. All of them are widely recognized by customers.

Several energy management platforms were built in 2020. The Intelligent Energy Company created

two industrial-park platforms – Jiangsu Taixing Hongqiao Industrial Park Smart Energy Cloud Platform and Nanjing Yanjiang Heating Network Monitoring Cloud Platform – as well as five corporate platforms, i.e., Tianjin MGL Energy Consumption Monitoring Cloud Platform, Fuqing Energy Consumption Online Monitoring Cloud Platform, Country Garden Silver Beach Hotel Smart Building Platform, Hezhou Power Plant Lingxi Energy APP, and CR (Zhejiang) Electricity Sales Company Electricity Application Applet.

### Case Study

#### Upgrading Smart Energy Management Platform to Cover More Types of Products

Relying on rich industrial experiences and data, we independently developed algorithm models to build the smart energy management platform, which enables centralized management of electricity, gas, cooling, and heating energy. The platform provides governments, industrial parks, and business customers with efficient energy supply and smart consumption services covering the entire process from energy planning, design, integration, construction, operation, and maintenance. In 2020, CR developed the second-generation smart energy management platform, which features an upgraded energy management system for the controller of the energy storage system, further covering thermal energy storage frequency modulation, wind energy storage integration, and solar energy storage integration. The new platform has obtained the level-3 information system security certification from the Ministry of Public Security.

# Improving Quality of Service

CR Power always provide customers with speedy, targeted, thoughtful, and satisfactory services. In accordance with the *Management Standards for Categorization of Energy Customers*, *Management Standards for Maintaining Relationship with Energy Customers*, *Management Standards for Customer*

*Services by Electricity Sales Call Center*, and *Management Standards for Electricity Sales 106 Text Message Platform*, we have set up differentiated power sales strategies, expanded customer base, selectively develop power distribution services, and offered complementary and integrated energy solutions.

In 2020

The Company's market-based pricing generation volume is

**105.2** TWh

Number of customers reached

**7,804**

Up 46% year-on-year

## Improving After-Sales Services

In addition to the account manager's daily visits to customers, maintaining relationships and handling problems, we take effective complaint handling as the first step towards better after-

sales services. Hence, we listen and respond to customers' feedback, and seek service improvement suggestions from their evaluations given in our satisfaction surveys.

### Handling Customer Complaints

Customers may send their queries or complaints through various channels, such as 400 Customer Service Hotlines, 106 Text Message Platforms, WeChat Official Account, and WeChat Runxiaoxi Service Account. We track 100% of the effective complaints to follow up with the customer to gather feedback, and then enter the complaint and outcome in our records.

### Conducting Customer Satisfaction Survey

Through phone calls or text messages, we conduct regular customer satisfaction surveys from six dimensions including contract performance, electricity bill settlement, service process, service efficiency, expertise and attitude of the account manager, and other opinions or suggestions. In 2020, the customer satisfaction rate was 95.8%.

### Caring for Customers

We regularly visit key customers and have set up a customer relations group on WeChat for major and group-company customers to provide better services. On holidays, we send our greetings and good wishes to customers through the 106 Text Message Platform and WeChat accounts. We have launched "Best Partner" and "Best Service Provider" awarding activities for high-quality customers and service providers, and we have also carried out the "Free Mask for Overcoming Tough Times" campaign, giving more than 20,000 masks to 623 contracted customers nationwide.



## Doing Responsible Marketing

We continue to enhance fair marketing management in accordance with the *Advertising Law of the People's Republic of China* and other applicable laws and regulations. During advertising, sales, and contract signing, marketing personnel are required to abide by relevant code of conduct, and are prohibited from overcommitting and disseminating misleading or ambiguous product information, to ensure customers' rights to be informed. We formulate the *Management Measures for Electricity Sales 106 Text Message Platform* to regulate the content, quality, and purposes of short messages. Any short message that violates the principle of fair marketing will be rejected and accountable persons will receive education and training.

We also value customer education and use online and offline channels to inform and educate our customers about the latest policies for the electricity market and our take on the current market situation.

Customers can also find information about national electricity market transactions, provincial power sales news, and our cloud-powered demonstration areas by following our WeChat accounts (including Runxiaoxi) and TikTok account.

Our magazine *CR Power Monthly* has a "Spot Power Market" column devoted to the spot market for electricity.

For customer requirements collected through phone calls, our account managers call customers to provide one-to-one training.

Moreover, we are joining hands with power exchange centers and other relevant organizations to answer customer questions, explain the workings of market-based electricity transactions, and comment on the development of the electricity market at face-to-face settings. We hope these events can help customers lower their energy bills.

## Keeping Information Secure

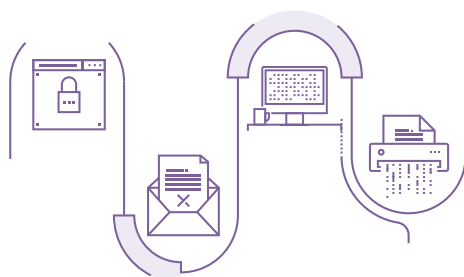
We strictly abide by the *Cybersecurity Law of the People's Republic of China* and other laws and regulations on the protection of key information infrastructure. We also draft and implement internal rules such as the *Management Measures for Information Security*, *Management Standards for Cybersecurity Incidents*, and *Management Standards for Information System Incidents*. We set up a cybersecurity leading group headed by the President, responsible for leading our cybersecurity activities and coordinating the decision-making of major cybersecurity issues.

We build systems that ensure the secure operation of our computers and related devices to achieve better protection against system security risks, and conduct regular inspections to detect and address safety loopholes for key data and personal information, thus ensuring information confidentiality and integrity. In their orientation, new employees need to attend cybersecurity training, and sign the *Letter of Commitment on the Use of Copyrighted Software*, *Confidentiality Agreement* and *Letter of Cybersecurity Accountability*. Our partners and suppliers are also required to sign a Letter of Confidentiality. For electricity sales involving customer information, the *Management Measures for Electricity Sales 106 Text Message Platform* specifies customer information security requirements and relating responsibilities, and the *Electricity Sales Cloud Platform Management System* defines the administrative permissions of the platform and controls the export of customer data.

Our information security measures also apply to suppliers. The *Procurement Center Management Guideline* provides the confidentiality obligations during procurement. Specifically, bidders should not disclose any non-public business or technological information on intellectual properties in the bidding documents without the consent of information owners, nor should they reveal any personal information during bidding and procurement.

In addition, we launch information security training through posters and videos, informing employees about the security risks frequently encountered on and off work settings, as well as how to avoid and handle them, in order to raise their awareness and related skills.

In 2020



We obtained the IT Server Room Power and Environmental System Certificate

100% of our employees signed the letter of cybersecurity accountability

Cybersecurity training coverage was 100%

# Enhancing Cooperation and Mutual Development

We value broad strategic partnerships and close cooperation with stakeholders, and seek diversified cooperation models to build harmonious relations with them. We work together to promote innovation and productivity in business development, project construction and operation, power sales, and integrated energy services, empowering and benefiting each other.

## Responsible Procurement

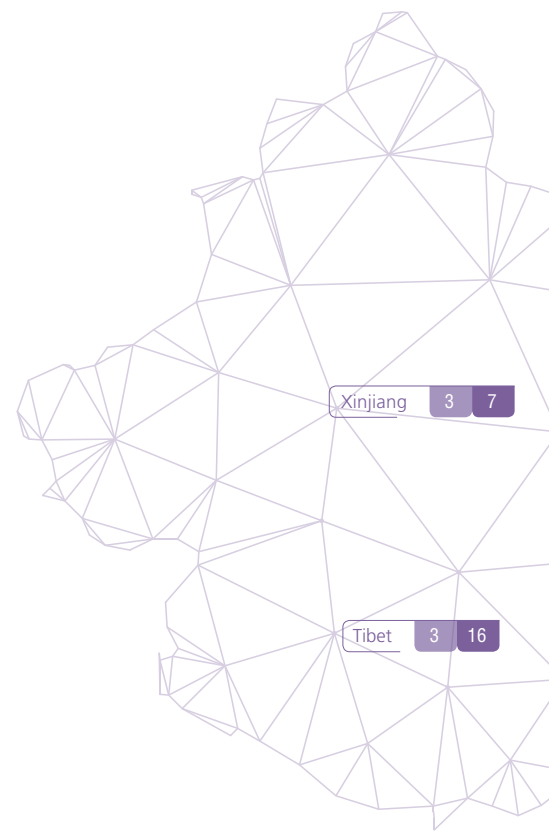
Applying the principles of fair trade, mutual benefit, and responsible procurement, CR Power selects suppliers based on merit. In accordance with the *Invitation and Submission of Bids Law of the People's Republic of China*, *Regulations on the Implementation of the Invitation and Submission of Bids Law*, and other applicable laws and regulations, we have developed internal procurement policies, including the *Supply Chain Management Principles*<sup>1</sup>, *Procurement Management Standards*, and *Bidding Supervision and Management Standards*. We have also created a procurement management system to facilitate information sharing among the headquarters and regional companies. A supplier database has been set up for centralized management of all suppliers from entry to exit.

We abide by the industry's code of conduct and business ethics. For procurement projects that are subject to a bidding process according to governmental or corporate rules, suppliers will be selected through competitive bidding. Information about every bidding process is available on our bidding platform to ensure openness and transparency. We have developed the *Code of Integrity*, requiring employees to maintain fair competition, fulfill the confidentiality agreement, comply with the avoidance system, acknowledge the tender results, and standardize bidding agency service. All our suppliers have been required to sign the Sunshine Declaration before bid opening so that they will reject bribes or demands for bribes from CR Power employees and may report to persons in charge of the inspection or audit department. We have zero tolerance

for anti-competitive behaviors such as collusion, below-cost bids, industry monopoly, and kickbacks. We have also set up a channel to receive and handle grievances and complaints from bidders during bid-invitation, bid-opening, and bid-award stage.

To create a more responsible supply chain, we formulate the *Guidelines for Stakeholder EHS Management in Bidding Process and Requirements for EHS Section of Engineering Project Bidding Documents*, which regulate suppliers' behaviors in environmental protection and safety management. According to these rules, bidders will be subject to an EHS review of their environmental and safety commitments, policy goals, governing bodies, personnel training, use of hazardous materials, personal protection, and environmental protection. Furthermore, we incorporate safety management requirements into bid documents and contracts, specifying the proportion of suppliers' safety production expenditure and the supervision of such expenditure. In the annual review of suppliers, we evaluate them in terms of product quality, after-sales service, project safety, and environmental protection. Delinquent suppliers will be identified, reviewed, and removed according to the *Delinquent Suppliers Management Process*.

In addition, to ensure that workers of suppliers receive their due payment on time, we specified, in our contracts with suppliers in 2020, terms on the separation of labor costs from project payments, use of dedicated account for workers' wages, payment period, and liabilities for violations.

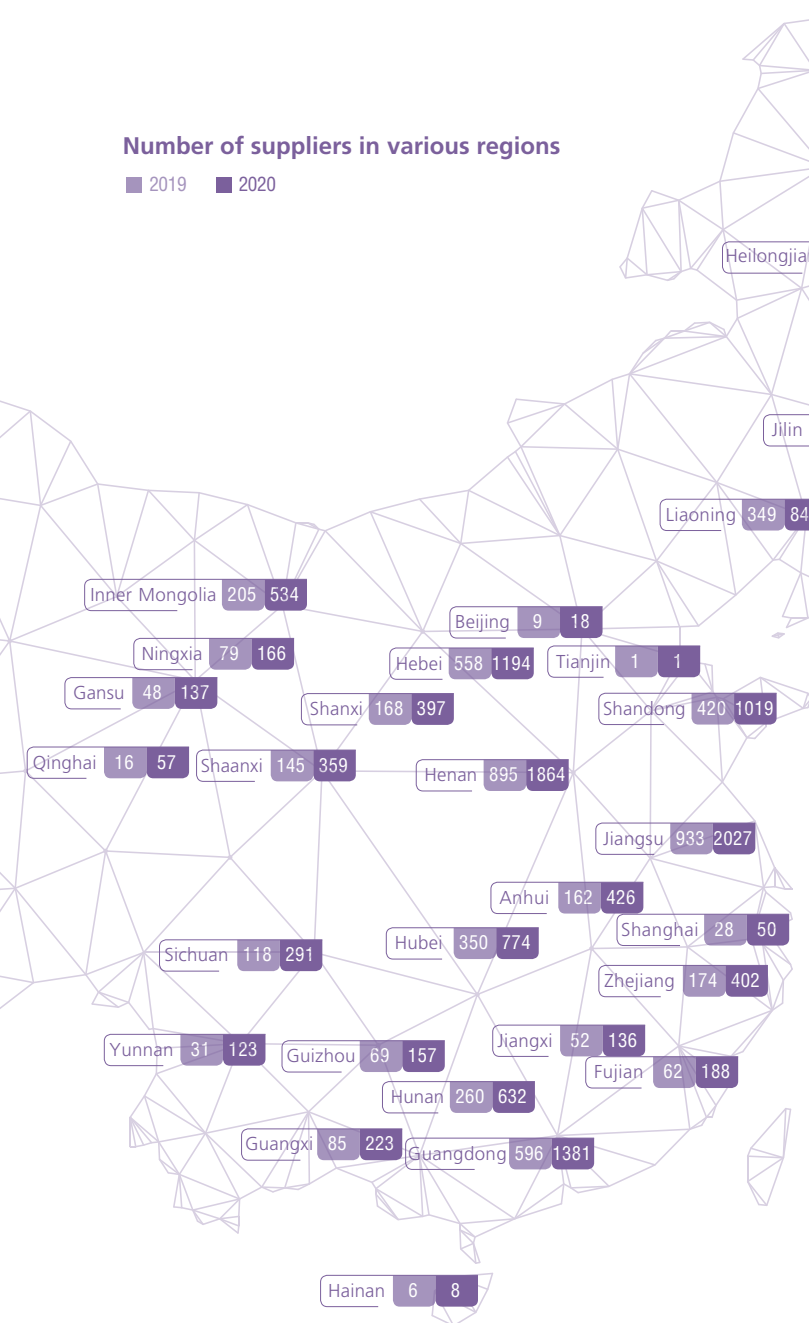


<sup>1</sup> The *Supply Chain Management Principles* regulates the business ethics of CR Power's suppliers in cooperation, specifies the responsibilities of suppliers in environmental protection, occupational health and safety, and practice on employment. The Principles also creates a channel to receive and handle grievances and complaints from suppliers (Please refer to the *Supply Chain Management Principles* for details).



## Number of suppliers in various regions

■ 2019 ■ 2020



In 2020

We evaluated

151,143 suppliers

Removed 39,527 suppliers who hadn't participated in any purchasing projects for more than three years

Identified 28,665 suppliers as qualified

Percentage of suppliers certified by the ISO 9001 (quality management), ISO 14001 (environmental management), and ISO 45001/OHSAS 18001 (occupational health and safety management) reached

100%

Percentage of economic contracts fulfilled

100%

Percentage of equipment localized

100%

Percentage of responsible procurement

100%

## Promoting Cooperation between Multiple Stakeholders



We collaborated with governments at all levels in a range of fields, primarily on poverty alleviation through photovoltaic and wind energy projects, sustainable wind energy development, construction of renewable energy bases, and intelligent energy services, to drive the industry and local economy. In 2020, we attended the National Energy Administration's "14th Five-Year" Power Planning Work Kickoff Meeting, the energy system reform planning seminars, and the wind power development seminars. At these meetings, CR Power gave

constructive suggestions based on experiences in energy structural reform, green power transformation, and technological innovation.

We explore ways to develop the industry, gain insight into the development trend, and lead or participate in research programs. As a key member of the China Fuel Management Standardization Technical Committee of Thermal Power Enterprises, we are responsible for the establishment of fuel management standards and research on technology

standardization. In 2020, we edited three industry standards: *Technical Specifications for Information Security of Power Plant Monitoring Systems*, *Basic Guidelines for Information Security Management of Power Plant Monitoring Systems*, and *Guidelines for Parameter Measurement and Modeling of Synchronous Generator Prime Mover and its Regulating System*. We also led the compilation of seven other standards, including the *Technical Guidelines for the Early Warning System of*



*Thermal Power Generating Units and Technical Guidelines for Calculating Online Energy Consumption of Thermal Power Plants.*

We promote integrated energy services, explore new ways of developing renewable energy and making technological innovation, and closely work with partners in a mutually beneficial way. In 2020 we carried out various forms of cooperation with equipment manufacturers and local governments to accelerate

the development and building of renewable energy generation projects.

With the help of universities that have intellectual advantages in energy theory research and software development, we expedite the R&D of core technologies and the implementation of key projects. For example, we set up a joint R&D laboratory for intelligent energy together with Zhejiang University to research thermal energy utilization and hydrogen production technology;

we worked with Harbin Institute of Technology on the Cangzhou Intelligent Heating Project as part of our cooperation in heating network control; we developed the CHNT IIoT Testbed Project with Shanghai Jiaotong University; and we signed a cooperation agreement with Changsha University of Science and Technology to build practice and training bases, opening a new chapter of university-business cooperation.

Total number of employees:

21,611

Total employee training hours:

952,206

Rate of employment contracts signed

100 %

Total training expenditure

RMB 4.39 mn



## Pursuit of Excellence

## Maintaining Growth through Cohesion

CR Power regards talent as its most valuable core competitiveness. It appreciates and respects the different personalities and talents of its employees, seeks to promote their mental growth, and empowers them to achieve their full potential. CR Power fully respects and protects the fundamental rights and interests of each employee and is dedicated to maintaining a fair and impartial work platform and a safe work environment for them. Through a talent development strategy that promotes employee diversity and growth, we have created a career platform that allows the employees to bring their competence into full play to forge ahead together with them.

### UN Sustainable Development Goal



### CR Power Actions

- Providing all employees with online training, learning, and examination on occupational health protection through two mini WeChat programs – Occupational Health Learning Platform and Training on Employee Occupational Health Protection;
- Offering leadership training programs to all of the middle and senior managers, including but not limited to “Young Manager Training Class”, “CR Leadership Program”, “CR Excellence Program”, and “Leadership Navigation Program”;
- Giving skill trainings for professionals – “Program for Command-in-Chiefs of Wind Power Construction Projects” and “Excellent Craftsman Program” – to build a pool of specialists;
- Promoting upstream and downstream industries through project construction, cumulatively created employment opportunities for about 10,000 migrant workers, and helped the disadvantaged groups find jobs.

# Building a Fair Work Platform

We are committed to protecting the rights and interests of the employees, advocating diversity and equal opportunities, improving compensation and performance management, increasing the types of benefits, and creating an inclusive, diversified, and fulfilling work environment.

## Promoting Employee Diversity

Based on our business development strategy and the prospects of the industry and market, we have increased efforts to plan for developing high-end, innovative talents by analyzing the talent needs of key positions, identifying high-potential talents, and focusing on hiring hi-tech talents in sectors like new energy, smart energy, and power sales. In 2020, we recruited 790 employees via multiple local platforms, including online and offline channels, in accordance with the *Management Standards for Recruitment*, of which 127 are high-caliber talents with a master's degree or PhD degree.

In order to ensure the stability of social employment, we have organized public recruiting events for people with employment difficulties such as military veterans and migrant workers. The measures taken by us in this regard include reserving job positions for veterans and offering auxiliary positions at wind farms to local poor migrant workers. In 2020, thanks to collaboration with upstream and downstream companies through project construction, CR Power created job opportunities for around 10,000 migrant workers, helping increase their income. In addition, we have been continuously helping with the resettlement of employees that were laid off as a result of the shut-down of coal mines due to overcapacity and distressed companies. In 2020, 598 of these employees were diverted and resettled.

In 2020,

Total number of employees:

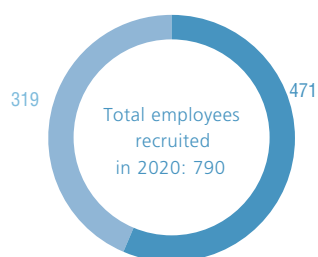
21,611

Turnover rate: 2.8%

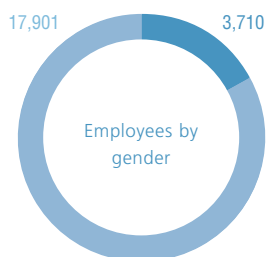
A survey of employee engagement is carried out every year from 2017 to 2020. The employee engagement in the high performance/best employer

zone was 83%

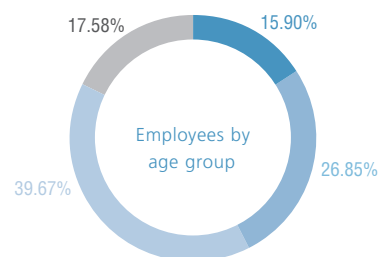




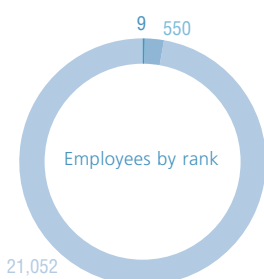
■ Recruited off campus ■ Recruited on campus



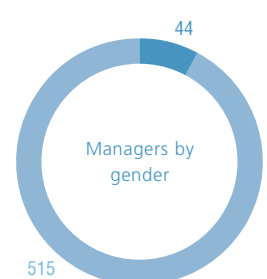
■ Female ■ Male



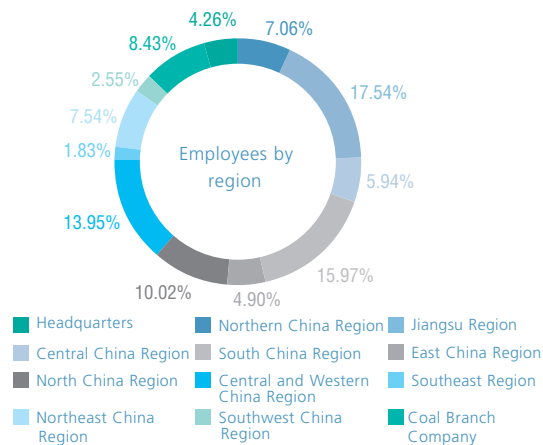
■ 20-29 ■ 30-39  
■ 40-49 ■ 50 and above



■ Senior managers ■ Middle managers  
■ Regular employees



■ Middle level and above female managers  
■ Middle level and above male managers

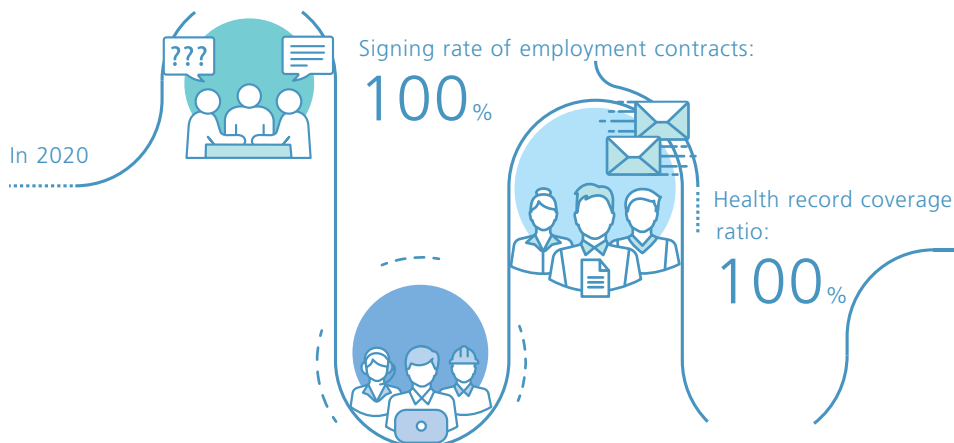


■ Headquarters ■ Northern China Region ■ Jiangsu Region  
■ Central China Region ■ South China Region ■ East China Region  
■ North China Region ■ Central and Western China Region ■ Southeast Region  
■ Northeast China Region ■ Southwest China Region ■ Coal Branch Company



## Protecting Employee Rights and Interests

CR Power strictly protects the fundamental rights and interests of its employees in accordance with the *PRC Employment Law*, the *PRC Employment Contract Law*, the *PRC Social Security Law*, the *Regulation on Paid Annual Leaves of Employees*, the *Regulation on Work-Related Injury Insurances*, the *Law on the Protection of Women's Rights and Interests*, and other laws and regulations. CR Power undertakes to: eliminate all forms of employment discrimination, respect the human rights of employees, oppose forced labor, prohibit child



labor, implement an employment policy that does not discriminate against sex, nationality, religion, or age, and respect the employee's rights to trade union representation

### Protection of human rights

In accordance with the core principles of the Universal Declaration of Human Rights, the International Labor Organization (ILO), and the UN Global Compact, we have formulated the *Human Rights Protection Principles*<sup>1</sup> to strictly forbid child labor and forced labor. In 2020, CR Power was neither a party to any major labor dispute, nor a subject of any human rights complaint.

### Open communication

We practice a democratic management approach whereby open communication is encouraged. Through two-way communication channels, such as seminars, complaints via leaders' mailboxes, annual interview on performance of duties, Human Resources Service Day event, and home visit, we keep close contact with employees to receive their input or suggestions; based on the suggestions obtained through this effective complaint channel, we make improvements to create a pleasant work environment.

### Labor protection

We have formulated the *Management Measures for Employment Contracts* to provide the framework and processes for entering into employment contracts with employees. We have always abided by the principles of lawfulness, fairness, and integrity and have always conducted fair negotiations with employees before signing employment contracts that include the rights and obligations of both parties and arrangements for compensation and dismissal, recruitment and promotion, working hours, and holiday arrangements, in order to maintain and protect the legitimate rights and interests of employees.

### Privacy protection

We protect the personal information of the employees against willful or accidental disclosure to non-staff personnel. During recruitment, performance evaluation, and compensation management, we permit access to employee's personal data (including resumes and information on their family, salary, and health status) only by dedicated personnel and only after they have received special approval.

<sup>1</sup> The Human Rights Protection Principles is applicable to all of CR Power's subsidiaries and suppliers. ([learn more about the Human Rights Protection Principles](#))



Social security  
coverage ratio:

100%

Physical examination  
coverage ratio:

100%

Average number of paid  
holidays per person

8

## Improving Compensation and Benefits

While ensuring internal fairness and external competitiveness, CR Power's compensation is based on position, performance, and competency. CR Power has formulated the *Management Rules for Compensation and Benefits* and the *Medium and Long-term Strategic Incentive Plan* to improve its compensation and performance management mechanism that is based on value contribution, efficiency, and professionalism.

### Performance management

By adopting a target-oriented approach, we communicate with employees in an objective and fair manner to set clear, specific, and challenging targets for continuous improvement in their performance; based on an impartial assessment of their value contribution, we give them a fair reward; through performance feedback, we can better encourage them to leverage strengths and improve weaknesses.

### Benefits

We have drawn up a comprehensive benefits scheme to cater to the employees' needs, consisting of contribution to pension, medical, unemployment, work-related injury, maternity insurances and housing provident fund, additional coverage of commercial insurances and supplementary pension insurance (i.e., enterprise annuity), and annual physical examination for all employees. Independent contractors are also included in our social security and commercial insurance scheme. We have released the *Headquarters Management Measures for Vacation Leaves* to safeguard the employees' right to vacation leave and provide female employees with entitlement to extra days off each month.

### Compensation management

We link the compensation of employees with the value of the position, performance, and competence (including knowledge, skills, and behavioral attitude). When other conditions are the same, employees with higher position value, performance, and competence generally receive higher compensation. We have in place a process to receive and respond to employees' complaints about their performance evaluation results. This process ensures effective and timely feedback and responses to their complaints.

### Incentive mechanism

To motivate and retain employees in key positions, CR Power determines incentives for such employees at each level by fully considering factors such as the compensation trend in the industry, the Company's position in the industry, compensation strategy and linking their income with the Company's achievement of business performance and strategic targets as a whole.



## Enhancing Employees' Competence

To provide employees with sound promotion channels, we have issued the *Management Standards of CR Power Headquarters for Rank Adjustment* and the *Guidelines for the Implementation Plan on the Professional Development Paths at Regional Companies* and designed dual career development

paths (i.e., the professional line and the managerial line). Each employee may choose a suitable career development path based on their personal development goal and professional skill needs and taking into account the Company's internal talent development plan. We offer a reasonably designed

training system and a diverse range of training programs to different types of employees – new recruits, employees in professional positions, and middle and senior managers – to help and support them in professional development and competitiveness improvement.

### Training for new recruits

Pursuant to the *Management Measures for Mentors of New Recruits*, we subject each new employee to a two-year training program and they are assigned to a mentor for one-to-one guidance. We have organized the "Future Star" training camp for years, which serves as an orientation program that prepares new employees for their future growth. In 2020, the "Future Star" training camp, held at 10 different sites, provided a 30-day orientation training to over 300 new graduate employees.

### Training in professional skills

We provide tailor-made training programs for employees in different positions to assist them improve expertise and skills; specialized training programs for professional talents, such as "Program for Command-in-Chiefs of Wind Power Construction Projects", "Excellent Craftsman Program", and "Cross-Discipline Training in Centralized Control/Auxiliary Control"; and occupational training programs for all employees in functional positions, such as "Professional Quality Program", "Compliance Evaluation Program", "EHS Management Improvement Program", and "HR Three Pillar Model Program".

### Leadership training

CR Power's middle and senior managers regularly participate in leadership training programs at China Resources University, such as "CR Approach Program" and "Business Approach Program". In 2020, 15 managers attended the "CR Approach Program". To cultivate potential talents and managers, CR Power also offers leadership trainings for employees at the appropriate level, including "Online High-end Talent Training Course" and "Young Manager Training Class" for direct managers of its controlled companies, and "Young Manager Training Class", "CR Leadership Program", "CR Excellence Program", and "Leadership Navigation Program" for direct managers of its regional companies.

We have been endeavoring to create a self-learning and self-improvement culture. With an aim to fully increasing employees' capacity, we have drawn up the *Management Standards for Employees' Participation in External Training* and the *Management Measures for Training of Dispatched*

*Employees* to encourage employees to seek learning opportunities and external training and to pursue higher academic degrees. We also help employees manage their applications for professional titles by reviewing, verifying, archiving, and conducting web assessment of application materials in areas

such as engineering, economics, archiving, and news. In 2020, we reviewed and selected more than 60 applications and helped 22 employees obtain professional titles in archiving, engineering, and economics.

## Facts &amp; Figures:

## Our efforts in talent cultivation

CR Power places high value on establishing a deep strategic partnership with colleges and universities in the R&D and application of technologies and cultivation and training of talents. Such partnership allows CR Power to speed up the R&D of core technologies and the implementation of major projects by taking advantage of the intellectual resources of colleges and universities in energy theory research and software system development.

In 2020, a "Craftsman Training Center" was inaugurated by East China Region and Nanjing Institute of Technology for an "Excellent Craftsman Training Program". This program provides courses in operation and maintenance of thermal power plants, heating, new energy, and other subjects in seven classes for 161 outstanding young employees in key front-line positions. By 2020, the Center had completed 51 courses (including two on practical operation), totaling 606 hours, covering 2,044 participants, and creating 1,860 designs. This program has produced 42 papers published on national journals and 35 on provincial or ministerial journals, 17 patent applications, 386 design reports, and two proceedings.

Training coverage ratio for employees:

100%

Leadership training coverage ratio:

100%

Professional skill training coverage ratio:

100%

Training coverage ratio for senior managers:

100%

Training coverage ratio for middle managers:

100%

Training coverage ratio for male employees:

100%

Training coverage ratio for female employees:

100%

Total employee training hours:

952,206

Average training hours per person:

49.5

Average training hours per person for senior managers:

34.4

Average training hours per person for middle managers:

38.8

Average training hours per person for ordinary employees:

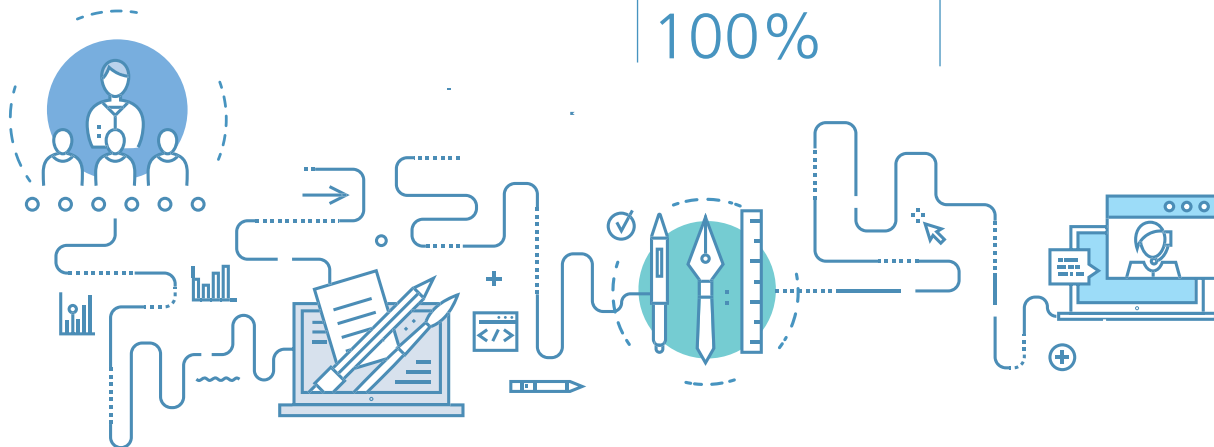
50.1

Average training hours per person for new employees:

12

Total training expenditures:

RMB 4.39<sub>mn</sub>



# Achieving Work-Life Balance

## Maintaining Physical and Mental Health

CR Power cares much about the employees' physical and mental health. In compliance with the *PRC Law on the Prevention and Control of the Occupational Diseases* and other applicable laws and regulations, CR Power has been improving its rules on occupational health management by drawing up the *Occupational Health Management Standards*, which specifies the duties of each functional department and position

in day-to-day occupational health management. In 2020, we took a wide range of measures, including occupational health training, occupational disease publicity activities, and work environment improvements, to raise the employees' health awareness and create a culture that values safety and health, helping them live a healthy life and work in a pleasant manner.

■ **Occupational disease prevention and control week:** CR Power has organized activities such as occupational health examinations, hearing care, and healthy China initiative, to push its affiliated entities to further improve occupational health management.

■ **Occupational health learning platforms:** CR Power has opened two mini WeChat programs – Occupational Health Learning Platform and Training on Employee Occupational Health Protection – to offer online training, learning, and examination on occupational health protection for all employees.

■ **Occupational health training:** CR Power has provided 23,980 operation personnel with eight training courses in respiration, hearing, and eye protection, the average duration of which is 30 minutes.

■ **Occupational health and safety roadshow:** CR Power has organized 14 occupational health roadshows, offering training for more than 300 people.

■ **Improvement of the work environment for projects:** As a part of its focus on occupational health, CR Power has supported its project company in constructing a dust-free sample preparation room in Heze Power Plant to ensure the sample preparation personnel work in an operating environment with lower dust concentration.

■ **Promotion of healthy life concept:** In addition to encouraging the employees to participate in physical exercise, CR Power has offered mental health trainings to help improve their pressure management capability so that they can better cope with pressure at work.

## Aiding Needy Employees

CR Power has set up the "CR Power Care Fund" to help solve the life difficulties of the employees and their families. In 2020, CR Power gave a financial aid of about RMB203,000 to

employees with financial difficulties and their family members and children as well as sick employees and their family members.







Total charitable donations:

RMB 175mn

Poverty alleviation contributions:

RMB 33mn

Participants in volunteer services:

2,793

## A Better Society

# Creating Harmony through Joint Efforts

Confronted with the severe challenges posed by the COVID-19 pandemic, CR Power has promptly responded to the country's call for action by fully implementing joint prevention and control measures, building stringent lines of defense across society, and fighting against the pandemic together with people all over the country. In response to the UN Goal of "ending poverty in all its forms everywhere", CR Power has been contributing to China's poverty alleviation campaign. In addition, CR Power has been an active participant in public welfare activities, caring about people's livelihood. These actions represent our contribution to a harmonious and better society.

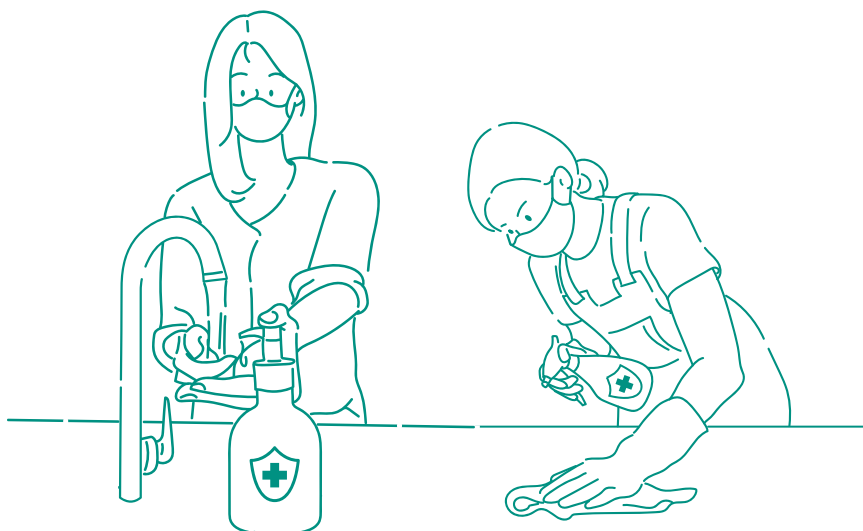
## UN Sustainable Development Goal



## CR Power Actions

- Innovatively integrating renewable energy projects into the poverty alleviation strategy and continuously supporting poverty alleviation through wind and photovoltaic power projects. By the end of 2020, we have signed 1,105 MW of wind power poverty alleviation projects in Hubei, Guangdong, Guangxi, and other regions;
- "Contributing more than RMB200 million in poverty relief funds during the 13th Five-Year Plan period, covering more than 18,000 poor families;
- Reasonably developing and utilizing energy resources in poverty-stricken areas to build energy infrastructures such as wind farms and photovoltaic power stations, making energy more accessible to the poor people.

# Fighting the COVID-19 Pandemic



After the sudden outbreak of COVID-19 in the early spring of 2020, CR Power immediately responded to the nation's pandemic prevention and control arrangement by taking strict prevention and control measures in its power plants, construction sites, and work places all over China. At the same time, being concerned about the impact of the pandemic on all other sectors of society, CR Power took actions to help resume local work and production.

In the early days of the pandemic, we promptly established a leading group for pandemic prevention and control headed by the President to make quick arrangements; we required all affiliated entities and departments to implement prevention and control measures at full strength to ensure the physical health of all employees and avoid the spreading of the virus within the Company. To build a strong line of defense for life safety, we tracked the health conditions of the employees in real time through a reporting mechanism, timely purchased, distributed and stockpiled pandemic prevention materials such as masks, regularly sprayed disinfectants in the plants, and strictly controlled the access of personnel and vehicles.

While ensuring the health of the employees, our power plants required them to hold fast to their positions and perform their duties to ensure safe production and continuous, stable power and heat supply. Based on their own characteristics, all regions have implemented epidemic prevention and power protection measures in accordance with local conditions, and continued to ensure power supply for the restoration of production and life in all regions.



## Donating self-produced disinfectants:

Caofeidian Power Plant in Tangshan, Hebei Province, Haifeng Power Plant in Guangdong Province, and Wenzhou Power Plant in Zhejiang Province donated sodium hypochlorite produced by electrolyzing seawater to address the urgent need for disinfection materials for public areas.



## Providing pandemic prevention materials to hospitals:

We immediately provided material support to CR & WISCO General Hospital and the Affiliated Hospital of Xuzhou Medical University after the outbreak of the pandemic, and made donations during the subsequent fight against the pandemic.



## Offering timely assistance to communities:

As the pandemic spread, we provided our support to the communities through donations of money, disinfectants, and masks, and publicity on epidemic prevention knowledge.

## Facts & Figures:

When the pandemic was at its worst, in addition to ensuring safe, stable power supply, CR Power did everything it could to help the society tide over the pandemic crisis. From January to June 2020, we donated:

Masks: around **247,000**

Protective suits: **5,150**

Medical gloves: **12,700**

Goggles: **1,920**

Thermometers: **7,659**

Disinfectants: **516** tons

# Joining Efforts for a Well-off Society

We leverage our strengths in resources and energy technologies to support the development of local industries and engage in public welfare and poverty alleviation programs, supporting the development of local women, farmer, herdsman, and fishman communities and other disadvantaged groups and making due contributions to building a well-off society in an all-rounded way.

## Fighting a Battle Against Poverty

We have reasonably developed renewable energy resources in poverty-stricken areas and built renewable energy infrastructures to improve accessibility of energy for the poor people. We have also provided employment opportunities and poverty relief funds for local people and support for the development of industries specific to these areas to drive the regional economic development. These efforts aim to establish a sustainable poverty alleviation model.

As of the end of the reporting period, we have signed wind power and photovoltaic poverty alleviation projects in Hubei, Guangdong, Guangxi and other regions with a total of 1,195 MW, and issued poverty alleviation funds of RMB57.04 million.

In terms of poverty alleviation through industry development, we have assisted poverty-stricken areas in developing their agriculture, animal husbandry, and other industries and, taking into account consumption-driven poverty alleviation e-commerce platforms and various offline channels, identified suitable supply chains for their agricultural and sideline products, in a bid to increase the sales of such products. This helps raise the living standards of farmers and herders and revitalize the rural areas. In May 2020, CR Power signed an Industrial Cooperation Framework Agreement with Zhangbei County Government to develop 1 GW photovoltaic power base in Zhangbei County and innovatively promote the integrated development of the Chinese herbal medicine planting and processing industry, livestock breeding and processing industry, marketing of green agricultural and sideline products, and building of beautiful rural areas in Zhangbei County.

In 2020

CR Power's poverty reduction donations:

about RMB **14.35**<sub>mn</sub>

Contribution of revenue from public-private partnership projects to local poverty relief funds

RMB **18.17**<sub>mn</sub>



## Our efforts in poverty alleviation:

In 2012, Fuyang Power Plant repaired village roads and installed solar power panels in Laowangzhai Village, Xinmaji Town, Jieshou City, Anhui Province, marking the start of its targeted poverty alleviation program. In 2017, Fuyang Power Plant assigned a poverty alleviation task force to the village, which prepared a Feasibility Report on the Planting of Sweet Potatoes in Laowangzhai Village based on many field surveys and communications with professional institutions. Considering the village's nearly 400-year history of planting sweet potatoes and fertile soil resources, the report suggested the planting and innovative sales of new sweet potato varieties as a solution to lift the villagers out of poverty.

The village has developed a full-fledged business model covering planting, deep processing, and sales. Each of the former impoverished households has seen an annual increase of over RMB5,000 in income through planting sweet potatoes. With the help of Fuyang Power Plant, Laowangzhai Village, which had a poverty rate of 10.2% in 2012, had completely eliminated poverty by the end of 2020.

**May 2017**

The poverty alleviation task force opened up experimental fields and introduced local excellent purple sweet potato seedlings to lead the villagers in planting purple sweet potatoes. At the same time, the task force started a plan for developing a "Pujianwang" sweet potato brand by incorporating a startup company mainly engaging in the sales of sweet potatoes and their by-products like sweet potato noodles.

**June 2017**

The poverty alleviation task force introduced the "Xuguahong" sweet potato variety, which was initially grown by large planters. The task force dispelled their concerns about the sales of the sweet potatoes by pre-selling the sweet potatoes online.

**August 2018**

Within three months after the "Xiguahong" sweet potatoes went on massive sale, more than 50,000 kg were sold online. The "Xiguahong" sweet potatoes put Laowangzhai Village on the road to prosperity.

**2019**

Laowangzhai Village with its "Xiguahong" sweet potatoes was invited by the Red Cross Society of China Anhui Branch to the "JD Crowdfunding Poverty Alleviation Contest". The village raised over RMB100,000 through crowdfunding in a month and secured a third place in the roadshow contest. In addition, Fuyang Power Plant donated a sweet potato harvester to the village's collective enterprise to provide free harvesting services to the impoverished households each year.

**2020**

While seeking to alleviate poverty through industry development, Fuyang Power Plant has built a close tie with the villagers by solving difficulties and bringing them tangible benefits. In early 2020, Fuyang Power Plant provided the village with a financial aid of RMB40,000 to support 59 registered poor students in their schooling.



## Actively Participating in Public Welfare Programs

CR Power has formulated and implemented the *CR Power Management Standards for Charitable Activities* in strict accordance with the *PRC Law on Donations for Public Welfare*, *Circular of the Ministry of Finance on Strengthening the Financial Administration of the Donations Made by Enterprises*, and other

applicable laws and regulations. Following relevant rules, the regional companies have recruited local low-income people to improve their living standards, given financial aid to poor students, and provided voluntary assistance services, benefitting the daily life of vulnerable groups. In addition, they ensure that their care and donations reach those in need.

In 2020

Volunteer activities organized:

332

Volunteers in public charity activities:

1,114

Total charitable donations by CR Power and its employees:

RMB 175 mn



### Financial aid for students

In 2020, CR Power's 34 managers participated in a "one-to-one" financial aid program for poor college students in Haiyuan County by donating RMB63,000; in September, CR Power started to construct a CR primary school in Fuchuan Yao Autonomous County, Guangxi; in addition, CR Power donated RMB300,000 to help orphaned children continue their schooling.

Shouyangshan Power Plant in Henan developed an excellent study tour course for primary and middle schools, which is titled "Promoting Growth through Power-themed Study Tour".

Guizhou Renewable Energy Company provided "CR-Guizhou Classroom" volunteer services in the Chengguan No.5 Primary School of Jianhe County. It gave the students a class on basic wind power knowledge, donated learning gift packages to them, and helped fulfill their little wishes.

Feixian Wind Farm in Shandong Province organized a "student aid" charity donation event to donate stationery, sports equipment, and books to the pupils of the Mengjiazhuang Primary School, delivering warmth and hope to them.

### Education assistance



### Environmental protection

We donated a total of RMB20 million to build ecological protective forests in Haiyuan County, Ningxia, and RMB760,000 to install smart street lights in the CR Hope Towns in Guizhou, Hubei, and other regions.

The "Runxing" Love Service Team of Tangshan Fengrun Power Plant in Hebei Province provided regular volunteer services to the Tangshan Lanfenghuang Support Center for Mentally Retarded People; Liyujiang Power Plant in Hunan Province gave gifts to the children with special needs in the Zixing Special Education School on Children's Day.

### Assistance to the disadvantaged







**Maintenance of  
Persistence**

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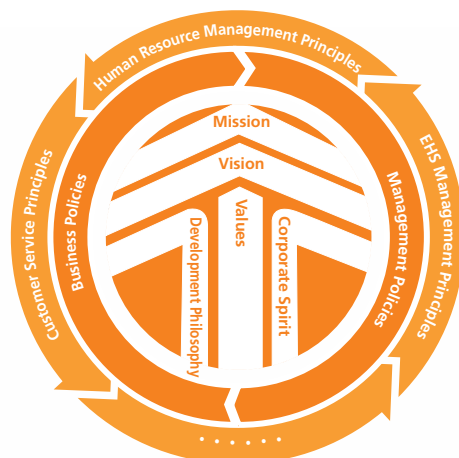
**Promoting a  
Culture of  
Responsibility**

CR Power has developed a “Power Culture” that embodies its distinctive features and corporate image. This Power Culture model is inspired by the two essential parts of a generator – the stator and the rotor. CR Power’s mission statement, vision, values, development philosophy, and corporate spirit form the core of its corporate culture. Its operating and management policies are derived from and are complementary to those core principles, providing guidance for all the Company’s day-to-day activities, and supplying endless “power” to its employees, to the Company as a whole, to the economy, and to the society.



# Deepening Social Responsibility Management

CR Power has formulated the *Social Responsibility Program Management Standards* and created a four-level social responsibility governance structure consisting of the Leadership Team, the Guidance Team, the Coordination Team, and the Implementation Team to promote sustainable development programs in an all-round way from the Board of Directors, the Management Team, and functional departments to business units.



CR Power's "Power Culture" Model

Governance Structure		Main Responsibilities
<b>Leadership Team</b>	Sustainability Committee <sup>1</sup>	<ul style="list-style-type: none"> <li>Reviewing monthly public sentiment and social responsibility reports;</li> <li>Reviewing semiannual summaries of and improvement plans for CR Power's sustainable development programs and offering suggestions;</li> <li>Supervising CR Power's handling of matters that relate to society, environment, and business ethics and have an impact on shareholders and other stakeholders; and</li> <li>Reviewing Company policies and performance on sustainable economic, environmental, and social development and offering suggestions to the Board of Directors.</li> </ul>
<b>Guidance Team</b>	Social Responsibility Steering Committee	<ul style="list-style-type: none"> <li>Studying CR Power's strategies on social responsibility programs;</li> <li>Studying and approving CR Power strategic plans, major rules, and annual plans and reports on social responsibility; and</li> <li>Studying and approving CR Power's major issues on social responsibility.</li> </ul>
<b>Coordination Team</b>	Administrative Office of Headquarters	<ul style="list-style-type: none"> <li>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;</li> <li>Organizing the preparation of CR Power's annual sustainable development reports;</li> <li>Developing sound rules and indicator systems for CR Power's social responsibility programs; conducting performance assessment; and organizing best practice recognition programs;</li> <li>Guiding affiliated entities' social responsibility efforts and promoting social responsibility initiatives;</li> <li>Organizing studies, training, communications, and other day-to-day management affairs concerning CR Power's social responsibility programs;</li> <li>Overseeing corporate governance, information disclosure, media relations, brand management, poverty alleviation, public welfare, and other work; and</li> <li>Regularly updating the Sustainability Committee under the Board of Directors on CR Power's social responsibility achievements.</li> </ul>
<b>Implementation Team</b>	Departments & Offices of Headquarters Regions Regional Companies Project Companies	<ul style="list-style-type: none"> <li>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;</li> <li>Making social responsibility plans as delegated by regional companies; promoting responsibility integration; introducing innovative responsibility practices; and enhancing responsibility performance capacity;</li> <li>Submitting information on social responsibility reports as required by the Company; and</li> <li>Broadcasting their social responsibility achievements and performance, and strengthening communication with stakeholders.</li> </ul>

<sup>1</sup> CR Power has issued the *Terms of Reference of the Sustainability Committee*, which sets specific standards and management requirements for the role, members, meetings, reports, responsibilities and functions, and review of the Sustainability Committee ([Learn the details of the Terms of Reference of the Sustainability Committee](#)).



Under the leadership and supervision of the Sustainability Committee, we have improved the closed-loop management procedures of sustainable development, covering goal setting, work plans, day-to-day management, result presentation, and progress evaluation. We have been improving sustainable development management by conducting regular communication and formulating plans on sustainable development. In 2020, CCR Power was incorporated into the Hang Seng ESG 50 Index and the Hang Seng Corporate Sustainability Benchmark Index.

**Our efforts in social responsibility:**

In 2020, focusing on sustainable development, we fully initiated the classification-based management of rules concerning sustainable development based on capital market ratings and indices and the performance of leading international peers in sustainable development management and practices, shifting to optimizing the management system of such rules. Taking into account the existing rules, we prepared and published policy documents, including *CR Power Supply Chain Management Principles*, *CR Power Environmental Protection Principles*, *CR Power Human Rights Protection Principles*, and *CR Power Code of Business Conduct and Ethics*; in addition, we established a database of indicators for sustainable development of the capital markets, further refined the sustainable development programs and requirements of the Company and its affiliated entities, and conducted research on sustainable development and social responsibility theories, paving the ground for the sustainable development management of the Company as a whole.

In May 2020, the Company’s Executive Directors chaired the Sustainable Development Report & Social Responsibility Meeting to summarize and review the implementation of the Company’s sustainable development programs in the previous year and set new goals and requirements for sustainable development programs in the current year. In November, based on the progress of the Company’s sustainable development programs and the external evaluation of such programs, the Company’s relevant departments and offices reported on how to elevate the Company’s performance in sustainable development, respond to the concerns of the capital markets, and further improve the preparation of reports. In 2020, the Coordination Team submitted 12 CR Power Monthly Public Sentiment and Social Responsibility Reports to the Board of Directors, providing timely and complete updates on the Company’s social responsibility management.

# Facilitating Communication of Our Responsibilities

We take day-to-day communication with our stakeholders seriously and have opened various channels to receive comments and suggestions. We share with stakeholders the latest changes in our operations, culture and values, and future plans, to help them understand and appreciate our actions. In addition, we incorporate their expectations and concerns in our corporate strategies, operations, and management to win their support.

Stakeholders	Main Concerns	Engagement Methods	Response Measures
 Government and regulatory agencies	Legal and regulatory compliance Work safety and environmental protection Promote economic development Tax payment Job creation Corporate stability	Formulate rules and policies Strategic cooperation Information submission Work reports Statistics reports	<ul style="list-style-type: none"> <li>Comply with laws and regulations</li> <li>Reduce operational safety hazards</li> <li>Prevent major accidents</li> <li>Meet national environmental standards</li> <li>Respond to the national goal of reaching carbon neutrality by 2060</li> <li>Guarantee employee compensation and benefits</li> </ul>
 Investors	Corporate governance Performance of sustainable development Performance growth Dividend distribution Investor relations Stock performance	Shareholder meetings Information disclosure On-site visits Roadshows	<ul style="list-style-type: none"> <li>Establish rational decision-making, execution, and supervision mechanisms, and strengthen internal controls</li> <li>Pursue qualitative growth and value creation</li> <li>Improve information disclosure and increase transparency</li> <li>Organize and participate in a variety of shareholder engagement events</li> </ul>
 Employees	Legitimate rights and interests Compensation and benefits Career development Training Occupational health and working environment Employee care	Employee representative meetings Employee suggestion Intranet and public-facing websites Seminars, networking, etc.	<ul style="list-style-type: none"> <li>Sign employment contracts as required by law</li> <li>Hold training to encourage internal mobility</li> <li>Implement occupational health programs</li> <li>Improve production and office environments</li> <li>Conduct annual employee satisfaction surveys</li> <li>Improve human resource policies</li> </ul>
 Customers	Provide safe and stable electricity, heating, and cooling	Satisfaction surveys Agreements/contracts Customer meetings	<ul style="list-style-type: none"> <li>Provide adequate, reliable, and environmentally friendly energy services such as power, heat, cooling, and coal</li> <li>Offer integrated energy solutions</li> </ul>

Stakeholders	Main Concerns	Engagement Methods	Response Measures
 Partners	Contract compliance and mutual trust Equal and Long-term cooperation Mutual benefits	High-level meetings Agreements/contracts Products and services	<ul style="list-style-type: none"> <li>• Ensure transparent procurement process to eliminate commercial bribery</li> <li>• Maintain integrity and business ethics</li> <li>• Sign long-term strategic cooperation agreements</li> </ul>
 Communities and environment	Environmental protection Safety and stability Harmonious community Charity programs Public relations	Philanthropic events Community building	<ul style="list-style-type: none"> <li>• Ensure environmental protection and compliance with pollutant emission standards</li> <li>• Promote circular economy and green office</li> <li>• Strengthen safety management and prevention of major accidents</li> <li>• Participate in community events and support philanthropic programs</li> <li>• Build CR Hope Town</li> </ul>
 Media and NGOs	Information disclosure Interaction with media Contribution to NGOs Impact on sustainable development	Activity organization On-site visits Information disclosure	<ul style="list-style-type: none"> <li>• Organize field surveys, interviews, and reports</li> <li>• Release advocacy materials and invite media to monitor social responsibility programs</li> <li>• Participate in industry exchange meetings and professional skill competitions</li> <li>• Engage in productive exchanges with NGOs</li> </ul>

### Case Study

#### The 5th Open Power Plant Month Themed “Cloud Empowered Green Tour”

According to the *Five-Year Plan of CR Power on Open Power Plant Month (2018-2022)*, we continue to carry out public open activities to increase the understanding and recognition of CR Power, and actively listen to the comments and suggestions from the community. In September 2020 we held the 5th Open Power Plant Month themed “Cloud Empowered Green Tour.” It was the first time we adopted an innovative method that allowed the public to tour around CR Power through live streaming, appreciating our intelligent technologies. The event had over 400,000 viewers.



# Targeted Responses to Issues

To fully and accurately inform internal and external stakeholders of our progress toward sustainability, we have further optimized the identification and evaluation processes of sustainability issues, created a materiality matrix to reflect the concerns of stakeholders, and made targeted responses.

## 01 Identifying and Selecting Sustainability Issues

### Policy Trend Analysis:

Understand national macro-policies, energy/power industry policies and regulations, and industry sustainable development trends;

### Corporate Development Plan:

Identify key issues significant to CR Power's strategic goals as per the strategic development plans and annual business plans of CR Group and CR Power;

### Analysis of Standards:

Analyze the GRI Standards, UN SDGs, TCFD recommendations, and *CASS Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises* to understand the latest management standards and disclosure requirements for sustainability issues.

### Capital Market Analysis:

Prioritize sustainability issues by reference to the MSCI ESG Ratings, Hang Seng Corporate Sustainability Index, Carbon Disclosure Project (CDP) index requirements, and Sustainability Accounting Standards Board (SASB) Standards related to the sustainability management of the power sector;

### Peer Benchmark Analysis:

Conduct benchmark analysis on sustainable development reports of leading domestic and foreign peers, and analyze and identify key issues and disclosure approaches for the power sector.

## 02 Stakeholder Survey

Invite internal and external stakeholders to evaluate the materiality of the 7 environmental, 11 social, and 8 governance issues identified, and comment on our existing sustainability strategies, performance, and reporting methods via an online questionnaire.

In 2020, 610 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.

## 03 Materiality Analysis and Review

Collect and analyze the responses 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. Screening and analysis results will be reviewed by internal management and external experts.

## 04 Responses and Disclosure

For substantive issues, formulate and implement an action plan, and disclose it in the report.

### 2020 CR Power ESG Issue Materiality Matrix



#### Issues with very high materiality

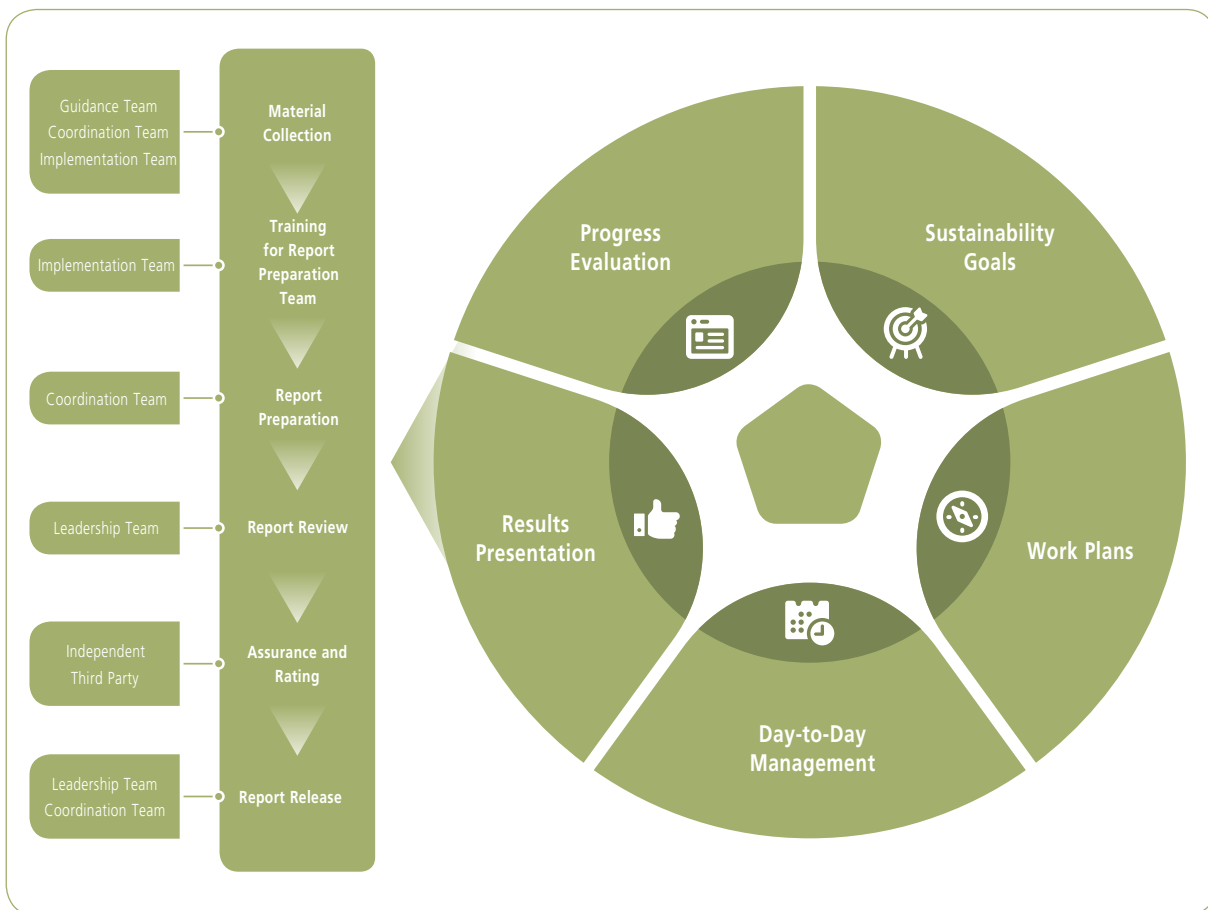
- |  |  |
|--|--|
| 1 Carbon Reduction                             | 6 Corporate Governance and Risk Management |
| 2 Corporate Culture and Business Ethics        | 7 Strengthening Ecological Protection      |
| 3 Response to National Policies                | 8 Employee Training and Development        |
| 4 Safe Production and Occupational Health      |  |
| 5 Reduction of Exhaust and Pollutant Emissions |  |

#### Issues with high materiality

- |   |  |
|---|--|
| 9 Employee Rights and Care                      | 17 Preserving and increasing the value of state-owned assets |
| 10 Technological Innovations and Transformation | 18 Protecting the rights and interests of shareholders       |
| 11 Water Resources and Wastewater Management    | 19 Community Service and Philanthropy                        |
| 12 Sustainable Development Planning             | 20 Respecting intellectual property                          |
| 13 Improving Customer Service                   | 21 Responsible supply chain                                  |
| 14 Protecting Data Privacy and Security         | 22 Industry Cooperation and Development                      |
| 15 Waste Disposal and Utilization               |  |
| 16 Protecting Market Environment                |  |

CR Power engages its management and implementation personnel at all levels in the preparation of its annual sustainable development reports. Before the preparation of a report, the Guidance Team trains the Coordination Team and Implementation Team according to the requirements and goals 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 Chairman 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 program.



# A Glance at the Future

The year 2021 marks the beginning of the 14th Five-Year Plan and the 20th anniversary of CR Power. In this year, we will commit to the goals of the 14th Five-Year Plan by developing new growth drivers, expanding into new areas, and exploring new technologies. Together with our stakeholders on this new journey, we will make greater contributions to the high-quality development of China.

We will implement the national energy security strategies and the new development philosophy, meet the requirements under the goal of reaching carbon peak by 2030 and carbon neutrality by 2060, and seek rational, high-quality development. Specifically, we will continue to develop new energy and increase its installed capacity mix, striving to increase the installed capacity of renewable energy by 40 GW in 5 years and, by the end of 2025, raise the proportion of total renewable energy capacity to over 50%. Aligning with world leaders, we will strengthen and expand our main businesses, and stay abreast of emerging new technologies, new models, and new businesses, thus laying a solid foundation for our transformation and sustainable development.

We will continue to optimize the organizational structure, improve the employee training and development system, develop training programs targeting different positions and levels, and create an incentive system that covers all employees. To promote community development, we will boost the management of charity events, focus on people's wellbeing, and carry out more distinctive and influential charity programs. We will also promote the incorporation of renewable energy technologies into industry development, boosting local economy.

Spring is the season of hope, and the beginning of a new year. This year we will take more confident, determined, and concerted steps toward our aspiration of growing into a world-class renewable energy provider by 2038, the centennial of CR Group. As China is entering into a new stage of energy development, we will join hands with our stakeholders to contribute to a green, safe, and efficient energy transformation as well as a sustainable development for all.

# Appendix

## Major Social Responsibility Awards Received

Award	Conferred by	Recipient	Date
Included to Hang Seng ESG 50 Index Included to Hang Seng Corporate Sustainability Benchmark Index	Hang Seng Indexes Company Limited	China Resources Power Holdings Co., Ltd.	August 2020
Asian Power Awards : Innovative Power Technology of the Year (Battery Energy Storage for Fast AGC Frequency Regulation at CR Power Liyujiang Power Plant) Biomass Power Project of the Year – Gold (Rizhao Kaidi Ecological Energy Co., Ltd. 1 x 30 MW Biomass Cogeneration Project) Wind Power Project of the Year (New Energy (Huanxin) Wind Power Co., Ltd.) Solar Power Project of the Year (Lanxian Chunhui Photovoltaic Power Station)	Asian Power	China Resources Power Holdings Co., Ltd.	December 2020
Research Center for High-Quality Development of China's Energy Sector – Demonstration Project for Poverty Alleviation through Wind Power	China Energy News	China Resources Power Holdings Co., Ltd.	September 2020
Ranked 7th in Greater Bay Area Business Sustainability Index	Centre for Business Sustainability (CBS) of CUHK Business School, CUHK, SGS (HK)	China Resources Power Holdings Co., Ltd.	July 2020
Hong Kong Green Awards – Corporate Green Governance Award (Environmental Monitoring and Reporting) Green Management Award – Gold Sustained Performance (6 years+) Certificate	Hong Kong Green Council	China Resources Power Holdings Co., Ltd.	December 2020
Outstanding Innovation in Equipment Management of Power Companies in 2019	China Electric Power Equipment Management Association	China Resources Power Holdings Co., Ltd.	March 2020
#3 unit awarded with COAL TOP PLANTS for High-Temperature Comprehensive Upgrading Retrofit of Subcritical Unit	POWER	China Resources Power (Xuzhou) Co., Ltd. China Resources Power (Tongshan) Co., Ltd.	August 2020
AAAAA Rating, Enterprise with Good Practice on Standardization	China Electricity Council	China Resources Power (Wenzhou) Co., Ltd. China Resources Power (Heze) Co., Ltd. China Resources Power Yunnan Honghe Co., Ltd.	February/September 2020
#5 unit recognized as AAAAA-Grade Best Generator in Energy Efficiency	China Electricity Council	Nanjing Chemical Park Thermal Power Co., Ltd.	May 2020
#1 and #2 units recognized as AAAAA-Grade Generator in 300 MW-Class Subcritical Pure Condensing Liquid-Cooled Generators	China Electricity Council	China Resources Power (Xuzhou) Co., Ltd.	June 2020
#1 unit recognized as Best Generator in Power and Coal consumption in 350 MW-Class Supercritical Heat Supply Liquid-Cooled Generators	China Electricity Council	China Resources Power (Panjin) Co., Ltd.	July 2020
Outstanding Integrated Smart Energy Project in 2020	China Electricity Technology Market Association, China Smart Energy Industry Alliance, etc.	China Resources Smart Energy Co., Ltd.	July 2020

Award	Conferred by	Recipient	Date
Promising Business Award in the 4th Energy Storage Innovation Competition Top 10 Innovators in Application of Energy Storage Technologies 2020 Top 10 Energy Storage Integrators in China 2020	Energy Storage International Conference	China Resources Smart Energy Co., Ltd.	August 2020
First Prize of the 4th National Equipment Management and Technology Innovation Achievement Award	China Association of Plant Engineering	China Resources Power Tangshan Fengrun Co., Ltd.	August 2020
#2 unit recognized as AAAAA-Grade Generator in 600 MW-Class Supercritical Heat Supply Liquid-Cooled Generators (2019)	China Electricity Council	China Resources Power Henan Shouyangshan Co., Ltd.	August 2020
The 18th TnPM International Industrial Alliance Conference 2020 Promotion Award for Standard Equipment Management TnPM Excellent Team Award	International Maintenance Association (IMA), Office of International Programs at China Association of Plant Engineering	China Resources Power Dengfeng Co., Ltd.	September 2020
AAAAA Rating, National Wind Farm Production and Operation Indicators	China Electricity Council	China Resources New Energy (Huanxian) Wind Energy Co., Ltd. Donghao Wind Farm, China Resources Power Shengfengling Wind Farm, China Resources Power Zijing Wind Farm, China Resources Power China Resources New Energy (Fuxin) Wind Energy Co., Ltd.	September 2020
100 Success Stories for Poverty Eradication through Energy Projects (Hezhou-Guangdong Power Transmission Project)	Annual Meeting for China's Energy Industry	China Resources Power (Hezhou) Co., Ltd.	September 2020
AAAAA Rating, Enterprise with Good Practice on Standardization	Hong Kong Quality Assurance Agency (HKQAA)	China Resources Power (Haifeng) Co., Ltd.	October 2020
Second Prize in the Presentation Contest of Technology and Innovation Results 2020	China Association for Quality	China Resources Power (Xuzhou) Co., Ltd. China Resources Power (Tongshan) Co., Ltd.	October 2020
Excellent Micro Video Award for Construction Project Archives	National Archives Administration of China	China Resources Power (Changshu) Co., Ltd.	October 2020
EcoChallenger, BOCHK Corporate Environmental Leadership Awards	Federation of Hong Kong Industries (FHKI) & Bank of China (Hong Kong)	China Resources Power (Hezhou) Co., Ltd.	October 2020
National Base for Energy Education	China Energy Research Society	China Resources Power (Hezhou) Co., Ltd.	November 2020
Social Responsibility Reports of 100 Excellent Enterprises at the 3rd China International Import Expo	Ministry of Industry and Information Technology	China Resources Power (Hezhou) Co., Ltd.	November 2020
Environmental, Health and Safety Award – Silver	Hong Kong Green Council	China Resources Power (Yichang) Co., Ltd. China Resources Power (Tangshan Caofeidian) Co., Ltd. China Resources Smart Energy (Neihuang) Co., Ltd.	December 2020
Outstanding Contributor to Energy Conservation and Emission Reduction	Alliance of Thermal Power Industry of China Energy Conservation Association	China Resources Smart Energy Co., Ltd.	December 2020
Outstanding Award for Energy Conservation and Emission Reduction during the 13th Five-Year Plan	Environmental Protection magazine affiliated to the Ministry of Ecology and Environment, PRC	China Resources Power (Tangshan Caofeidian) Co., Ltd. China Resources Power Dengfeng Co., Ltd. China Resources Power Henan Shouyangshan Co., Ltd.	December 2020

## Key Performance Indicators

### Energy performance

	Unit	2016	2017	2018	2019	2020
Total assets	HKD bn	200.111	220.972	208.223	215.736	259.632
Net generation volume of subsidiary power plants	GWh	151,590	159,395	157,019	149,186	154,944
Total heat supply	kTJ	65.19	73.83	92.04	102.48	112.00
Attributable operational generation capacity	MW	36,184	36,077	37,438	40,392	43,365

### Economic performance

	Unit	2016	2017	2018	2019	2020
Turnover	HKD bn	66.21	73.31	76.94	67.76	69.55
Operating profit	HKD bn	16.36	12.48	11.35	12.89	14.09
Net profit <sup>2</sup>	HKD bn	7.71	4.62	3.95	6.59	7.58
Return on invested capital (ROIC)	%	7.3	5.3	6.0	6.9	6.8
Return on equity (ROE)	%	11.0	7.7	9.5	12.7	12.3
Asset-liability ratio	%	62.7	63.5	62.9	59.8	59.2
Interest-bearing debt ratio	%	55.1	55.7	55.6	52.1	50.5
Value appreciation of state-owned assets	%	97.3	109.0	103.6	109.1	112.7
Net operating cash flow	HKD bn	22.30	18.56	18.10	20.51	20.70
New patents	Patents	50	51	198	225	132

### Environmental performance

	Unit	2016	2017	2018	2019	2020
Proportion of installed renewable energy attributable generation capacity <sup>3</sup>	%	13.9	17.1	20.1	23.3	25.9
Total environmental investment	RMB bn	1.798	1.957	1.518	1.828	1.499
Investment in efficiency and emission upgrade	RMB bn	1.776	1.697	1.283	1.511	1.270
Energy consumption per RMB10,000 industrial added value	tce	9.25	10.79	11.04	8.90	8.57
Water consumption per RMB10,000 industrial added value	t	79.04	98.83	90.56	67.98	56.88

1. Third party performed an independent limited assurance of figures marked with “\*”. See pages 4 to 5 for the Assurance Report.

2. Net profit attributable to owners of the Company.

3. Renewable energy sources include wind, solar, and hydro. By the end of 2020, the proportion of installed renewable energy attributable generation capacity was 25.9% and the proportion of attributable operational generation capacity of grid-connected renewable energy was 31.1%.

	Unit	2016	2017	2018	2019	2020
Carbon dioxide emissions <sup>4</sup>	Mt	N.A.	137.29	133.30	134.02	140.71*
Carbon emission intensity in power generation	g/kWh	N.A.	780	755	728	726*
Carbon emission intensity in thermal power generation <sup>3</sup>	g/kWh	N.A.	844	834	834	834*
Comprehensive energy consumption	k tce	29,553.8	30,051.5	29,064.1	27,251.6	27,233.7
Net generation coal consumption rate (subsidiary coal-fired power plants) <sup>5</sup>	g/kWh	305.0	303.2	299.5	296.6	296.0*
Natural gas consumption <sup>6</sup>	Mm <sup>3</sup>	193.59	198.21	193.64	259.88	285.72*
Diesel consumption <sup>6</sup>	kt	15.7	14.9	11.0	11.2	12.9*
Coal consumption <sup>6</sup>	kt	74,766.5	78,150.3	77,589.1	73,489.0	74,813.7*
Purchased electricity <sup>7</sup>	MWh	126,339.70	106,343.60	92,117.60	79,682.09	104,513.67*
Oil consumption for power generation	g/MWh	93.80	86.90	59.10	62.90	69.70
Power consumption rate of power plants	%	4.95	4.99	4.97	4.93	4.85
Power consumption rate of factories	%	5.75	5.67	5.82	5.88	5.85
Comprehensive water consumption for power generation	kt	252,598.8	275,161.6	238,433.9	208,088.7	180,671.2
Comprehensive water consumption rate for power generation	t/MWh	1.51	1.60	1.42	1.32	1.12
Wastewater discharge	kt	N.A.	3,324.0	4,855.9	4,770.6	3,195.0
Wastewater discharge rate	g/kWh	24.79	19.30	28.82	30.06	17.53
Chemical oxygen demand (COD)	t	89.80	153.79	138.03	118.53	55.02
Nitrogen oxide emissions	kt	32.2	28.6	22.6	19.6	19.7*
Nitrogen oxide emission rate <sup>8</sup>	g/kWh	0.20	0.17	0.13	0.12	0.12*
Sulfur dioxide emissions	kt	21.1	17.2	13.6	11.2	10.6*
Sulfur dioxide emission rate <sup>8</sup>	g/kWh	0.13	0.10	0.08	0.07	0.07*
Particulate emissions	kt	3.4	2.3	1.8	1.4	1.3*
Particulate emission rate <sup>8</sup>	g/kWh	0.02	0.01	0.01	0.01	0.01*
Installation rate of desulfurization equipment in coal-fired power plants <sup>9</sup>	%	100	100	100	100	100*
Installation rate of denitrification equipment in coal-fired power plants <sup>9</sup>	%	100	100	100	100	100*
Total amount of hazardous waste created	kt	N.A.	4.2	3.1	4.5	4.0
Density of hazardous waste created	g/MWh	N.A.	24	18	25	22
Total amount of non-hazardous waste created	kt	N.A.	20,055.3	19,544.7	19,227.6	19,552.5
Density of non-hazardous waste created	t/MWh	N.A.	0.12	0.12	0.12	0.12
Comprehensive ash and slag utilization	kt	N.A.	15,653.2	17,589.7	14,802.8	14,201.7
Comprehensive ash and slag utilization rate	%	97.39	94.55	95.91	96.46	88.96

## Social performance

	Unit	2016	2017	2018	2019	2020
Total tax paid	RMB bn	9.309	7.712	7.040	6.334	6.137
Major equipment incident(s)	Incident(s)	0	0	0	0	0
General equipment incident(s)	Incident(s)	0	0	0	0	0
Personal injury and fatality incident(s)	Incident(s)	2	2	0	2	0
Unplanned outage	Times	20	25	20	19	19
Equivalent availability factor	%	90.54	92.77	91.62	92.28	91.78
Safety management personnel with certificates	Person	1,831	1,866	477	1,441	1,446
Certified safety engineers	Person	200	209	173	287	366
Total headcounts	Person	33,604	29,827	21,629	21,746	21,611
Female employees	Person	5,673	5,277	4,161	3,987	3,710
Ethnic minority employees	Person	949	934	909	901	959
Social security coverage ratio	%	100	100	100	100	100
Total expenditure for employee training	RMB mn	9.82	11.16	12.80	15.25	4.39
Training coverage	%	82	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	411	297	489	331	319
Newly added employees	Person	2,283	2,252	1,639	855	790
Charitable donations	RMB mn	20.52	4.69	6.07	117.40	175.40
Volunteer activities	Participants	5,328	3,787	6,109	4,315	2,793

4. Carbon dioxide emissions include emissions from burning fossil fuels and using purchased electricity.  
Carbon emission intensity in power generation = carbon emissions in power generation/total power generation.  
Carbon emission intensity in thermal power generation = carbon emissions in thermal power generation/total thermal power generation.  
Figures are based on the Guidelines for Power Generation Enterprises in China on Accounting and Reporting Greenhouse Gas Emissions (2014) issued by the National Development and Reform Commission and the Accounting and Reporting Requirements for Greenhouse Gas Emissions Part I: Power Generation Enterprises (GB/T 32151.1-2015, effective from June 1, 2016) issued by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of the People's Republic of China. In particular, the factor for calculating carbon dioxide emissions is from the annual Accounting and Reporting Supplementary Data of Carbon Emissions issued by the Ministry of Ecology and Environment.
5. Standard coal consumption per unit power generation, and calculated based on the Method for Calculating Technical and Economical Indicators of Thermal Power Plant (T904-2015).
6. Total energy consumption of the Company in production or non-production activities, and calculated based on the Method for Calculating Technical and Economical Indicators of Thermal Power Plant (T904-2015).
7. Electricity that a power enterprise purchases from a power grid or other power generation enterprises.
8. Nitrogen oxides emission rate: Nitrogen oxides emission per unit power generation  
Sulfur dioxide emission rate: Sulfur dioxide emission per unit power generation  
Particulate emission rate: Particulates emission per unit power generation  
Emission rate = total emission/thermal electricity generated
9. Installation rate of desulfurization equipment in coal-fired power plants: The number of coal-fired power plant with desulfurization equipment to the total number of coal-fired power plants  
Installation rate of denitration equipment in coal-fired power plants: The number of coal-fired power plant with denitration equipment to the total number of coal-fired power plants

CR Power always attaches great importance to ESG management. We regard all ESG performance data as the starting point for reviewing and improving management, and continuously improve the scientific and standardization of statistics. We also summarize and promote all the optimized data indicators each year, analyze the causes of all missing data indicators and formulate improvement plans to promote the company's sustainable development.

## Key Policy List

ESG Indicator	Key Policy
A1 Emissions	<i>Environmental Protection Management Standards</i>
A2 Energy Consumption	<i>Energy Conservation Management Standards</i> <i>Energy Conservation Supervision Standards for Thermal Power Plants Units</i> <i>Work Guidelines for Power Generation Efficiency Improvement in Wind Power Units</i>
A3 Environment and Natural Resources	<i>Carbon Asset Management Standards</i>
B1 Employment	<i>Management Measures for Employment Contract</i> <i>Headquarters Management Measures for Vacation Leaves</i> <i>Management Standards for Recruitment</i> <i>Management Standards for Organizational Performance</i> <i>Management Standards for All Employee Performance at Regional Companies</i> <i>Management Measures for Remuneration and Benefit Audits</i> <i>Management Measures for Interns at Headquarters</i>
B2 Health and Safety	<i>EHS Accident and Event Management Standards (Tentative)</i> <i>Safety Production Educational Training Management Standards</i> <i>Occupational Health Management Standards</i> <i>EHS Supervision Management Standards</i> <i>EHS Post Responsibility System</i> <i>Guidelines for Identifying and Managing Safe Production Accident Hazards</i> <i>Management Measures for EHS Hazards</i> <i>Integrated EHS Emergency Response Plan</i> <i>EHS Risk Assessment Criteria for Thermal Power Companies</i> <i>EHS Risk Assessment Criteria for Wind Power Companies</i> <i>EHS Risk Assessment Criteria for Solar Power Companies</i> <i>EHS Risk Assessment Criteria for Hydropower Companies</i> <i>Safety Risk Classification and Control Work Guidelines</i>
B3 Development and Training	<i>Management Measures for Talent Coordination and Exchanges</i> <i>Management Measures for Mentors of New Recruits</i> <i>CR Power Management Measures for Trainings of Dispatched Employees</i> <i>Management Measures for Internal Trainers</i>
B4 Labor Principles	<i>Management Measures for Employment Contract</i> <i>Management Standards for Recruitment</i>
B5 Supply Chain Management	<i>EHS Management Guidelines for Bidding by Stakeholders</i> <i>EHS Stakeholders Management Standards</i> <i>Procurement Management Standards</i> <i>Procurement Center Management Guidelines</i> <i>Management Standards for the Certification of Procurement Personnel</i> <i>Management Measures for the Recording, Announcement, and Investigation of Interference in Bidding Procedures and Engineering Projects by Managers</i> <i>Rules for the Periodic Rotation of Procurement Personnel</i> <i>Bidding Supervision and Management Standards</i> <i>Guidelines for Submission of Disputes and Handlings of Complaints on Purchase Projects Subject to Bidding</i> <i>Management Measures for Bid Evaluation Expert database and Bid Evaluation Experts</i> <i>Guidelines on the Management of Improper Conduct of Bid Evaluation Experts (Blacklist) (Tentative)</i>

ESG Indicator	Key Policy
B6 Product Liability	<i>Post-Construction Evaluation Method for the Quality of Thermal Power Projects</i> <i>Post-Construction Evaluation Method for the Quality of Wind Power Projects</i> <i>Knowledge Management Standards</i> <i>Information Security Management Standards</i> <i>Information System Security Management Standards</i> <i>Legal Dispute Cases Management Standards</i> <i>Guidelines on Risk Management in Power Sales</i> <i>Management Guidelines on Power Sales</i> <i>Management Standards for Maintaining Relationship with Energy Customers</i>
B7 Anti-Corruption	<i>Management Measures for Audits</i> <i>Management Measures for the Integrity and Self-Discipline Information of Managers and Key Personnel</i> <i>Confidentiality Rules for Discipline Inspection and Supervision Programs</i> <i>Implementation Measures on Anti-Corruption Talks</i> <i>Internal Audit Regulations</i> <i>Basic Rules of Internal Control and Risk Management</i> <i>Procurement Management Standards</i> <i>Code of Integrity</i> <i>Sunshine Declaration</i> <i>Interim Measures for Regulating Managers and Key Employees in Investing, Running, and Establishing Other Businesses</i> <i>Accountability Guidelines for Financial Transaction Risks</i> <i>Management and Evaluation Method for the Chief Financial Officers of Affiliate Companies</i>
B8 Investment in Communities	<i>Management Standards for Charity Activities</i> <i>Social Responsibility Program Management Standards</i> <i>Guidelines for Models of Poverty Alleviation through Wind Power Projects</i>



## Rating Report

### Rating Report of Sustainable Development Report of China Resources Power Holdings Co., Ltd. of 2020

Upon the request of China Resources Power Holdings Co., Ltd., the Chinese Expert Committee on CSR Report Rating invited experts to form a rating team to rate the "Sustainable Development Report of China Resources Power Holdings Co., Ltd. of 2020" (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 office has established a sustainable development report preparation work team, which is consisted of a "leading team" and a "preparing team". The office director works as the leader of the "preparing team" who overall promotes the preparation of the report. The President works as the leader of the "leading team" who is in charge of the key contents of the report and responsible for the review, and the chairman of the Board is responsible for the final approval of the report. The report, with definite function value position, is taken as an important tool for compliant disclosure of information, strengthening of social responsibility management, enhancement of communications among relevant parts, and promotion of brand image. A reporting information base for sustainable development indicators is built based on the identification of substantive issues such as national macroscopic policies, company development planning, internal and external social responsibility standards, industry benchmarking analysis, and investigation of stakeholders, etc., which has promoted the quality of information disclosed by the enterprise, pushed the subsidiaries to release reports, and enhanced the integration of social responsibility longitudinally. The report is planned to be published on the official website of the company, and to be presented in electronic version, printed form, and long chart version, etc. with excellent performance in process.

##### Materiality (★★★★★)

The Report systematically discloses the key industrial issues such as implementation of macro policies, guarantee of power supply, safe production, development of green power, environmental impact assessment of construction projects, energy conservation, development of circular economy, reduction of "three-waste", and ecological environmental governance, etc., with detailed and full description and excellent performance in materiality.

##### Integrity (★★★★★)

The main body of the Report systematically discloses 93.33% of the core indicators of the industry from the perspectives of "exploit clean energy for low-carbon development", "be cautious and secure development cornerstone", "explore to accelerate upgrade and innovation", "gather strength for growth and write a new chapter of glory", "join hands to create harmony for a beautiful society", and "uphold the spirit of responsibility with perseverance", with excellent performance in integrity.

##### Balance (★★★★★)

The Report reveals negative data such as "number of large and above environmental pollution incidents", "staff turnover rate", "number of major equipment incidents", "number of injuries and fatalities", and "number of unplanned shutdowns", and describes the handling and result of the "fatal incident involving staff of China Resources Power's relevant parties" in details, with excellent performance in balance.

##### Comparability (★★★★★)

The Report discloses the comparative data of 75 key indicators such as "operating profit", "number of new patents", "total environmental investment", "energy consumption per 10,000 yuan worth of industrial added value", "total tax payment" and "social insurance coverage" for three consecutive years, and makes a horizontal comparison on "no. 109 of the world's top 250 power enterprises" and "no. 1043 of the world's top 2,000 listed companies", with excellent performance in comparability.

##### Readability (★★★★★)

By continuing the theme of "nourishing life with green power", the report systematically presents the company's concepts, behaviors and achievement on duty performance with a clear structure and highlighted key topics. Cover idea and chapter double-spread are incorporated with the company's main businesses and scenarios of duty performance, which not only demonstrate the industrial characteristics, but also increase the recognition level and infectivity of the report. The "chapter introduction" part is set up, and footnotes are given in a number of places to explain the policy of duty performance, which make readers grasp the content quickly, and improve the report's readability. The chapter system is consistent, the design style is refreshing and simplistic, the graph/text ratio is appropriate, all of which improved the report's readability, with excellent performance in readability.



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Chinese Expert Committee on CSR Report Rating

### Innovation (★★★★★)

The Report actively responds to hot issues such as 2060 Carbon Neutral, prevention and control of COVID-19, and poverty alleviation, etc., demonstrating the company's responsibility for the implementation of macroscopic policies, and catching up with current events for the report. The report concentrates on the main points by showing the company's duty performance idea and actions, and response to the UN's SDGs in the beginning. Innovative way to publish the report with a number of ways for secondary development such as H5, long chart, and video versions, which strengthened the propagation effects. A special issue on poverty alleviation is prepared and published, which focuses on the practice highlights of the company's duty performance, further strengthening the communications among stakeholders, with excellent performance in innovation.

### Overall Rating (★★★★★+)

According to the rating team's assessment, the "Sustainable Development Report of China Resources Power Holdings Co., Ltd. of 2020" is of five-star rating regarding its process, materiality, integrity, balance, comparability, readability and innovation, and it is an excellent corporate social responsibility (CRS) report.



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The Sustainable Development Report of China Resources Power has won the five-star rating for six years in a row, and Remarkable Five-Star rating for two years in a row

### IV. Improvement Suggestions

Increase the disclosure of the industry's core indicators, and further improve the report's integrity.



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