

2022 ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

POWER CONSTRUCTION CORPORATION OF CHINA LTD

Report Descriptions

This is the 11th environmental, social and governance report issued by Power Construction Corporation of China Ltd (stock code: 601669, abbreviation: POWERCHINA), aiming to truly present to stakeholders POWERCHINA's philosophy, practice and performance in sustainable development.

This report covers all aspects of POWERCHINA's business, and also discloses relevant key performance indicators, so that stakeholders have a full understanding of the relevant information.

◎ Preparation Basis

This report is prepared in accordance with documents and standards such as Guidelines To Chinese State-owned Enterprises on Fulfilling Corporate Social Responsibilities (GZFYJ [2008] No. 1) and Guidelines To State-owned Enterprises on Further Fulfilling Corporate Social Responsibilities (GZFYJ [2016] No. 105) of the State-owned Assets Supervision and Administration Commission of the State Council (SASAC); Guidelines on Environmental, Social and Governance Report and Guidelines on Climate Information Disclosure of the Stock Exchange of Hong Kong Ltd. (HKEX); Guidelines on Self-discipline Regulation of Listed Companies No. 1 -- Standard Operation and Rules for Stock Listing (January 2022 Revision) of the Shanghai Stock Exchange (SSE); Guide To the Preparation of CSR Reports in China (CASS-ESG5.0) of the Chinese Academy of Social Sciences; GRI Standards (2021 Revision) of the Global Reporting Initiative (GRI); ISO26000 Guidance on Social Responsibility of the International Organization for Standardization (ISO); and the 2030 Sustainable Development Goals (SDGs) of the United Nations (UN).

◎ Reporting Period

The reporting period is from January 1, 2022 to December 31, 2022, with some appropriate extensions beyond that as needed.

◎ Scope of Organizations

Power Construction Corporation of China Ltd and its wholly-owned and holding companies, covering relevant indicators of enterprises under management entrusted by Power Construction Corporation of China, the controlling shareholder.

◎ Data Description

The financial data quoted in this report are mainly derived from audited financial reports, while other data are obtained from official corporate documents, statistical reports, etc.

◎ Title Description

For ease of expression and reading, Power Construction Corporation of China Ltd is described as "POWERCHINA", "the company" and "we" in the report, according to the specific contexts.

◎ Confirmation and Approval

This report was reviewed, confirmed and approved by the Board of Directors in April 2023 to ensure that it meets the principles of "importance", "quantification", "balance" and "consistency".

◎ Report acquisition

This report is available to stakeholders and the public in PDF electronic documents in Chinese, which can be downloaded from the website of the SSE and the official website of POWERCHINA (<http://www.powerchina.cn/>), and its English version is available on the website of the SSE.

We sincerely appreciate your attention and look forward to your feedback, suggestions and corrections, which will contribute to our efforts to improve POWERCHINA's ESG governance and disclosure.

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ABOUT POWERCHINA

Corporate Profile

Power Construction Corporation of China Ltd (POWERCHINA), formerly known as Sinohydro Group Ltd., was established in Beijing on November 30, 2009 by Sinohydro Corporation and Hydrochina Corporation. Sinohydro Group Ltd. was listed on the Shanghai Stock Exchange on October 18, 2011 (stock code: 601669), and changed its name from "Sinohydro Group Ltd" to "Power Construction Corporation of China Ltd" and its stock abbreviation from "Sinohydro" to "POWERCHINA" in January 2014.

Power Construction Corporation of China, the parent company of Power Construction Corporation of China Ltd, is ranked No. 100 in the Fortune Global 500, No. 1 in the ENR[®] Top 150 Global Design Firms, No. 5 in the ENR Top 250 Global Engineering Contractors, No. 6 in the ENR Top 250 International Engineering Contractors, and Ranked 154th in the world's top 500 brands.

in the Fortune
Global 500

No. **100**

in the ENR Top 150
Global Design Firms

No. **1**

in the ENR Top 250 Global
Engineering Contractors

No. **5**

in the ENR Top 250
International Engineering
Contractors

No. **6**

Ranked 154th in
the world's top
500 brands

No. **154**

[®]ENR: Engineering News Record is the world's most authoritative academic journal in the field of engineering construction.

Major Capital Operation • 2022

In May 2022

the company completed the largest asset replacement project in the A-share market in the construction industry in terms of transaction scale since 2020, fulfilling its public commitment to resolve horizontal competition and improving asset quality and management efficiency. On this basis, the company further destocked its real estate projects, effectively restored its refinancing ability and laid a solid foundation for its high-quality development.

In December 2022

the company issued 2.080 billion common shares to 30 investors in a non-public offering, raising RMB 13.396 billion, which was the largest private placement ever by listed companies in the A-share market in the construction industry, and also the largest private placement project inquired by state-owned enterprises (SOEs) without the participation of its majority shareholder, effectively optimizing its shareholding structure and capital structure and providing a strong momentum for its strategic transformation.

Since 2022

the company has been promoting the restructuring and integration of renewable energy business, and further optimizing and adjusting the mechanism and mode of renewable energy investment and development. So far, it has basically realized the centralized management and operation of renewable energy assets, and completed the shareholding system transformation of POWERCHINA Renewable Energy Co., Ltd.

POWERCHINA 2022 Non-Public Offering Investor Exchange Meeting

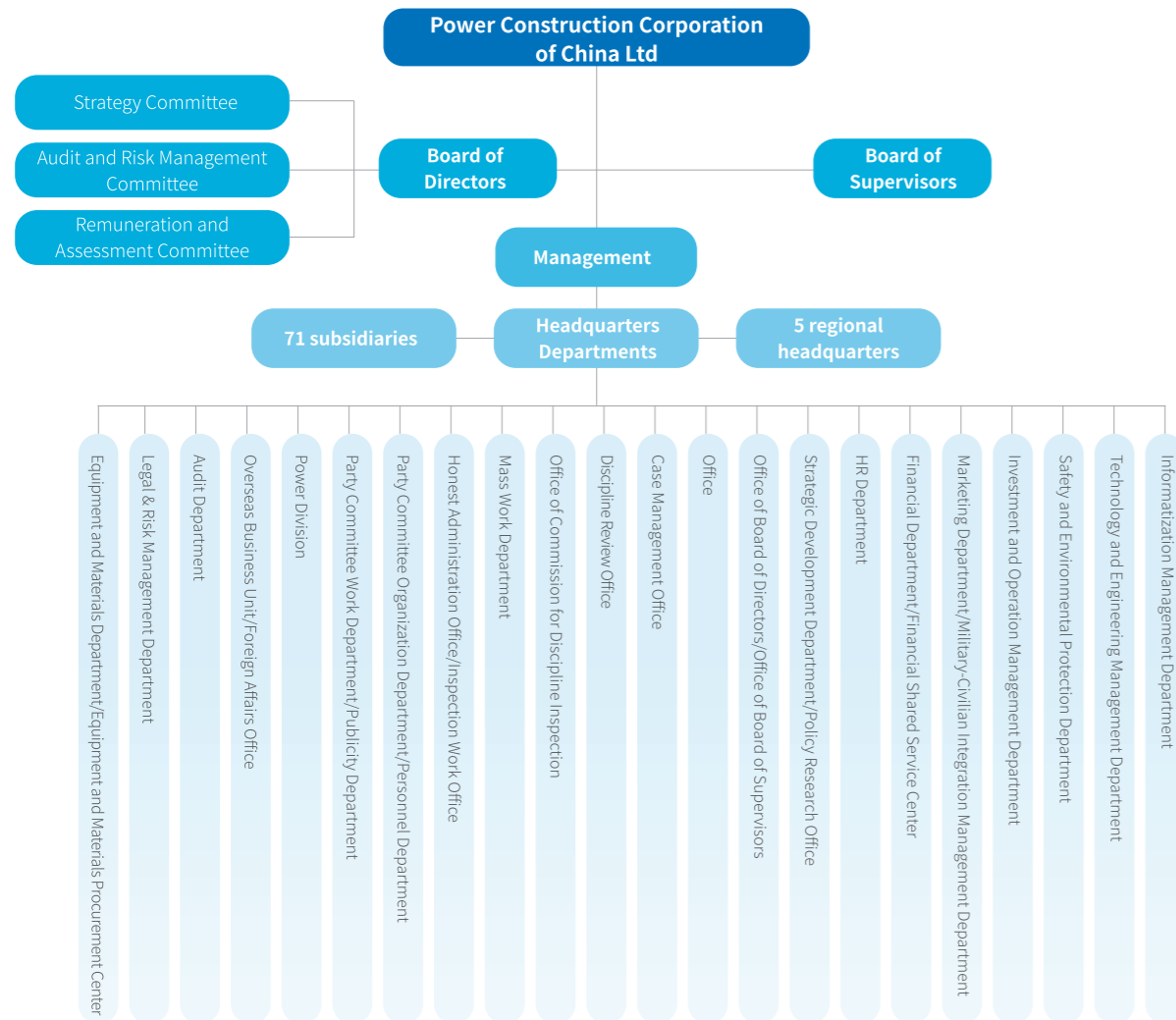


Beijing Venue



Shanghai Venue

Organizational structure



Business Scope

Construction, design, engineering, consulting and supervision of domestic and overseas projects for hydraulic structure, water conservancy, water resources and environment, electric power, roads, highways, railroads, ports, waterways, airports, housing, mines, municipal facilities, and urban rail projects; related engineering technology research, survey, design and services; electricity generation; bidding agency; industrial investment and management; import and export business; personnel training, etc.

The company pursues global operation and operation for quality and efficiency; aiming for sustainable development, we keep optimizing corporate governance and strengthening safety and risk prevention and control; we devote ourselves to providing high-quality products and services, and protects the rights and interests of our clients; we continuously strengthen the foundation of development, make every effort to strengthen and expand the company's main business, and strive to create greater value for shareholders.

The company regards environmental protection as the cornerstone of sustainable development; we actively play our leading advantages in planning and engineering and whole industry chain integration to fully support green and low-carbon energy development; we continuously promote the shifts to green and low-carbon construction and operation, strengthen ecological environment governance and protection, maintain the harmonious coexistence between human and nature, and provide strong support for global sustainable development.

The company always keeps in mind the responsibility of SOEs; upholds the business philosophy of cooperation and complementarity, and pursues win-win results with partners; the company puts people first, protects the rights and interests of employees and cares for their career development; the company gives back to society with love, contributes to rural revitalization and social welfare, and is willing to work with all parties to create a good life for all stakeholders.

Development Strategy

Strategic development

With a goal of becoming a world-class enterprise, the company coordinates the domestic and overseas markets, integrates the three major links of "investment, construction and operation", focuses on the five major fields of "water works, electric energy, green aggregates, urban facilities and digital technologies", implements seven capacity building initiatives on comprehensive innovation, market expansion, quality performance, lean management, resource integration, asset management and risk control, systematically takes the eight strategic actions on party building, technological innovation, deepening reform, management improvement, international development, talents cultivation, clean governance, and digital transformation. The company also strengthens capacity building and high-quality development to better serve the national strategy, aiming to contribute more in the 14th Five-Year Plan period by playing a great role, delivering concrete results and making practical contribution.

With a goal of becoming a world-class enterprise

Building a world-class enterprise with global competitiveness

Coordinating the domestic and overseas markets

Based on the new home-and-abroad development pattern

Integrating the three major links of "investment, construction and operation"

Playing the advantage of integrating the whole industry chain of "investment, construction and operation"

Focusing on the five major fields of "water works, electric energy, green aggregates, urban facilities and digital technologies"

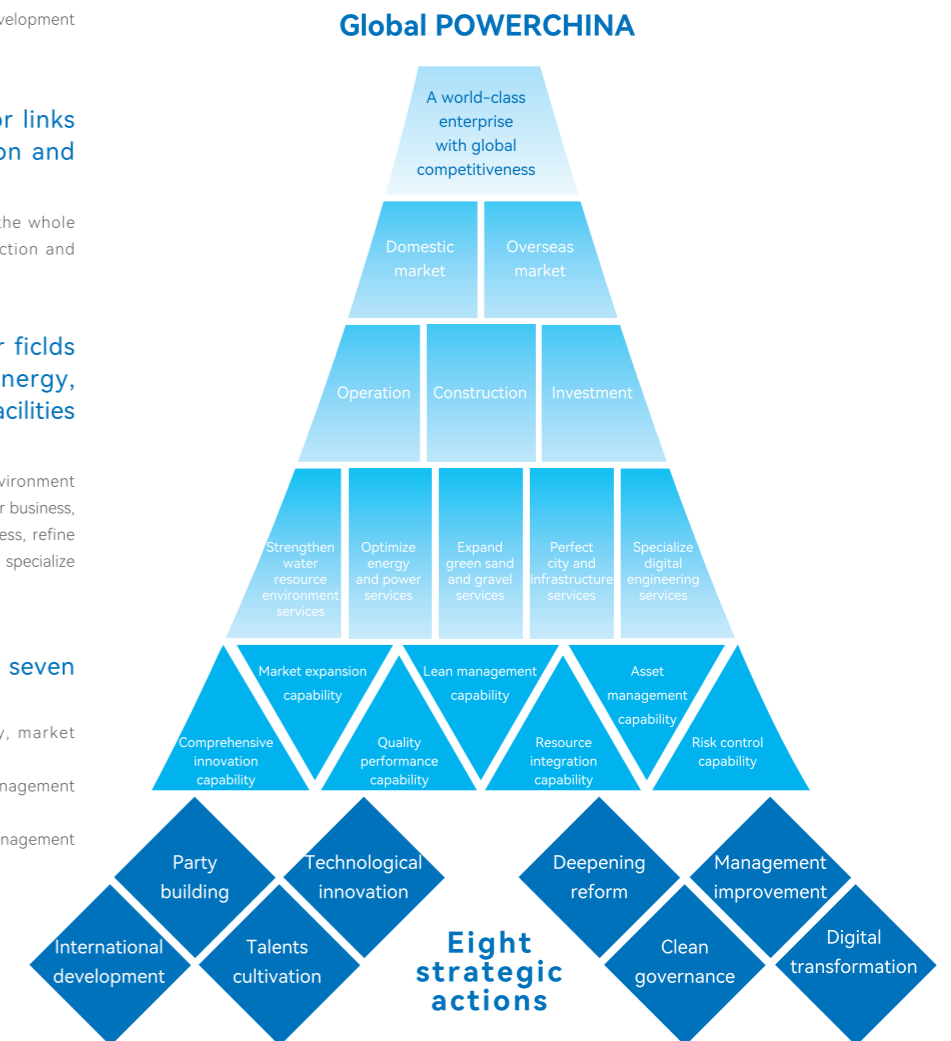
Strengthen the water resources and environment business, optimize the resources and power business, expand the green sand and gravel business, refine the urban and infrastructure business, and specialize in the digital engineering business

Strengthen the building of seven major capacities

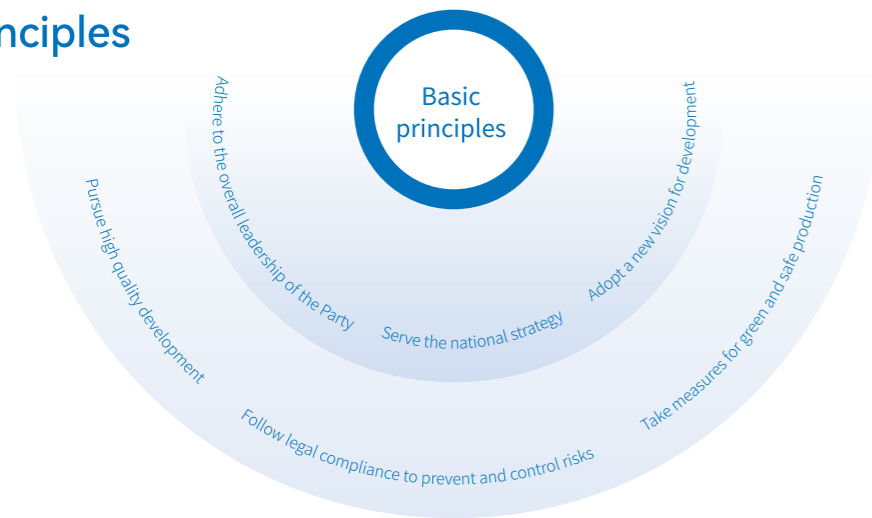
Comprehensive innovation capability, market expansion capability
Quality performance capability, lean management capability
Resource integration capability, asset management capability
Risk control capability

Promoting eight strategic actions

Party building technological innovation, deepening reform management improvement, international development, talents cultivation clean governance, and digital transformation



Basic principles

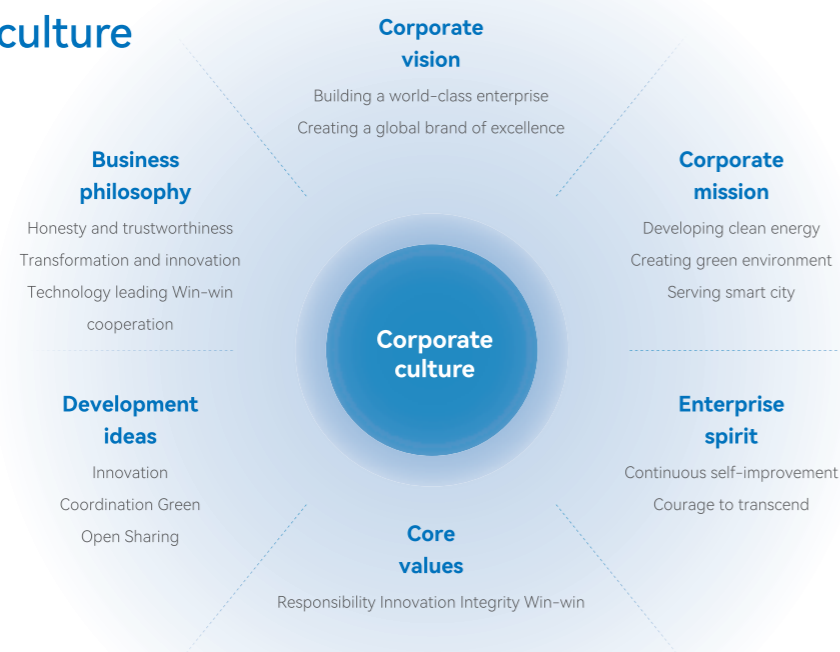


Overall objective

Overall objective during the 14th Five-Year Plan period: Building a world-class enterprise with global competitiveness

- Establishing a world-class business system
- Building a world-class technology innovation system
- Forming a world-class management system
- Creating a world-class global management pattern
- Cultivating a world-class talent team
- Completing the three-year action of SOE reform
- Strengthening the Party leadership and Party building

Corporate culture



ESG Governance

As a founding member of the Mechanism for International Sustainable Infrastructure Promotion (MISIP), POWERCHINA sticks to the goals of sustainable development and "social value creation", and takes the initiative to adapt to ESG development trends, practice ESG concepts, strengthen ESG governance, improve ESG performance, and accelerate strategic transformation and high-quality development.

ESG governance

Statements of the Board

The Board of Directors (BOD) conducts overall supervision on ESG matters, reviews and decides major ESG matters and assumes the overall responsibility of ESG work. To be more specific, the BOD oversees the company's ESG development direction and strategy, identifies, assesses and manages important ESG risks, regularly reviews the ESG work, approves information disclosure on ESG reports, and evaluates the applicability and validity of the company's ESG risk management and internal control systems.

Ability development

The company attaches great importance to the ability building of ESG practitioners, actively attends ESG training sessions for listed companies of SOEs, the 14th Open Class of Sharing Responsibility and other special training on social responsibility /ESG , and takes part in ESG China Forum quarterly summits and other influential communication and exchange activities in the field of ESG. Within the POWERCHINA group, we effectively publicize ESG knowledge, spread ESG concepts, enhance ESG awareness, and effectively improve the management and practical ability of relevant personnel in ESG work.

Organizational mechanism

The Corporate Office performs the management functions relating to ESG works and provides such information and suggestions to BOD on a regular basis. According to the positioning and functions, the different subsidiaries can set up relevant departments with appropriate policies to carry out such ESG activities. Meanwhile, target systems, performance evaluation, and reward and punishment mechanisms relating to ESG should be added to corporate governance to guarantee more effective implementation.

2022 • Our Honors

- The Board of Directors of the company was awarded the Best BOD of the 18th Gold Prize of Round Table for the Board of Directors of Listed Companies in China
- The company won great honors in the capital market such as Class A Enterprise of information disclosure of listed companies in Shanghai Stock Exchange for 9 consecutive years
- The company was awarded "Outstanding Issuer of Corporate Bonds" by Shanghai Stock Exchange in 2022
- The company was selected into "Central Enterprises ESG • Pioneer 50 Index" and "Social Value • Pioneer 50 Index" in 2022
- The company was selected into the "Central Enterprises Responsibility Management • Pioneer 30 Index"
- POWERCHINA Fund Management Company Limited was awarded "Featured Sponsor of Revitalizing Stock Assets by Asset Securitization" by Shanghai Stock Exchange in 2022
- POWERCHINA Factoring Co., Ltd. was "Excellent Sponsor of Asset Securitization Business" by Shanghai Stock Exchange in 2022



POWERCHINA Fund Management Company Limited was awarded "Featured Sponsor of Revitalizing Stock Assets by Asset Securitization" by Shanghai Stock Exchange in 2022



POWERCHINA was selected into "Central Enterprises ESG • Pioneer 50 Index" and "Social Value • Pioneer 50 Index" in 2022

Communication with stakeholders

Our company has actively understood the stakeholders' demands and given feedback in relation to their expectations. Adhering to the true, accurate, and integrated principles, in 2022, we conducted the disclosure work with high quality. As a result, we were awarded for one of "A class" companies in information disclosure works of listed companies for the ninth year.

2022 • Our Information Disclosure Channels



- Prepared and disclosed 126 periodic reports and various provisional announcements;
- Released visualized annual reports on multiple platforms and channels to disclose information in a concise, clear and easy-to-understand manner;
- Held the 2022 semi-annual performance briefings for the first time in the form of "live broadcast + network communication", with high-quality responses to investors' questions and good feedback on the full-coverage, multi-terminal information disclosure;
- Disclosed information on social, environmental and governance value creation through the "Social Responsibility" column of the official website, and promptly followed up and responded to the concerns of related parties.

Stakeholders	Demands	Communication mechanism	Our response
Government	National strategy acknowledgement Law-abiding and compliance management Maintenance and appreciation of assets value Full tax payment according to law Promoting stable employment Tackling climate change	Policy guidance Special meeting reporting Information submission Work objectives and evaluation Strategic cooperation	Compliance with laws and regulations Executing the national policy Law-based integrity management Clean practice Develop clean energy Undertake social responsibility
Shareholders	Avoid economic risks Keep information communication	Periodic or interim reporting General Meeting of Shareholders Board of Directors Performance briefings Daily communication Company's official website	Maintaining stable profit Safeguarding shareholders' equities Continuous and reasonable bonus Timely disclosure of information
Customer	Guarantee construction quality Perfect customer services Innovative engineering technology	Customer-service hotline Satisfaction survey Company's official website Customer visit	Implement quality management Provide high-quality service Strengthen scientific and technological innovation Protect customer privacy Lead common growth
Partner	Comply with business ethics Practice mutual benefit and win-win	Regular communication Business communication and cooperation Industry forums and exhibitions	Insist on honesty and trustworthiness Mutual benefit and equal consultation Maintain good cooperation
Employee	Improve welfare benefits Guarantee personal safety Support career development Realize personal value Work and life balance	Workers' congress Daily communication Various business training Staff recreational activities	Stable salary incentive Protecting employees' rights and interests Carry out democratic management Strengthen staff development Enrich employees' life Perform epidemic prevention and control
Community	Support community building Support social public welfare	Community visits Consolation and communication Open day Public charity Environmental protection	Participate in community activities Contribute to public charity Rush to rescue and relief Practice green production Carrying out environmental public welfare

Substantive topic identification

Topic identification

For deeply understanding the core demands and expectations of stakeholders and meeting the "materiality" principles in information disclosure, we keep updating and improving the ESG database every year following the national macro policies, industrial development, regulatory requirements, and our operating strategies. The topics are divided into three categories: environment, society and governance, 42 items included.

Governance topic

- Ownership and control
- Salary
- Board of Directors
- Accounting
- Business ethics
- Anti-corruption
- Tax transparency
- Information transparency
- ESG management

Social topic

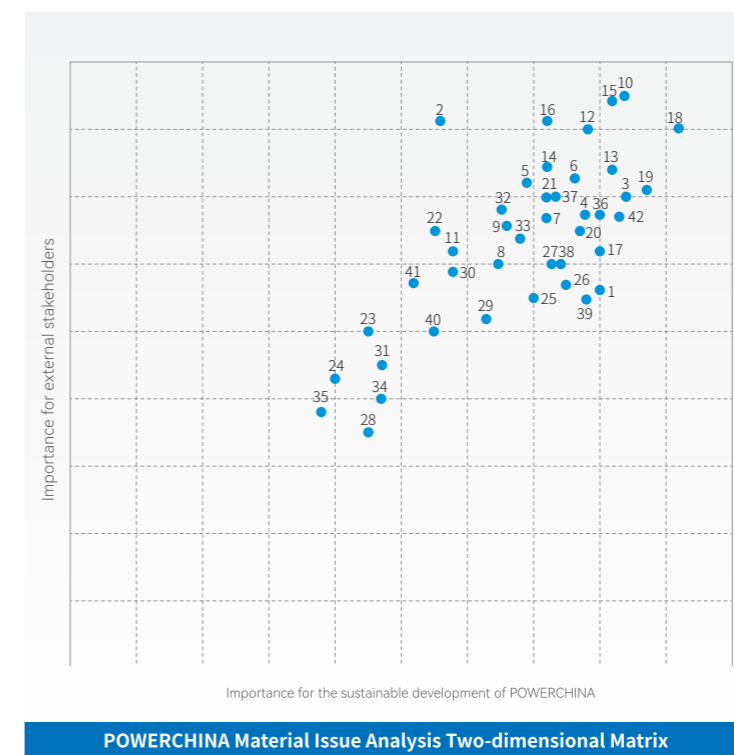
- Health and safety
- Community relations
- Labor force management
- Human capital development
- Privacy and data security
- Product/service quality management
- Protection of customer rights and interests
- Accountable supply chain management
- Driving the development of industry
- Strategic cooperation
- Employment promotion
- Public charity
- Volunteer service

Environmental topic

- Environmental management system
- Environmental management objectives
- Environmental warning and emergency mechanism
- Environmental protection training and education
- Energy management
- Use of clean energy
- Packaging material
- Wastewater management
- Waste gas management
- Developing the circular economy
- Green office
- Tackling climate change
- Toxic emissions and waste
- Carbon emissions
- Opportunities for clean technologies
- Water resources stress
- Biodiversity and land use
- Ecological restoration and management

Topic analysis

We conduct statistical analysis and evaluation of material issues to build a "POWERCHINA Material Issue Analysis Two-Dimensional Matrix Model" that identifies the corporate's material ESG topics to provide us with accurate and comprehensive ESG information for a disclosure purpose.



G

Managing the Foundation Glorifying the Road of Development



POWERCHINA is persistent in carrying out "two consistent principles". We focus on reinforcing the Party's leadership and improving corporate governance to establish a modern enterprise system with Chinese characteristics and to achieve a more standardized governance structure. All parties have clear responsibilities and effective operations with checks and balances.

Opportunities and challenges

- According to the report of the 20th CPC National Congress, we should improve the modern enterprise system with Chinese characteristics, promote the entrepreneurial spirit, and accelerate to become a first-class enterprise in the world. When considering corporate governance issues, we should strengthen our Party's leadership in state-owned companies and financial institutions.
- An effective governance structure should accord with the best interests of shareholders in the long run. Our country is accelerating to establish a "dual circulation" development pattern in which the domestic economic cycle plays a leading role while the international economic cycle remains its extension and supplement. Under this background, enterprises should concern more about overseas compliance requirements, enhance their abilities in risk management and international cooperation, seek new advantages in international competitions.
- International and domestic regulatory authorities and exchanges are becoming more demanding and stringent in the supervision departments for companies.

POWERCHINA' s coping strategies

- Carrying out "two consistent principles", keep improving the modern enterprise system, putting efforts to the construction of the Board of Directors, and construct well-structured subsidiaries' BODs.
- POWERCHINA actively serves the major national strategies by accelerating the corporate transformation and upgrading. We focus on "water works, electric energy, green aggregates, urban facilities and digital technologies", and construct an integrated industry chain of "investment, construction and operation". We firmly focus on the globalization strategy, pursue a high-quality development, and expedite to establish a first-class enterprise in the world.



Improve corporate governance

POWERCHINA keeps improving the governance structure, establishing a well-structured organization system with checks and balances among the Board of Directors, the Board of Supervisors and the management. All parties have legal and transparent powers and responsibilities, and operate in a coordinated manner with effective checks and balances. The construction of modern enterprise system is progressing steadily, the management of corporate bodies is further optimized, and the SOE reform is highly affirmed by all parties, promoting the quality and efficiency of operation with first-class corporate governance.

Perfect governance system

POWERCHINA deeply carries out "two consistent principles", establishes a perfect governance structure and decision-making mechanism according to the requirements of the modern enterprise system, with clear boundaries of powers and responsibilities among the shareholders' meeting, the Party committee, the Board of Directors, the Board of Supervisors and the management, and a rigorous decision-making process, which ensures high quality and efficient decision-making on business reform and development and Party building matters. The company scientifically revised the Implementation Measures for the Decision-making System of "Major Issues, Appointments, and Dismissals", and prepared the list of powers and responsibilities for the standing committee of the Party committee, the shareholders' meeting, the Board of Directors, the Board Chairman, and the General Manager in the decision-making matters of "major issues, appointments, and dismissals", to further clarify the decision-making subjects, methods, procedures and other major matters.

Data Reading · 2022

All **77** subsidiaries that are in the list for establishing boards of directors have built and improved their boards of directors, with a majority of external directors, and have constructed the authorization system of the boards of directors

Additional **28** subsidiaries have implemented the work related to the functions and powers of the board of directors, realizing the differentiated implementation of the functions and powers of the board of directors

Implement the three-year reform action

POWERCHINA has deeply implemented the List of Key Tasks in 2022 for the Three-Year Action of Comprehensively Deepening Reform and has achieved a successful three-year reform action. The company used flexible medium- and long-term incentives in various ways, and so did the subsidiaries. Also, we organized outreach meetings for such incentive policies. As a result, 28 enterprises were approved to implement technology-based job bonuses and excess profit sharing. Two representative materials were published by the SASAC in the Three-year Reform Action Briefing and SOE Reform News, and five subsidiaries were incorporated into the list of "Scientific and Technological Reform Demonstration Enterprises" in 2022. Moreover, Twelve "Double Hundred" "Scientific and Technological Reform" enterprises make progress in innovation and exploration to create reform benchmarks.

Optimize industrial structure and organizational structure

The company carries out strategic restructuring and professional integration and realizes the centralized management and operation of renewable energy assets such as photovoltaic and wind power within the company's system. We have completed the transformation of the shareholding system of POWERCHINA Renewable Energy Co., Ltd. Also, we have established two offshore wind power construction enterprises, striving to build an integrated chain of offshore wind power and accelerating to develop the relevant businesses; POWERCHINA Insurance Brokers Co., Ltd has been set up. Its centralized management mode proved to be efficient. The company's financial sharing and global treasury management system was initially completed and put into use. In addition, the company's public resources trading platform was certified as a three-star national platform, and the electronic bidding business was fully promoted; and the supply chain cloud service platform application was continuously deepened.

Promote mixed ownership reform

The company adheres to the principles of "applying policies that suit the enterprises concerned, making independent arrangement where it is feasible to do so, exercising control where it is feasible to do so and making participation where it is feasible to do so, without making arbitrary arrangement, without making full-range coverage, and without setting a timetable therefor", and promotes the mixed ownership reform steadily by classification and stratification. At present, the company has 2 subsidiaries included in the pilot mixed ownership reform of the National Development and Reform Commission, and 9 enterprises included in the pilot mixed ownership reform at the enterprise level. There are 138 mixed ownership enterprises, introducing non-state capital of RMB 14.07 billion. Most of them are in good operations. The mixed ownership reform of the municipal institutes under Huadong Engineering Corporation Limited and Kunming Engineering Corporation Limited has achieved progress in stages, and the introduction of strategic investment in Beijing Engineering Corporation Limited is being actively promoted.

Data Reading · 2022

2 subsidiaries included in the pilot mixed ownership reform of the National Development and Reform Commission

9 enterprises included in the pilot mixed ownership reform at the enterprise level

Strengthen the management of corporate bodies

The company has been continuously strengthening the basic work of corporate body management, and uses subsidiary corporate body information system and management reduction special system to perform real-time monitoring and effective screening on corporate bodies in different levels to clarify the company's current situation. By the end of 2022, the company has reduced 418 corporate bodies, and recovered capital of 14.95 billion RMB with 220 million RMB reduced in management expenses. Based on this, the company has further simplified its organization structure, optimized its capital distribution, and improved its resource distributing efficiency. Most significantly, company has improved its management efficiency.

Strengthen the leadership of Party building

The company is always bearing our country's most fundamental interests in mind, and consciously promoted its work into the overall situation of the Party and the state. We have been carrying out re-learning, re-implementation and re-enhancement activities based on the spirit of General Secretary Xi Jinping's important instructions with the theme of "Building a New Era and Welcoming the 20th CPC National Congress". Activities guided Party members and cadres in faithfully supporting the "two establishments" and resolutely achieving the "two upholds" in order to earnestly study and understand the spirit of the 20th CPC National Congress. The company has held deployment meetings for "double introduction and double construction", and promoted the thorough implementation of Party building tasks at all levels. We have independently developed an intelligent Party building system, and formed 8 Party building collaboration areas that comprehensively strengthened the Party building. Also the system has successfully concluded the three-year action of standardization of Party branches. Consolidated and deepened the political inspection with fulfilled responsibility of party management implemented more precise and powerful supervision. Discipline and accountability systems provided a more distinct order for talents selection and employment. More focused group work further enhanced the energy of officers and workers in entrepreneurship. In 2022, the company was rated "A" in the assessment of the party building accountability system and inspection patrol of central enterprises. Rated "Excellent" in the discipline inspection assessment of central enterprises by the Discipline Inspection and Supervision Group of the NDRC.



POWERCHINA's Party Committee held the Mobilization and Deployment Meeting for "Double Introduction and Double Construction"

Advance strategic transformation

As a global leader in clean and low-carbon energy, water resources and environment construction, the backbone of global infrastructure connectivity, and a leading enterprise which serves the construction of "the Belt and Road Initiative", the company has established its foothold in large infrastructure focusing on "water works, electric energy, green aggregates, urban facilities and digital technologies". With integrated investment, construction and operation, the company has been promoting globalization, vigorously driving forward its strategic transformation and upgrading. The company has built a large number of "pillars of the great power", created numerous "world firsts", writing new chapters of high-quality development that are drawing worldwide attention.

Data Reading · 2022

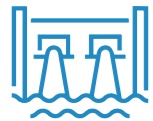
trillion for new business contracts

RMB **1.009186** trillion

for operating revenue

RMB **571.649** billion

Integrate "water works, electric energy, green aggregates, urban facilities and digital technologies"



The company has designed and built more than **80**% of large hydropower stations in China

The installed power capacity has exceeded **200** million kilowatts



China-ASEAN Nanning Airport Fusui Economic Zone Second Water Supply Plant and Supporting Pipeline Network Project

The company gives full play to its role as a "national team" and "main force" in energy and power construction, focusing on the five core advantages in "water works, electric energy, green aggregates, urban facilities and digital technologies", and has been integrating them into the overall development of the country, taking mountains and rivers as its home, responding to the needs of the country, and building the pillars of the country.

Optimize "water works"

The company works toward leading the global comprehensive management of water environment industry. We have been actively participating in the construction of national water networks, systematic management of Yangtze River, Yellow River and other river basins, intelligent water conservancy construction, ecological restoration of islands, coastal environmental governance and other water-related industries. We explore value chain in the water field deeply, consolidate and enhance our advantages of water use and water management. Additionally, we put effort into new strengths of water supply and development.

The company has been vigorously developing water-related business and sustains the integration of water industry with rapid improvement in business scale, industry influence and competitiveness. In 2022, the company constructed Water Diversion Project that drives water from Yangtze River to Huaihe River. This project is the largest water conservancy project under construction in China, and also opened to water transportation on a trial basis. Project Baiyang Lake in Xiong'an New Area constructed by company is categorized into Good Lakes in China. Intelligent Central Yunnan Water Diversion constructed by company is ranked to Top 10 Digital Solutions of China. The largest modern sewage treatment plant in Bangladesh constructed by company is also put into operation. The company officially commenced PPP Project of second Water Plant and Supporting Infrastructure in China-ASEAN Nanning Airport Fusui Economic Zone. This project is the largest water project under construction in China that won bid for the first section of Water Diversion Project from Yangtze River to Hanjiang River. The company also constructed other projects include East Guangdong Water Resources Allocation Project and other major projects, the company has been demonstrating its brand influence in water environment and remarkable benefits of water services.



Sewage Treatment Plant in Dasherikandi, Bangladesh



No. 1 Wind Farm in Anbei Connected to Grid

Strengthen "electric energy"

The company bears the mission of "leading global clean and low-carbon energy construction", focuses on the goal of "carbon peaking and carbon neutrality", takes the advantage of integrating the whole industry chain of "planning, design, investment, construction and operation", seizes the market of pumped storage, photovoltaic, wind, geothermal, biomass, hydro, energy storage and comprehensive energy distribution. The company has promoted development in integrated water, wind, photovoltaic, energy storage, and has also been actively participated in construction of smart energy and smart grid. Furthermore, the company has been promoting construction of new power system with renewable energy as major business.

The company actively participates in national strategic projects and key projects, and strives to create a number of high-quality projects, model projects and demonstration projects. The company has undertaken the planning and design tasks for more than 60% of wind power and photovoltaic power stations. The company has designed and constructed more than 90% of pumped storage stations and more than 70% of offshore wind power projects in China. The company is becoming a main force to implement the goal of "carbon peaking and carbon neutrality". In 2022, the company made an all-out effort in renewable energy. The photovoltaic project in Wuwei, Gansu and No. 1 Wind Farm in Anbei were successfully connected to the grid, which means the world's first renewable energy power system has been completed. In addition, the company concluded plenty of major projects, such as the world's largest hydropower-photovoltaic-husbandry hybrid power station project. The company's four indicators of new construction targets, new investment projects, new projects started, cumulative scale of installed capacity exceeded 10 million kilowatts, and the development of renewable energy business entered a new stage and reached a new height.



In November 2022, the first unit on the right bank of Dateng Gorge was put into operation



In December 2022, the first batch of photovoltaic modules of the 120,000-kilowatt photovoltaic power supply guarantee project were connected to the grid in Senji District, Nagqu County, Tibet



Changjiu (Shenshan) Limestone Mine Project in Chizhou, Anhui - the largest green building aggregate production base in China

Expand “green aggregates”



The company's green sand and gravel resource reserves reached

8.568 billion tons

The company has been vigorously developing business in green aggregates and gravel building material, and actively promoting coordinated development of green sand, gravel building material and prefabricated construction. The company has laid a solid foundation for long-term development, enhanced momentum of development and revitalization. The company has based itself on key strategic areas, important city clusters and suburbs around metropolitan areas, the company has actively promoted green development of sand and gravel resources. The company has applied new technologies in reducing carbon emission. The company has been achieving environmental protection goal through technological innovation, continuously cultivates and strengthens POWERCHINA's brand in "green aggregates". The company also promotes upgrading and development of sand and gravel industry directed in environment protection, intelligence and modernization

In 2022, the Qichun Shigu Green Building Materials Base project officially launched, the first phase of Changlai Green Mine project went into full production. The largest domestic wet-process production of high-end sand and gravel project, the De'an Baiyunling project, which was under construction, was put into operation. Currently, the company's green sand and gravel resources reserve has reached 8.568 billion tons, with a designed annual production capacity of nearly 500 million tons, achieving the "14th Five-Year Plan" goal ahead of schedule, and the company is becoming the largest domestic supplier of green sand and gravel with the largest reserves.



Extra-large green sand and gravel base in Xiong'an New Area

Case 1 Extraordinary Changlai, extraordinary speed

Flowers in spring come to fruition in autumn, and success only comes through hard work. After 173 days of intense preparation and 588 days of construction, on December 28th of 2022, Hubei Province, hub for nine provinces, added a large-scale, green and intelligent aggregates and gravel supply base - the Changlai Green Mine project in Xishui County, Hubei Province. The builders of Changlai handed in an outstanding report card, created multiple industry records and achieved early production 123 days ahead of schedule. The total investment of the project is 5.87 billion RMB, located in Xishui County, Huanggang City, Hubei Province. The first phase of the project has an investment of 3.196 billion RMB, with processing system capacity of 20 million tons per year, transportation capacity of 40 million tons per year of long-lasting glue corridor, and four 5,000-ton-class Yangtze River bulk cargo berths. On the day of the project's commissioning ceremony, the first batch of sand and gravel produced by Changlai was successfully shipped, officially opening a new journey for Changlai's aggregates to enter the market.



Changlai Green Mine Project in Xishui County, Hubei

Perfect “urban facilities”



The company invested and built rail transit projects nearly 810km in 13 cities in China

810 km

The company focuses on innovative business thinking and models that centered around "deep cultivation of cities, operating cities, and serving cities". The company strengthens systematic and forward-looking layouts in the process of urban construction and renewal. The company has been vigorously expanding its urban comprehensive development business and actively participating in construction of the Sichuan-Tibet Railway, the national comprehensive three-dimensional transportation network, and new infrastructure construction, making cities and infrastructure construction an important growth pole.

In 2022, the company focused on high-quality spot exchange projects and continued to expand its marketing network in fields such as intercity railways, rail transit, and underground pipe corridors, targeting key regional cities' infrastructure projects. The company has invested and constructed nearly 810 kilometers of rail transit projects in 13 cities across the country. The "Xiongan POWERCHINA Zhihui City" project has gradually become a benchmark for integrated "investment, construction and operation", combining "smart cities, smart energy, and carbon neutrality" globally; the Heyuan Egret Island Eco-Park in Guangdong designed and undertaken by the company was completed, which won the 2022 ELA International Landscape Award (Top 10 Landscapes).



Rendering of "Xiong'an • POWERCHINA Zhihui City"



In December 2022, Wuhan Metro Line 7 North Extension (Qianchuan Line) Phase I was opened for operation



Aerial Photo of Heyuan Egret Island Eco-Park in Guangdong

Integrate “investment, construction and operation”

The company leverages its core capabilities and comparative advantages in “water works, electric energy, green aggregates, urban facilities and digital technologies” full industry chain integration development, accelerates the transformation from single investment-driven to integrated investment and operation, and strives to form a virtuous development pattern of “strong investment, strong contracting, excellent assets, and excellent capital” with precise investment, excellent construction, efficient operation, and smooth exit. The company implements a comprehensive life-cycle planning scheme for its holding investment projects, strengthens life-cycle management, fully taps profit points in various links such as investment and financing planning, planning and design, construction, equipment procurement, and project operation, comprehensively improves investment return rates, and enhances the competitive advantage of integrated investment and operation development.



Panoramic View of Track Laying Base of Chengdu Metro Line 18 Track Section 3

Specialize “digital technologies”

The company upholds the strategic vision of “digital POWERCHINA, smart future”, actively promotes deep integration of digitalization with construction methods, business concepts, market forms and industry management, implements comprehensive digital transformation of deliverable projects. The company has built a series of intelligent water services, smart energy, green construction, and smart city platform products to promote urban and rural development and governance innovation with digitalization, and to drive the healthy development of the digital economy.

In 2022, the company took the lead in forming a collaborative innovation platform for digital transformation of central construction enterprises, and initially created a number of digital, intelligent and smart platforms for complex scenarios in fields like smart basin, smart energy, smart mine and smart city. The integration between business and data intelligence technology became closer, and the pace of upgrading business models was more robust. The company also established POWERCHINA Intelligence Cloud Co., Ltd., and promoted the digital and intelligent management of the company's financial operations.



On December 26, 2022, Wanning Floating Offshore Wind Power Project in Hainan was officially commenced. It is the world's largest commercial floating offshore wind power project invested and developed by POWERCHINA, was officially commenced



Liaoning Qingyuan Pumped Storage Power Station EPC Platform



Global Renewable Energy Reserve Evaluation, Prospect Analysis and Planning Platform

Promote globalization

As one of the central enterprises that first “went global”, the company has formed a matrix management structure composed of one corporate headquarter, six overseas regional headquarters, and overseas institutions (projects) based on the new home-and-abroad development pattern. Meanwhile, we adhere to the “three-step” strategy of global development, with the scale of overseas operations and internationalization index ranking among the top central enterprises. Also, the company focuses on strengthening infrastructure inter-connectivity and deepening international cooperation on industrial capacity, steadily promotes localized operation, continuously optimizes the “Five Centers” orientation of overseas regional headquarters, in an effort of the high-quality economic and social development of the operating countries in which outstanding projects and livelihood projects located, thus adding to the wisdom and power of POWERCHINA for building a community with a shared future for mankind.

Data Reading · 2022

New contracts for international business amounted to

RMB **192.341** billion

Ranked 1st in the world in total installed capacity of overseas energy and power projects

Year-on-year growth rate of

17.11 %

Ranked 1st among Chinese enterprises in terms of new contracts signed in overseas renewable energy market



- Shelek Wind Power Project in Kazakhstan, the first renewable energy project invested in Central Asia, has been put into operation and the second phase of the project is being accelerated
- No. 2 Tunnel Project with the most complicated geological condition and the most difficult construction in Jakarta-Bandung High-speed Rail Project was completed with the investment of POWERCHINA, and the leaders of China and Indonesia jointly witnessed the test run of the high-speed railway
- Ruzibazi Hydropower Station in Burundi, the largest hydropower station under construction with China's foreign aid, has been fully put into operation
- Dasherbandi Sewage Treatment Plant in Bangladesh, the largest single sewage treatment plant in South Asia contracted in the presence of President Xi Jinping, was officially completed and put into operation
- Alcazar PV Plant in Qatar delivers green energy for the World Cup

2022·Our Honors



The projects undertaken by the company, including Kariba North Bank Hydropower Station Extension Project in Zambia, Nzeto-Soyo Highway Construction Project in Angola, Subre Hydropower Station Project in Côte d'Ivoire, Dawood Wind Power Project in Pakistan, and Nouadhibou Ore Terminal Project in Mauritania, were honored with the 2022 "China International Sustainable Infrastructure Award" (CISIA) by the China International Contractors Association



Honor Certificate of Kariba North Bank Hydropower Station Extension Project in Zambia



Nzeto-Soyo Highway Construction Project in Angola



Honor Certificate of Dawood Wind Power Project in Pakistan



Honor Certificate of Subre Hydropower Station Project in Côte d'Ivoire



Nouadhibou Ore Terminal Project in Mauritania



Shelek Wind Power Project in Kazakhstan

"China's 'the Belt and Road' initiative and Kazakhstan's 'Bright Road' new economic policy are perfectly dovetailed and fully integrated here. Kazakhstan and China cooperate with each other and become like-minded, vigorously promoting production capacity and investment cooperation. The project plays an active role in popularizing and promoting clean energy in Kazakhstan, allowing us to truly feel the green pulse of the 'the Belt and Road'."

—By Bolat Akchulakov, Minister of Energy of the Republic of Kazakhstan

"Alcazar PV Plant is the first non-fossil fuel power station in Qatar and is a key project in its '2030 National Vision'. The project strongly sustains Qatar's commitment to host a carbon-neutral World Cup.

—By Mao Ning, Foreign Ministry Spokesperson of China



Alcazar PV Plant under Our General Contract

Case 2 Scattering "Sunflowers" and Offering Clean Energy

In February 2023, the 550 MW PV EPC project cluster in Loc Ninh, Vietnam, led by POWERCHINA as the EPC general contractor, won the Asian Power 2022 Solar Power Project Award, which is the only project constructed by a Chinese company in the list of solar power project winners. Loc Ninh PV EPC Project in Vietnam, with a total installed capacity of 550 MW, is by far the largest single PV plant in Southeast Asia and is already in commercial operation. So far, the company has completed more than 50 renewable energy projects in Vietnam, including onshore wind power, offshore wind power and PV projects, with a total installed capacity of 5,540 MW, making it the largest electric power general contractor with the largest market share in Vietnam for four consecutive years.



Loc Ninh 550 MW PV EPC Project in Vietnam



Award for
**Solar Power Project
of the Year - Vietnam**

LOC NINH 1,2,3 POWER PLANT (550MWP)
by
**POWERCHINA ZHONGNAN ENGINEERING
CORPORATION LIMITED**



Asian Power
2022 Solar Power Project Award

Provide excellent services

Strengthen quality management

The company attaches great importance to quality management through revising and improving management systems such as quality management methods, accident handling regulations and quality engineering (product) award selection methods according to the Quality Management System Requirements (GB/T19001-2016/ISO9001:2015) and the Code for Quality Management of Engineering Construction Enterprises (GB/T50430-2017), and establishes quality objectives and multi-level quality management systems. In addition, the company continuously strengthens process control, standardizes daily management activities, puts efforts into optimizing training and online technical support, and actively builds efficient and professional quality management teams. The company has no ordinary or serious quality accidents or incidents throughout the year.

Data Reading · 2022

Won **8** "National Gold Awards for Prime-quality Projects", **14** "National Prime-quality Projects" and **8** "Luban Prizes"



Our Honors

8 projects including Lancang River Huangdeng Hydropower Station and Niuqiang River-Dianchi Lake Water Replenishment Project in Yunnan which were invested, surveyed, designed, generally contracted, constructed, supervised and commissioned by the company won the National Gold Award for Prime-quality Projects, and **14** projects including Don Sahong Water Conservancy and Hydropower Hub Project in Laos and Mauritania Fishing Port Project won the National Prime-quality Projects

8 projects, including the New Construction of Section 2/3/4 of the southern extension of Sri Lanka Highway and Qinghai-Henan ±800kV UHV DC power transmission and its supporting project (UHV South Henan Converter Substation), won the China Construction Engineering Luban Prize

The Greater Bay Area Sci-tech Innovation Center Base Project of the company won the Platinum Award, the highest award of the 2022 MUSE Design Awards.

2022 "FIDIC Project Awards"



Wudongde Hydropower Station



Chengdu Tianfu International Airport

Insist on innovation-driven

The company takes the initiative to undertake national and industrial core technology research, builds collaborative innovation platforms, implements innovation-driven development strategy with high quality, endeavors to build a source of original technology, and aims to be the "leader" of modern industrial chain. Also, the company strictly abides by the Patent Law of the People's Republic of China and other laws and regulations related to intellectual property protection, and comprehensively enhances the management and protection of intellectual property rights in production and operation. In 2022, the company added 10 R&D platforms above the provincial and ministerial level, and led a record number of approved national and ministerial-level science and technology projects.

Applied for **6,591** patents and authorized for **7,454** patents throughout the year

Approved to lead **2** national key R&D programs and **6** ministerial-level major technology research tasks

2 technological innovations, Intelligent Control and Comprehensive Operation and Maintenance Technology for Large Tonnage Cable Crane Group of Baihetan Hydropower Station and Comprehensive Remediation Technology for Large Volume and Multi-Type Contaminated Soil, were named to the Top 10 Technological Innovations in the Construction Industry

Improving innovation systems and mechanisms

We have released a Three-year Implementation Plan for the Reform of Scientific and Technological System and Mechanism of Power Construction Corporation of China to enhance the management of core technology research, the transformation of scientific and technological achievements, as well as the mechanism of scientific and technological talent cultivation and motivation, and to perform various functions in strategy, market, investment, capital, science and technology, equipment and informationization.

Carrying out core technology research

We presided over 2 national key R&D programs in the fields of renewable energy and water resources, advanced major research tasks at the ministerial level with high quality, such as wind power development in deep and distant sea, solar thermal utilization and water resources utilization, implemented the innovative group-level core technology research "Science and Technology Inducement Prize System" and "Horse Race System"; accelerated the core research in the integration of water, wind, photovoltaic energy storage, pumped storage stations, compressed air energy storage, and other key aspects.

Building high-level R&D platform

We improved the operation mechanism of POWERCHINA Technical Center and accelerated the construction of domestic first-class enterprise technical center; established the Tibet Autonomous Region Water, Wind, Photovoltaic Energy Storage Technology Innovation Center as a leading role, with other leading central enterprises and authoritative research institutes as joint participants; took the lead in the construction of Shaanxi Provincial Wind and Photovoltaic Power Generation and Multi-element Energy Storage Engineering Technology Research Center.

Advancing the transformation of innovation achievements

We issued the Implementation Plan on Further Strengthening the Special Work of "ensuring safety through Science and Technology" and released the first batch of 10 achievements of ensuring safety through science and technology; built the comprehensive patent database, and established a high-value patent evaluation system and workflow.

Accelerating digital transformation and upgrading

We released the Guidelines on Digital Construction of "Investment, Construction and Operation" to improve the capability of providing the whole-process digital service; continued to profoundly utilize PRP system, and fully applied digital technology in Lianghekou, Baihetan and other projects. More than 20 subsidiaries launched EPC platforms respectively, which were applied to more than 300 projects such as Gonghe Solar Power Generation in Qinghai.

Optimize customer service

The company continuously optimizes its service system and regularly conducts customer satisfaction surveys to learn about customers' opinions and suggestions and improve customer experience; strictly protects customer information; continuously strengthens customer complaint management, reinforces compliance control, responds to and properly handles customer feedback and complaints in a timely manner; promotes products and services while adhering to the law, and provides product-related knowledge and gives potential risk warnings through diversified customer training and product descriptions. In 2022, the company achieved a high-quality delivery of Fuzhou Metro Line 5 and 6, Shenzhen Metro Line 12 and other projects after overcoming various difficulties, which were highly praised by industry experts, local governments, owners and all sectors of society.



Shenzhen Metro Line 12 officially opened for initial operation on November 28, 2022

Improve supply chain management

Following the principle of "Openness, Fairness and Impartiality", POWERCHINA continuously enhances its supply chain service capability, ensures a reliable supply chain, and makes an effort to establish long-term and stable cooperative relationships with upstream and downstream partners in the industry chain.

Responsible procurement

POWERCHINA keeps improving its procurement management system, while establishing and maintaining qualified supplier base lists. The headquarters, subsidiaries and project units examine the qualified suppliers on the principle of "One Base with Three Levels", covering such aspects as social responsibility and their three-standard integrated management systems, and ensure the authenticity and accuracy of supplier information through directly exchanging information with the State Administration of Industry and Commerce and credit bureaus on POWERCHINA's centralized procurement platform of equipment and materials. Moreover, POWERCHINA carries out an annual evaluation of suppliers, examines suppliers' social responsibility in business cooperation, and integrates responsible procurement and social responsibility into both supplier and procurement management. By the end of 2022, a total of 54,203 suppliers were included in the qualified supplier base at all levels, of which 19,865 were active suppliers who had participated in procurement actions.



Supply chain management

In accordance with the idea of "improving, strengthening, solidifying and extending the supply chain", POWERCHINA sets up a working group for supply chain security, establishes a work record for model enterprises, performs various target tasks, and continuously promotes an integrated development of industrial chain and supply chain; standardizes supplier management process, reviews permissions for supplier access and qualification, actively carries out supplier training, and works together with suppliers to perform duties.



Supply chain cloud service platform

5,069 contracts with a total value of RMB 86.534 billion were signed throughout the year. We also constantly reinforce supply chain management transformation and upgrading.



Solidifying, extending and improving the supply chain

POWERCHINA has carried out GW-level quarterly centralized procurement of PV modules and wind turbine generator sets at a total capacity of 5.35 GW, communicated with mainstream suppliers in a "headquarters-to-headquarters" way, explored the feasibility of a vertically integrated OEM model for PV modules, and studied to develop a price adjustment mechanism for PV modules.



Supplier access

POWERCHINA has established an information-sharing qualified supplier base, in which suppliers must register and can be qualified only after submitting declaration materials and being approved.



Supplier evaluation

POWERCHINA reviews suppliers' declared information in real time and evaluate suppliers' information and performance on a daily basis.



Penalties for poor supplier performance

POWERCHINA makes great efforts to develop high-quality suppliers by penalizing suppliers with irregularities, disciplinary violations, and poor performance in the procurement and execution process accordingly.

Procurement platform operation

Focusing on the digitalization of operational management and business performance and with the management mindset of 'Internet Plus', POWERCHINA has built a centralized procurement platform for equipment and materials by actively applying the new technologies such as Cloud Computing, Big Data, IoT, Mobile Internet, Smart City and Blockchain. POWERCHINA has been continuously upgrading and improving the platform functions guided by the 'Internet Plus' Bidding and Procurement Action Plan (2017-2019). From procurement planning to supplier performance evaluation, POWERCHINA have realized a digitalized closed-loop management of the whole procurement process. This centralized procurement platform has covered our headquarter, subsidiaries, project units and other grassroots units.

Strengthen risk control and prevention

With the formation and implementation of the Risk Assessment Management Measures, POWERCHINA is strengthening continuously its risk prevention and control capacity, carrying out annual risk assessment, tracking dynamically major risks, strengthening special assessment before making decisions on major operation matters such as investment projects, promoting systematically risk identification, assessment and management, establishing strong risk awareness, promoting integration of risk management with daily operation management, and improving effectively the quality and efficiency of daily operation management.



Normalized epidemic prevention and control

Develop various targeted and differentiated epidemic prevention initiatives, improve the "Five Haves and One Network" policy and strengthen all-round epidemic prevention to ensure strong daily management and effective operation of emergency systems;

Organize special training and guide actively vaccination campaign to construct an effective vaccine immunization barrier, work closely with relevant local departments for joint prevention and control, and make every effort to protect the life safety and health of employees and related personnel.



Major business risk prevention and control

Put emphasis on business risk prevention and control, and make legal compliance review a mandatory procedure before major business decisions and business operations;

Improve the compliance management system, and set a chief compliance officer in accordance with relevant regulation;

Strictly implement the "Three Lists" of compliance management, and realize the organic integration of compliance management and operation management.



The 2022 Legal Compliance and Internal Risk Control Work Conference and "the Year of Strengthening Regulatory Compliance Management" Work Promotion Conference were held

Improve conduct and enforce discipline

Take strict steps to improve conduct and enforce discipline and corruption prevention

- ◎ Advance "Non Corruptions in Three Aspects" by exerting more efforts to improve conduct and enforce discipline, promote improvement based on real cases and solve problems effectively, and strengthen deterrence so that officials don't dare to commit corruption.
- ◎ Achieve remarkable results in reducing existing problems and preventing new ones from occurring, report prominent and serious problems of grass-roots officials to higher levels, thus sending a signal that discipline execution is stricter at higher levels.
- ◎ Prevent the reoccurrence of "Four Bad Conducts". Strengthen the correction of "Four Bad Conducts" with a focus on important positions, important personnel, and important holidays.

Practice and refine supervisory duties

- ◎ Strengthen political supervision, establish a list of supervision matters and a record for close performance monitoring, and firmly implement the important instructions of General Secretary Xi Jinping as well as the decisions and deployments of the Party Central Committee.
- ◎ Highlight "chief" supervision, open up channels for dialogue between top level and low, and let the "critical minority" push forward the management of the "great majority". Keep an eye on the project's chief, strengthen the supervision of project managers in the whole process of performing their duties, and achieve sound management of 'micro-corruption' at grassroots level.
- ◎ Implement and follow-up a sunken-down supervision, strengthen daily supervision of key areas and crucial segment such as bidding, subcontracting & procurement, finance & funds, and personnel selection, and implement follow-up supervision for key loss-making (troubled) enterprises and projects to stop losses and turn around deficits.
- ◎ Improve the management efficiency of 'Massive Supervision'. Convene the joint meeting of the coordination group for building a clean government and conducting anti-corruption work, deepen the joint prevention and control for integrity risks, and issue the *Guidelines of the Discipline Inspection Commission on the Development of Clean Projects*, helping the construction of clean, high-quality and efficient projects.

Take serious measures to rectify special issues

- ◎ Fulfill the responsibility of inspection and rectification, firmly push forward the fundamental rectification task of the special inspection initiated by the State-owned Assets Supervision and Administration Commission of the State Council, and complete the rectification task with high quality.
- ◎ Reinforce the comprehensive rectification of special issues, consolidate the existing rectification results, hold special rectification work promotion meeting, carry out joint supervision and inspection of subsidiaries, promote the elimination of chronic issues and find the immediate solution for new issues.
- ◎ Take a variety of ways to strengthen overseas supervision and management, prevent overseas risks, and urge the improvement of compliance systems and overseas supervision mechanisms.

Establish a new style of incorruptible culture

- ◎ Strengthen integrity education and warning, implement strict and impartial disciplines, continue the construction of incorruptible culture, produce anti-corruption micro-videos, and build an incorruptible "dam" for party members and cadres.
- ◎ Have a pre-appointment talk with newly appointed cadres about integrity, to tighten the "first button" for integrity of their career.
- ◎ Weave a tight institutional cage for "rectifying irregularities", take strict measures to implement relevant systems, and develop and revise four systems of work style construction.

Operate in compliance with the law

POWERCHINA insists on operating in compliance with the law and regulation, promotes the construction of risk prevention and control system. It makes precise efforts on "six focuses and six promotions", and provides services strongly and firmly to guarantee reform and development of this enterprise.

POWERCHINA actively implements the strategy of law-based governance on all fronts and the requirements of the "Year of Strengthened Compliance Management" by the SASAC, promoted the deep integration of law compliance with production and operation, formulates and issues the Implementation Plan on Further Deepening the Construction of Law-based POWERCHINA and the Compliance Management Measures. These measures aims at enhancing comprehensively the seven capabilities such as risk control, overseas security, active legal rights safeguarding, standardized management, professional support and digital management. Also, the company carries out special investigation of compliance operation risks and of law & regulations violations at all levels, in all fields and in all aspects, aiming to build up "the Three Defensive Lines" of compliance management, i.e. comprehensively improves the professionalism, standardization and normalization of management in the field of law compliance and internal risk control. And, at the same time, POWERCHINA strives to realize law-based governance, compliance operation and standardized management.

In addition, POWERCHINA insists on the keynote of "strictness", implements the policy of "Non-corruptions in three aspects", intensifies the supervision of chiefs and the leading groups, integrates "massive supervision" into daily production and operation management and discipline construction, strengthens integrity risk control and problem rectification, steps up efforts in supervision, discipline, execution and accountability, strictly investigates corruption behind the "Four Bad Conducts", and improves the political ecology of the enterprise.



POWERCHINA Held the Promotion Meeting for Strengthening Compliance Management (2022)

Qionghai National Wetland Park - the largest urban wetland park in China

E

Watery Greenland Glorifying the Ecological Covenant



POWERCHINA persists in integrating green development into its development philosophy and corporate mission, strictly complies with laws and regulations related to environmental protection, continuously strengthens management related to environmental protection, responds actively to climate change, vigorously builds clean energy sources, strives to create a green environment, integrates closely our development blueprint with environmental protection undertakings, contributes joint efforts to promote carbon reduction, pollution reduction, green expansion and growth, and contributes its wisdom and strength into building a more beautiful China with bluer skies, greener mountains and clearer water.

Opportunities and challenges

- According to Report to the 20th National Congress of the Communist Party of China, we should push forward the building of beautiful China, coordinating tasks such as industrial restructuring, pollution control, ecological protection, respond to climate change, and contribute joint efforts to advance carbon reduction, pollution reduction, green expansion and economic growth, and drive forward an ecology-first, economical and intensive, green and low-carbon development pattern. We should also accelerate the green transformation of development, implement a comprehensive economical strategy, develop green & low-carbon industries, advocate green consumption, and promote the formation of a green and low-carbon production mode and lifestyle. Central enterprises are duty-bound to such tasks. Therefore, they must play an irreplaceable role in promoting the building of a more beautiful China and in the collaboration to form an ecology-first, economical, intensive, green and low-carbon development pattern.
- Global warming and climate change is one of the greatest challenges that human confront today. It has become one of the most significant medium- and long-term global risks, posing a significant threat to global economic, social development, and the sustainability of enterprises. Thus, it requires immediate global cooperation.
- On September 22nd 2020 at the 75th Session of the United Nations General Assembly, President Xi Jinping announced that China aims to peak its CO2 emissions by 2030 and works towards the goal of carbon neutrality by 2060. This fully demonstrates China's great courage, firm confidence and unprecedented efforts to push forward the transformation to green, low-carbon and high-quality development pattern. Also, it shows China's role as an important player who is actively participating in, as well as, leading the global climate governance. Therefore, State-owned enterprises must play an active role in the 'Carbon Peaking and Carbon Neutrality' Scheme.

POWERCHINA's coping strategies

- Actively contribute to the goal of "Carbon Peaking and Carbon Neutrality", and improve the development strategy of constructing an ecological civilization.
- Seize the historical opportunity of "Carbon Peaking and Carbon Neutrality" scheme and actively carry out strategic transformation: firstly, transform towards renewable energy and build a whole industry chain platform covering "investment, construction and operation"; secondly, push forward the upgrading of infrastructure engineering services from "old" to "new"; thirdly, focus on investment in the development and construction of renewable energy and green sand & gravel excavation.
- Increase continuously investment in environmental protection, energy conservation and emission reduction.



Drive green transformation

New power system based on renewable energy is an important support to achieve the goal of "Carbon Peaking and Carbon Neutrality". As a global leader in the construction of clean and low-carbon energy, water resources and environment, POWERCHINA consciously takes up the mission of "developing clean energy, creating green environment, and serving smart cities" and carries out clean energy source development in a strong, orderly and effective manner. POWERCHINA is contributing its power to the timely realization of "Carbon Peaking and Carbon Neutrality" goal in China.

Data Reading · 2022

Installed capacity of clean energy source

17.2234GW

Year-on-year increase

21.13%

Hydropower

By the end of 2022, POWERCHINA's installed hydropower capacity reached 6.8554 million kilowatts. As the central enterprise with the longest history, the most outstanding performance and the most advanced technology in the field of hydropower construction in China, POWERCHINA has always followed the national strategic deployment, completed the hydropower planning of large and medium-sized rivers such as Lancang River, Jinsha River and Yarlung Zangbo River, and participated in the design and construction of Three Gorges Project, South-to-North Water Diversion Project, Xiangjiaba Dam, Jinping, Xiluodu, Baihetan and a number of other "Pillars of a Great Nation" that are characteristic of their times, and made significant contributions to the great development of China's hydropower industry.

POWERCHINA News · 2022

- On March 19, the Upper Tamakoshi Hydropower Station in Nepal, constructed by POWERCHINA, was put into full operation.
- On September 6, Ruzibazi Hydropower Station in Burundi, the largest hydropower station under construction with China's foreign aid, celebrated its completion ceremony.
- On October 12, Xianghe River Water Control Project in Tibet, a national major water conservancy project constructed by Chengdu Engineering Corporation Limited as the agent and SINOHYDRO Bureau No.9 Co., Ltd. as the contractor, participated by SINOHYDRO Foundation Engineering Co., Ltd., successfully completed the major milestone of water storage with the gate closed, laying a solid foundation for the first unit to be connected to the grid.
- On November 8, the first unit on the right bank of Dateng Gorge Water Control Project constructed by SINOHYDRO Bureau 8 Co., Ltd. was officially put into operation, which greatly alleviates the threat of salt tides to the Pearl River Delta region and provides water conservation for the Greater Bay Area nearby Guangdong-Hong Kong-Macau.
- On December 20, all units of Baihetan Hydropower Station of Jinsha River, the world's largest and most technically complicated hydropower project under construction, designed and surveyed by POWERCHINA, were put into operation, marking the full completion of the clean energy corridor downstream of Jinsha River.



Baihetan Hydropower Station



Upper Tamakoshi Hydropower Station - the largest hydropower station in Nepal

Wind power

By the end of 2022, POWERCHINA's total installed wind power capacity reached 7.6444 million kilowatts. In 2022, POWERCHINA achieved fruitful results in the field of wind power. For example, Wanning Million Kilowatt Floating Offshore Wind Power Project in Hainan, the world's largest commercial floating offshore wind power project was invested and developed by POWERCHINA. It was officially commenced that year; Bozhong Offshore Wind Power Project, the first project approved in China in the era of offshore wind power parity, was connected to the grid; an EPC general contract was signed with Laos for Monson 600 MW Wind Power Project, and a cooperation agreement was signed for Monson Wind Power Project Phase II; the first batch of units of Laizhou Offshore Wind Farm Integrated Development Pilot Project, the first offshore wind power and marine ranching project in China, were connected to the grid, further consolidating the global leading position of China's wind power industry.

Data Reading · 2022

Newly installed capacity of wind power

135.99
million kilowatts



Bozhong Offshore Wind Power Project

Case 3 The first offshore wind power + marine ranching project connected to the grid

Wind turbines of hundreds of meters high are lined up on the sea, and wisps of sea breeze are converted into green electricity and transmitted to the grid. On November 25th, 2022, the first units of Laizhou Offshore Wind Power and Marine Ranching Integrated Development Pilot Project were connected to the grid. It is the first offshore wind power and marine ranching project in China. It is under the EPC general contract of Zhongnan Engineering Corporation Limited Institute which is affiliated to POWERCHINA. The project is located in the national marine ranching demonstration waters west of Laizhou City, Yantai, Shandong, with a planned capacity of 304 MW and a total of 38 wind turbines whose unit capacity of 8 MW. This project is a model for building a "blue energy + marine granary" in Shandong and China. The project took only 4 months from the commencement of construction to power generation, setting a new record of construction speed in the industry and demonstrating "POWERCHINA efficiency". After its operation at full capacity, the annual on-grid energy will reach 1.064 billion kWh, saving about 300,000 tons of standard coal and reducing 780,000 tons of CO2 emissions each year.



Laizhou Offshore Wind Power and Marine Ranching Integrated Development Pilot Project

PV

In 2022, POWERCHINA added a newly installed PV capacity of 1.272 million kilowatts, and continued to promote the implementation of the offshore 1.15 million kW PV project in Shandong, as well as the development and construction of a large number of PV projects, such as Chifeng Wind Power and Photovoltaic Hydrogen Production Integrated Project, Jiziwan Hydropower, Wind Power and Photovoltaic Integrated Project in the Yellow River, and Dali Prefecture PV Power Project in Yunnan. Among them, Beizhuangbao PV Power Station generated electricity at full power during the Beijing Winter Olympics to ensure sufficient power supply, contributing to the first "carbon-neutral" Winter Olympics with POWERCHINA wisdom and solutions.

Data Reading · 2022

Newly installed PV capacity reached

1.272

million kilowatts



Wenling 100 MW Tidal-Photovoltaic Hybrid Power Station in Zhejiang, the first tidal-photovoltaic hybrid power station in China

Case 4 POWERCHINA's first overseas invested PV project connected to the grid

On December 28, KyeonKyeewa PV Power Plant in Myanmar invested by POWERCHINA was connected to the grid, achieving the goal of commencing construction and putting into operation in the same year, and sending the best New Year gift to Myanmar. KyeonKyeewa PV Power Plant is the first project to be put into operation in the first 100 MW PV project cluster in Myanmar invested and built by POWERCHINA RESOURCES LIMITED. The project is located in Magway, Myanmar, with a total installed capacity of 40.28 MW and an average annual on-grid energy of 64.6414 million kWh. After completion, the project will be directly connected to the state grid in Myanmar, effectively improving the power shortage in the current Myanmar, which will have an important role in promoting local economic development and further deepening the economic and trade cooperation and friendship between China and Myanmar.



Pumped storage

As the first "national team" engaged in the design and construction of pumped storage power stations, POWERCHINA has been involved in the construction of more than 90% of the pumped storage power stations in China, possessing the integrated advantages in the whole industry chain of survey and design, construction, operation and maintenance management in the field of pumped storage, with a number of pumped storage power station projects completed and under construction, playing an important role in ensuring the safety of large power grids, promoting the consumption of renewable energy and improving the performance of the whole system. In 2022, the pumped storage power stations invested by POWERCHINA in Yanling (Hunan), Huangcheng (Gansu), Yunyang (Chongqing) and the others commenced construction one after another, and a number of pumped storage power stations designed and constructed by POWERCHINA, such as the one in Fengning (Hebei), were connected to the grid, gradually stabilizing the position that nine out of ten pumped storage power stations were built by POWERCHINA".

Data Reading · 2022

- On February 12, Chunchangba Pumped Storage Power Station was put into operation, overcoming the world-wide problem of capacity optimization allocation and access technology of China's cascaded hydropower-photovoltaic-pumped storage hybrid power plants, and supporting the development of the world's first joint operation control and intelligent dispatching system for cascaded hydropower-photovoltaic-pumped storage hybrid power plants.
- On March 1, Unit 4 of Changlong Mountain Pumped Storage Power Station, which was surveyed and designed by Huadong Engineering Corporation Limited and constructed by SINOHYDRO Bureau 12 Co., Ltd. and SINOHYDRO Bureau 14 Co., Ltd., was officially put into commercial operation.
- On April 26, Unit 4 of Dunhua Pumped Storage Power Station in Jilin was put into commercial operation, marking the completion and operation of the first 700-meter head in China and the largest pumped storage power station in Jilin designed and constructed by POWERCHINA.
- On August 28, Unit 4 of Zhouning Pumped Storage Power Station, designed and constructed by POWERCHINA, was officially put into commercial operation.
- On September 15, the commencement ceremony was held for Jiangde Pumped Storage Power Station in Zhejiang, the second largest pumped storage power station in China and the largest in East China, designed by POWERCHINA.

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Changlong Mountain Pumped Storage Power Station



Dunhua Pumped Storage Power Station in Jilin - the first 700-meter-head pumped storage power station designed, manufactured, installed, commissioned, operated and managed completely independently in China

Strengthen environmental management

POWERCHINA strictly abides by the Environmental Protection Law of the People's Republic of China and other relevant laws and regulations, continuously establishes and improves the environmental management system across the whole company, forms a long-term mechanism for environmental supervision and management, and constantly improves the ecological and environmental governance capacity. In 2022, POWERCHINA invested a total amount of RMB 987 million in environmental protection, with no major environmental emergencies or major impacts resulting in violating laws and rules for energy conservation.

Data Reading · 2022

sessions of environmental protection training

34,516

participants in environmental protection training

306,000

Improve the environmental management system

Centering on the source for ecological and environmental protection work, POWERCHINA carried out research on the management consulting project of Research and Application of Ecological Pollution Source and Risk Identification and Evaluation for Construction, Equipment Manufacturing and Power Generation, established pollution source and risk identification and evaluation standards, constructed pollution source and risk list data for three major segments of construction, equipment manufacturing and power generation, provided scientific basis and professional guidance for various units in carrying out pollution source and risk identification and evaluation and control work in a standardized manner, and was awarded the First Prize of 2022 POWERCHINA Electricity Management Innovation.

Prevent and resolving environmental risks

POWERCHINA actively fulfills its entity responsibility for ecological environmental protection and fully implements environmental protection in the whole process of engineering construction; strengthens the inspection and supervision of surrounding environment, carries out ecological environmental protection inspection and assessment and other special rectification activities, and effectively manages major hazards; formulates environmental factors, hazard identification and risk evaluation forms regularly, and organizes targeted comprehensive and special drills to effectively respond to environmental emergencies.

Environmental protection technology R&D and application

POWERCHINA insists on scientific and technological innovation and empowers sustainable growth with green technology. Units at all levels actively carry out R&D and use of relevant technologies in conjunction with the actual production scenarios, further coordinating improvement of environmental and economic benefits.

- SOCOL Corporation Limited applied dust-sensing vehicle-mounted dust reduction devices to control the amount of water for dust reduction according to the dust concentration, with solar power to achieve energy-saving and emission-reducing effects;
- POWERCHINA Construction Group Ltd. developed the foundation pit dust-proof canopy system to solve the problem of dust control in the earthwork construction stage of mega buildings.



A (boat type) robot for examination of concealed culvert leakage, theft of concealed pipes, concealed culvert blockage and other situations



A (tracked) robot for video detection of illegal discharge in urban culverts in the absence of water or with a small amount of water

Implement low-carbon operation

POWERCHINA unswerving takes the road of "ecology-first, green and low-carbon" high-quality development, actively advocates green office, advances energy conservation and consumption reduction, drives green transformation around waste recycling, low-carbon energy, harmless raw material, clean production, etc., and effectively guards the beautiful ecology. In 2022, POWERCHINA fully achieved its pollution and carbon reduction targets such as power consumption and sulfur dioxide emissions per RMB 10,000 of business income.

Data Reading · 2022

Total investment in environmental protection reached

RMB **987** million

ETA passing rate of new projects

100%

Up-to-standard discharge rate of pollutants

100%

Advocate green office

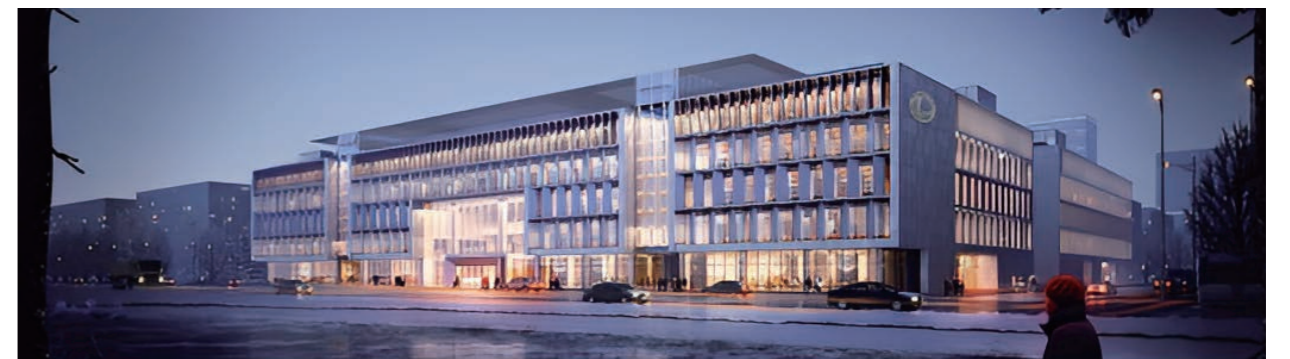
POWERCHINA actively practices the concept of green office, optimizes electricity consumption for lighting, and effectively reduces energy consumption of office equipment; strengthens daily inspections, and avoids "running water" and "evaporating, emitting, dripping or leaking"; actively carries out professional training on environmental protection for employees on "World Environment Day", "National Low Carbon Day", "Clean Up the World Weekend" and "Energy Conservation Publicity Week" to guide employees to develop green and healthy office habits and create a new culture of ecological civilization.

Advance energy conservation and consumption reduction

POWERCHINA adheres to the concept of green construction, integrates the concept of environmental protection into the whole life cycle of project planning, design, construction, operation and maintenance, establishes mechanisms for the economical use and recycling of energy and resources, actively promotes the application of new low-carbon technologies and techniques for energy conservation and emission reduction, and continuously improves the efficiency of energy and resource utilization. In 2022, POWERCHINA played the professional advantage in the field of green sand and gravel aggregate processing to process slag into construction aggregate products, providing high-quality sand and gravel raw materials for project construction, successfully transforming slag into "golden mountain".

Case 5 Create low-carbon buildings to help green development

The Low-carbon Intelligent Building Project of Xiong'an Power Dispatching Building, which was constructed by POWERCHINA, adopts sustainable energy sources such as building photovoltaic for building energy supply, with a comprehensive energy-saving rate of over 60% and an annual carbon emission reduction of 857.82 tons, which significantly reduces the energy consumption on the load side of the building. The project has successfully created a demonstration of ultra-low energy consumption, near-zero energy consumption and low-carbon intelligent building, and was selected as a zero-carbon building technology demonstration project at the level of Xiong'an New Area, Hebei Province and the Ministry of Housing and Urban-Rural Development.



Near-zero Energy Consumption Building Demonstration Project of Xiong'an Dispatch Center Building

Reduce pollution emissions

POWERCHINA strictly adheres to the red line of ecological protection and plays a good role in pollution prevention and control, providing scientific basis and professional guidance for each unit to standardize the work of identifying, evaluating and controlling pollution sources and risks.



Water pollution prevention and control

The Law on the Prevention and Control of Water Pollution of the People's Republic of China and local discharge standards are implemented, and wastewater recycling equipment is set up at construction sites to strictly control wastewater discharge and treatment.



Soil pollution prevention and control

In-depth soil protection is carried out. The Pile Foundation Project of Saudi Arabia NEOM New City adopts new environmentally friendly materials for the construction of grouting piles, realizing zero pollution of soil environment.



Dust pollution prevention and control

A special programme for dust pollution is formulated, fog cannons and dust monitors are set up at construction sites, a "one-stop" spraying system is built and sprinklers are set up to sprinkle water regularly to improve the efficiency of dust control at construction sites.



Noise pollution prevention and control

Low noise equipment, reasonable arrangement of construction time and other measures are adopted to strengthen the acoustic environment management. The Mingyue Longting Project of POWERCHINA brings noise reduction "headphones" for the city through construction noise intelligent management, staggered pouring, application of new equipment instead of traditional ground pump, and setting up noise barrier.



Waste management

The Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes and related laws and regulations are strictly observed, and the circular economy is developed to encourage the resourceful use of solid waste; "garbage sorting" is fully promoted to realize the resourcefulness, reduction and harmlessness of waste.



Chongqing Rail Transit Line 4 Project Department of SINOHYDRO Bureau 6 Co., Ltd. was awarded "Chongqing City 2021 Construction Dust Control Demonstration Site"

Ecological environment protection

POWERCHINA conscientiously implements the concept of "Lucid Waters and Lush Mountains are Invaluable Assets", gives full play to our own advantages, comprehensively strengthens ecological governance, protects biodiversity, actively carries out environmental protection public welfare activities, making positive contributions to the harmonious coexistence of man and nature.

Service ecological governance

Protecting the ecological environment means protecting productivity, and improving the ecological environment means developing productivity. POWERCHINA strictly implements the national measures for ecological environment management, strives to promote ecological management and restoration, and provides POWERCHINA solutions for building China into a country with a good environment.

Contribute to ecological governance

As a leader in the construction of global water resources and environment, POWERCHINA is born of water and thrives on water, and is bloodily connected to rivers, lakes and oceans. POWERCHINA strives to strengthen water environment treatment, respond to climate change and reduce environmental pollution with clean water.



Scan the QR code to watch **Outstanding Achievements of Ecological Water Treatment in Baiyang Lake**

Since the beginning of 2018, POWERCHINA has taken up the important task of managing Baiyang Lake, the kidney of North China. Nowadays, thanks to the efforts of POWERCHINA staff, the ecological environmental management of Baiyang Lake has achieved obvious results that the water environment quality has improved to an unprecedented extent, adding a beautiful scenery to Xiong'an New Area.



"Before the treatment, the fish and shrimp in Baiyang Lake always had an earthy taste. But now the water is clearer and the fish and shrimp are fresher."

——Baiyang Lake villager



POWERCHINA's first cyanobacteria treatment project - Zhangqiao Port In-situ Algae Control Pilot Project

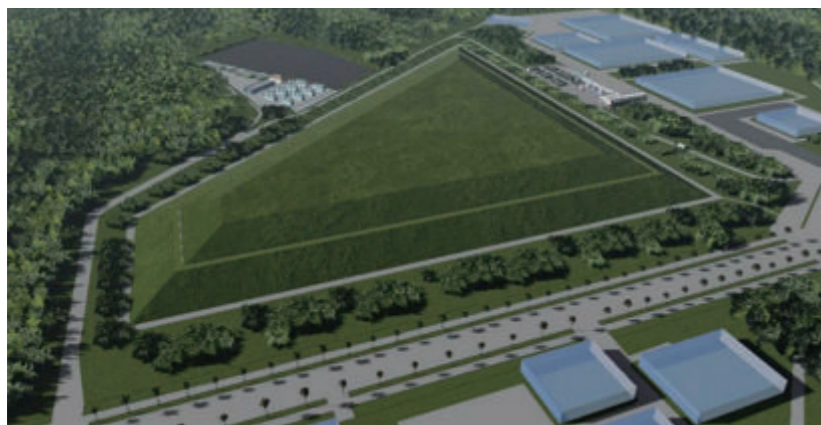


The first batch of square arrays of Ecological Treatment 1 million kilowatts PV Demonstration Project in Loudi, Hunan Province was combined to the grid

POWERCHINA Hubei Engineering Co., Ltd won the EPC general contracting project of the second bid section of Kubuqi 2 million kilowatt PV Sand Control Base Project in West Inner Mongolia Base. This project is the largest photovoltaic sand control project nationwide and one of the first large wind power photovoltaic base projects in China, which marks a new stage of "photovoltaic + sand control" ecological comprehensive management in China.



Photovoltaic sand control



Project Renderings

POWERCHINA Consortium won the Environmental Treatment and Ecological Restoration General Contracting Project of Yanchunling Landfill in Haikou, which is the largest landfill comprehensive treatment project in China, and as a demonstration project focused on by the Ministry of Ecology and Environment and an achievement of "New Technology, New Product, New Application" in the World Internet Of Things Convention (WIOTC), its treatment model and integrated application with new generation digital technology will have important promotion value.

Protect biological diversity

POWERCHINA actively responds to the initiative of "Building a Shared Future for All Life on Earth". The company has participated in the "Joint Action of Fish Enhancement and Releasing in Hydropower Industry for World Environment Day in 2022", releasing more than 21 million fish in major hydropower bases in China; actively protected mangrove forests in the development of Pakistan's Qasim Project, with a total transplantation area of 125 acres; innovatively used the IDF system for the first time in Australia to protect rare species such as wedge-tailed eagles in the development of Australia's Cattle Hill Wind Power Project, which was highly recognized by Australian environmental protection departments at all levels.



Joint Action of Fish Enhancement and Releasing in Hydropower Industry for World Environment Day in 2022



Cattle Hill wind power IDF system

Carry out environmental public welfare

POWERCHINA practices "Harmony between Humanity and Nature" and actively carries out afforestation, garbage cleanup, environmental education and other activities to contribute to the promotion of green and low-carbon development and the construction of a beautiful world.



▶ POWERCHINA actively responded to the call of the initiative of "100 Companies in 1000 Villages", which was launched by "Alliance of Chinese Business in Africa for Social Responsibilities" which was established under the support of President Xi Jinping, and carried out renewable energy product donation of "100 Companies in 1000 Villages·Love Light World" in Nigeria, Angola and other countries, received a letter of thanks and a trophy from Kano Youth Development Association, and won the "National Construction Idol Award" in Nigeria.



POWERCHINA Eco-environmental Group Co., Ltd. carried out environmental protection advocacy



Qingdao Water carried out tree-planting activities

Happy children in the school donated by POWERCHINA RESOURCES LIMITED in Nam Ou River Immigration Village in Laos

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Industry embellishing society Glorifying benefits of people's livelihood

As a central enterprise, POWERCHINA practically takes up responsibilities. The company serves the national strategy and pursues common development in cooperation; builds up the safety production line to ensure the life and health of employees; strengthens the humanistic care to practically enhance the employees' happiness and sense of gain; and contributes our power to people's better life by supporting public welfare and charity, helping in epidemic fight and disaster relief and revitalizing the countryside.

Opportunities and challenges

- The "14th Five-Year Plan" sets "a better life for the people, with more obvious and substantial progress in the all-round development of people and common prosperity for all people" as one of the visionary goals for the basic realization of socialist modernization in 2035.
- The report of the 20th National Congress of the Communist Party of China points out that we must adhere to safeguarding and improving people's livelihood in the course of development, encourages people to struggle together to create a better life, constantly realizing people's aspirations for a better life.
- General Secretary Xi Jinping stresses that we must adhere to the priority development of education, science and technology self-reliance and self-improvement, talent-driven development, accelerate the construction of a powerful country in education, science and technology, talent, adhere to nurture talent for the Party and the country, comprehensively improve the quality of independent training of talent, focus on creating top-notch innovative talent, gather the world's talents and put them in important positions.

POWERCHINA's coping strategies

- We adhere to the people-oriented, fully respect and safeguard the legitimate rights and interests of employees, optimize the training mechanism, open up development channels, continue to promote the well-being of employees, building "Happy POWERCHINA";
- Fully play the role of talents as the primary productivity, actively mobilize the enthusiasm, initiative and creativity of talents, promote the comprehensive development of medium- and long-term incentives for subsidiaries, and approve 28 enterprises to implement technology-based enterprise job bonus and excess profit sharing;
- Servicing national strategies and formulating the 14th Five-Year Plan for Partner Assistance of the Economic and Social Development of Markam County in Tibet Autonomous Region and the 2022 Designated-point Assistance Implementation Plan for Assisting in the Rural Revitalization to clarify objectives, fulfill responsibilities, improve guarantees and carry out actions.
- With "The Top Priorities of the Country" in mind, the company bears the responsibility to deepen the construction of "Candlelight", "Firefly", "Good as Water", "Willing to help achieve the aim", "POWERCHINA Overseas Youth Volunteer Association" and other volunteer service brands, and widely carry out social welfare volunteer activities.



Adhere to the safety red line

POWERCHINA strictly abides by the Production Safety Law of the People's Republic of China and other relevant laws and regulations, implements General Secretary Xi Jinping's important instructions on safety production, and deeply promotes the consolidation and improvement of the "Three-Year Action for Special Improvement of Safety Production". The annual total investment in safety production was RMB 9.450 billion, and no large or even serious production safety accidents occurred. The number of accidents, fatalities and disaster casualties all decreased.

Implement safety responsibilities

POWERCHINA strictly implements the safety production responsibility system. The company insists on the "CPC committees and governments share the responsibility" and "one post with two responsibilities", adopts the means of "contract and guarantee responsibility system", managing and carrying out level by level, strongly promoting safety responsibility to be implemented to the team, to the post, to the individual, ensuring the implementation of safety responsibility "vertical to the end". At the same time, the production, technology, quality, equipment and other management departments at all levels are promoted to manage together in accordance with the requirements of "management of business, industry, production and operation must manage safety", putting in place the legal safety production responsibilities of all employees, ensuring the implementation of safety responsibilities "horizontal to the edge", and effectively building a dam for safe production.



POWERCHINA convened 2022 Work Conference on Safety Production

Improve safety management

POWERCHINA insists on serving high quality development with high level of safety, safeguarding new development pattern with new safety pattern, continuously establishing and improving safety management system and methods, promoting the improvement of essential safety level and safety supervision efficiency. In 2022, POWERCHINA revised a number of systems such as Safety Production Accident Management Measures and Safety Production Assessment Management Measures, formulated safety technical standards and operation manuals for high-risk businesses such as offshore wind power, and compiled a list of strict investigation and control of hidden dangers in key areas such as pumped storage and rail transportation, providing a solid guarantee for safe production.



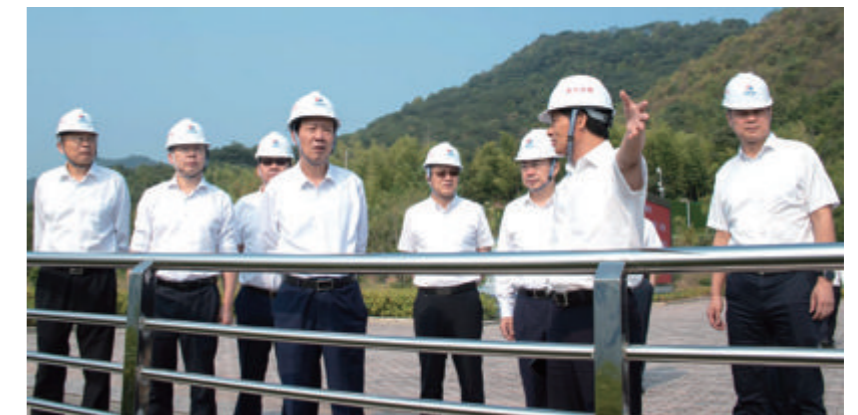
Mali Gouina Project of SINOHYDRO Bureau 15 Co., Ltd. won the "2022 Overseas Security Excellent Practice Award"

Promote "revitalizing security through science and technology"

POWERCHINA actively carries out the special work of "revitalizing security through science and technology", using digitalization and information technology to improve the intrinsic safety level and safety supervision efficiency. In 2022, based on the high-risk operations that are prone to accidents, POWERCHINA established 89 safety technology research projects, promoted the application of 145 safety technology innovations, and eliminated 50 backward processes and equipment that endanger safety.

Strengthen safety supervision

POWERCHINA fully understands the extreme importance of safety work, recognizes the safety risks faced in production and operation, pays high attention to safety supervision work with high standards and strict requirements, and effectively consolidates the safety foundation. Mr. Ding Yanzhang, Secretary of the Party Committee and Chairman of the company, and Mr. Wang Bin, Deputy Secretary of the Party Committee and General Manager of the company, led by example, have visited key projects such as Changjiu Mine and Jinan-Weifang Expressway to conduct safety supervision and teach "safety public class". In 2022, POWERCHINA arranged 5 supervisory teams and 15 inspection and assessment teams to inspect over 150 key projects; the subsidiaries have investigated and rectified 321,000 various hidden dangers.



Mr. Ding Yanzhang, Secretary of the Party Committee and Chairman of the company, went to carry out safety and environmental protection supervision

Promote special rectification

POWERCHINA steadily deploys the "Three-Year Action for Special Improvement of Safety Production" and "Annual Special Action of Safety Production Enhancement", deeply investigates and manages safety risks and hazards, solidly promotes the rectification of problems, keeping the production safety "lifeline". In 2022, POWERCHINA carried out more than 10 special rectification activities for hydropower stations and small, dispersed and distant power generation enterprises, camp firefighting, cement storage tanks, old houses, etc. to solve outstanding problems and prevent and resolve safety risks.



CSSDI participated in the special rectification work for the safety of self-built houses in Hunan Province

Cultivate safety culture

Aiming at "zero safety accidents" and "cultivating safety production into core competitiveness and excellent corporate culture", POWERCHINA actively organized "Safety Production Seminar", "Production Safety Month" and other activities. A total of more than 6,700 production safety public lecture and everyone talks were held throughout the year, with more than 210,000 participants, creating a strong atmosphere of safety culture. At the same time, regular training programme such as safety training in rotation for subcontractors and safety operation procedures training for operation level was continuously strengthened, so that the safety awareness and safety skills of personnel at all levels were continuously improved.

Data Reading · 2022

coverage of production safety training

100%



Dangxiang Project Department of the SINOHYDRO Bureau 16 Co., Ltd. carried out safety education activities

Safety emergency drills

POWERCHINA continues to develop and improve safety production target drills and actively carry out emergency drills, enabling employees to effectively improve their emergency awareness and ability to deal with accidents. In 2022, POWERCHINA's first-class emergency response capability and disaster relief work level were effectively demonstrated in floods, droughts and other natural disasters, achieving "zero fatalities and zero loss of contact".

- 78 employees were appointed as flood control and drought relief experts by the State Flood Control and Drought Relief Headquarters



Fire safety emergency drills

Implement employee care

Protect employees' rights and interests

POWERCHINA strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China and other laws and regulations, and protects the rights and interests of employees in various aspects such as labor employment, salary and social security, employee benefits and democratic management to enhance employees' sense of gain and happiness.

Data Reading · 2022

disabled employees

588

female managers ratio (associate senior title)

22.80%

labor contract signing rate

100%

social insurance participation rate

100%

employee participation rate in labor union

100%



Equal employment

- POWERCHINA insists on equal employment and employee diversity, and treats employees of different ages, genders, races, religious beliefs and nationalities fairly;
- Thoroughly implements the Law of the People's Republic of China on the Protection of Disabled Persons, positively employing disabled persons;
- Complies with the Special Rules on the Labor Protection of Female Employees, safeguarding the legitimate rights and interests of female employees;
- Respects employees' privacy and opposes forced labor and harassment and abuse;
- Abides by the Provisions on the Prohibition of Using Child Labor and the Law of the People's Republic of China on the Protection of Minors, prohibiting the employment of child labor.



Salary and welfare

- POWERCHINA improves the salary system and basic security system, providing employees with competitive salaries;
- Promotes subsidiaries to fully carry out medium- and long-term incentives, and approves 28 enterprises to implement technology-based enterprise job bonus and excess profit sharing, stimulating employees' enthusiasm to work;
- Complies with the Regulations on Paid Annual Leave for Employees, setting up a legal and reasonable leave system;
- Continuously implements welfare protection such as enterprise annuity, accident insurance, supplementary medical insurance and other welfare protection.



Democratic management

- POWERCHINA improves the democratic management system in the basic form of employee representative congresses.
- All major decisions and matters involving the fundamental interests of employees are resolved and adopted by the employee representative congresses to protect the right to information, participation, expression and supervision of employees.

Strengthen the cultivation of talents

POWERCHINA is focusing on implementing the talent concept of "strivers-based, performance-oriented", optimizing the construction of talent team and staff training. We have organized the first talent work conference, formulated the implementation plan of "Hundred-Thousand-Ten Thousand" Scientific and Technological Talent Training Project, and appointed 2 chief scientists and 25 chief technical experts. At the same time, we have clarified the recommended candidates for academicians and the supporting measures, further promoted the recruitment of talents for the Great Scholars Program, and formulated the management measures for the Skill Master Studios. In 2022, two employees of POWERCHINA were selected as national outstanding engineers, three were selected as "Craftsmen of the Nation", four were awarded as "National Technical Expert", and one company was awarded "National Outstanding Contribution Unit for Skilled Talent Cultivation".

In addition, POWERCHINA vigorously promotes the construction of multi-sequential career development paths, scientifically plans the growth paths of employees at all levels, increases the selection and use of outstanding young cadres, and smooths the career development paths of R&D talents, creating a good vibe of "comparing, learning, chasing, helping and surpassing".


- Relying on major innovation projects to cultivate outstanding talents, POWERCHINA creates an array of talents in the fields of "water works, electric energy, green aggregates, urban facilities and digital technologies" in line with the status of the industry;
- Empowers the growth and development of domestic and overseas employees through pre-job training, mentorship, job skills training and transfer training;
- Highlights the "top-notch and urgently-needed" talent orientation, and carries out multi-level and multi-channel activities such as job training, skills competition and skills contest to enhance the effectiveness of training.

Build a vigorous and happy enterprise


POWERCHINA pays close attention to the physical and mental health of employees, provides assistance and aid to employees in difficulty continuously, organizes rich and diverse cultural and sports activities, and is committed to creating a safe, healthy and comfortable working environment for employees.

Guard physical and mental health


POWERCHINA strictly abides by the Law of the People's Republic of China on Prevention and Control of Occupational Diseases, the Measures for the Supervision and Administration of Employers' Occupational Health Surveillance, and the Measures for the Supervision and Administration of "Three Simultaneities" of Facilities for the Prevention and Control of Occupational Diseases of Construction Projects, and other laws and regulations, taking multiple measures to practically guard the physical and mental health of employees. In 2022, the coverage rate of medical checkups for POWERCHINA employees was 100%.




- POWERCHINA optimizes the working environment of special work types, controlling dust, radioactive substances and other occupational health hazards;




- Carries out health knowledge lectures to popularize occupational disease prevention and treatment and other health knowledge;




- Does employee health management well, regularly carrying out occupational health checkups and organizing employees to participate in recuperation program;



- Cares for female employees, organizing "screening for cervical cancer and breast cancer" activities for female employees;



- Implements epidemic prevention and control, conducting emergency screening, vaccination, nucleic acid testing and other measures;



- Deepens the construction of youth heart station and youth homes, building a warm home for employees.



The Senegal Water Supply Project Department of POWERCHINA HARBOUR CO., LTD carried out employee medical checkups

Data Reading · 2022

1 company was awarded the title of "National Outstanding Contribution Company for Skilled Talent Cultivation".

2 employees were awarded the title of "National Outstanding Engineer".

3 employees were selected as "Craftsmen of the Nation".

4 employees were awarded as "National Technical Expert".



Scan the QR code to watch POWERCHINA Builds Career Platform for Foreign Employees



POWERCHINA Nuclear Engineering Company Limited organized training activities for new employees in 2022



PowerChina Gansu Energy Investment Co., Ltd.'s Wangji Project trained Zimbabwean employees



Before the Spring Festival in 2022, POWERCHINA allocated the "two festivals" subsidies for employees in difficulty of

RMB 12.339 million to subsidiaries
(allocated by the group company)



Donation for sick employees

Practice humanistic care

POWERCHINA deeply implements the series of practical activities of "I do practical work for the masses", and carries out long-term activities such as "daily help", major illness relief, "scholarship in autumn", and "two festivals" subsidies for employees in difficulty, and makes every effort to solve the problem of "emergency and difficulty" for employees; provides services such as holiday sympathy, birthday sympathy, and hospital visitation with care and affection, and sympathizes with employees working in overseas units on a permanent basis, benefiting employees and their families with warm-hearted care. Before the Spring Festival in 2022, POWERCHINA allocated the "two festivals" subsidies for employees in difficulty of RMB 12.339 million to subsidiaries (allocated by the group company), so that the majority of employees can feel the warmth of POWERCHINA.



Summer Cooling of Xi'an Metro Line 1



Sympathize with employees in Ukraine



In 2022, a total of **7,191** various cultural and sports activities

Balance work and life

POWERCHINA continues to strengthen the construction of "Home for Employees", improves the supporting facilities such as employee study room, calligraphy and painting room, chess and card room, and organizes diversified activities such as Chinese New Year celebration, sports games, soccer matches and basketball matches, allowing employees to enjoy the fun of life while working happily and enhancing the cohesion and centripetal force of POWERCHINA. In 2022, a total of 7,191 various cultural and sports activities were carried out with 204,037 participants.



POWERCHINA's Network Spring Festival Gala



carried out with **204,037** participants



PowerChina Chongqing Investment Company's Employee Activities for Chinese New Year



Women's Day Theme Activity of "Taste Life, Feel Happiness" of PowerChina Eco-environmental Group Co., Ltd.

Practice opening up and cooperation

POWERCHINA adheres to the business philosophy of "creating value through strategic synergy and cooperation, and pursuing common development and progress through mutual benefit", and actively participates in building a new development pattern with domestic economic cycle playing a leading role while international economic cycle remaining its extension and supplement, and builds a community of shared interests with all parties with strong alliance, complementary advantages and mutual benefit.

Deepening cooperation

POWERCHINA actively seeks to cooperate with partners in a wider field and scope, continuously strengthens communication with governments at all levels, attaches importance to communication with upstream and downstream enterprises, actively participates in various forums and other exchange activities, and contributes to the high-quality development of the industry with POWERCHINA's experience, POWERCHINA's solutions and POWERCHINA's wisdom.

Government-enterprise cooperation

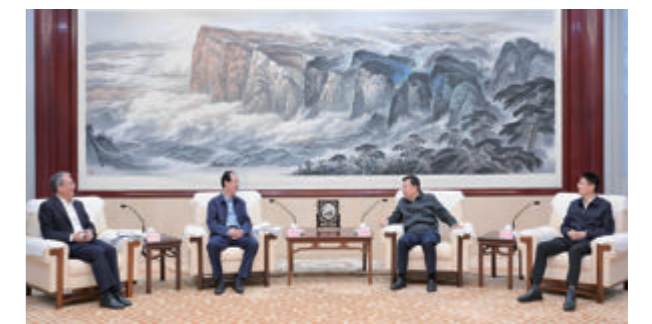
PowerChina is committed to serving the national strategy as its mission, closely integrating enterprise development with national needs, and playing its advantages in the regional development strategies. In 2022, POWERCHINA signed strategic cooperation framework agreements with 12 provinces (cities and regions), including Zhejiang Province and Shandong Province, and actively carried out communication and exchanges with local governments such as Inner Mongolia Autonomous Region and Sichuan Province, contributing to the high-quality development of regional economy and society.



POWERCHINA and Shandong Provincial Government signed a strategic cooperation agreement



Mr. Ding Yanzhang, the Party Secretary and Board Chairman, attended the Business Conference on Project Matching Between Hubei Province and Central Enterprises and witnessed the signing of major projects



Mr. Ding Yanzhang, Secretary of the Party Committee and Chairman of the company, and Mr. Wang Bin, Deputy Secretary of the Party Committee and General Manager of the company, had a discussion and exchange with Mr. Wang Xiaohui, Secretary of the Sichuan Provincial Party Committee.

Enterprise-enterprise cooperation

In 2022, POWERCHINA signed strategic cooperation agreements with 8 enterprises, including CECEP and Mingyang Smart Energy, to achieve resource integration, complementary advantages, teamwork and coordinated operations.



POWERCHINA signed a strategic cooperation agreement with CECEP

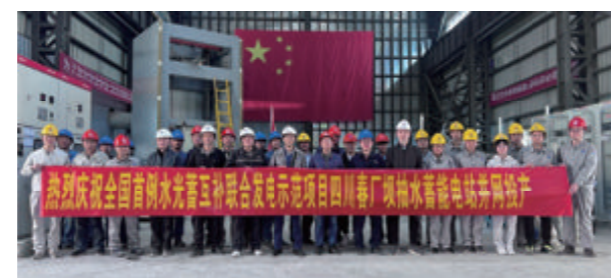


POWERCHINA signed a strategic cooperation agreement with Mingyang Smart Energy

College-enterprise cooperation

POWERCHINA actively builds an open, collaborative, and shared innovation platform, and cultivates a collaborative innovation ecosystem. The "world's first cascade water-light storage and complementary power station" developed in cooperation with Tsinghua University and other universities was awarded as one of the 2022 Top Ten Science and Technology News in Sichuan.

"The world's first cascaded hydropower-photovoltaic storage hybrid power plant" Awarded to 2022 Top 10 Science and Technology News in Sichuan Province



Chunchangba Pumped Storage Power Station put into operation

Strengthen overseas cooperation

With the first-mover advantage in international operation, POWERCHINA actively builds a community of shared future, strengthens mutually beneficial cooperation with host country enterprises, extensively cooperates with European and American enterprises in the third-party market, shares advantages and goes overseas together with powerful Chinese enterprises, and continuously enhances our competitiveness and discourse power in international business development. In 2022, POWERCHINA has implemented a number of cooperation projects, such as the largest renewable energy project in the Americas and the Laos Bale Hydropower Project, the first cross-border power cooperation project, in cooperation with European companies. At the same time, POWERCHINA has established physical country subsidiaries in countries where the time is ripe, in accordance with the principle of "one country, one policy", to realize localization of institutions, resources and decision-making. At present, 98% of the workers involved in the construction of the PV Project in Victoria Falls, Zimbabwe are Zimbabweans, and the proportion of local employees in the Indonesia KKU Project and the Kediri International Airport Project is up to 95%.

Data Reading · 2022

Business covers

131 countries (regions)

management offices worldwide

372

Participate in industry exchanges

In 2022, POWERCHINA has participated in the "Belt and Road" Summit Forum, China Hydropower Development Forum, China-Europe Floating Offshore Wind Cooperation Forum and other important high-end forums and conferences for more than 30 times, exploring development ideas with upstream and downstream partners and discussing the future of the industry.

Give back to society

POWERCHINA implements major national strategies, and plays an important role as a pillar and stabilizer in stabilizing the national economy, responding to major natural disasters and serving and safeguarding national economy and the people's livelihood.

Assist rural revitalization

POWERCHINA conscientiously implements the work deployment of the Party Central Committee to consolidate and expand the effective linkage between achievements in poverty alleviation and rural revitalization, and formulates the POWERCHINA 14th Five-Year Plan for Partner Assistance of the Economic and Social Development of Markam County in Tibet Autonomous Region, POWERCHINA 2022 Designated-point Assistance Implementation Plan for Assisting in the Rural Revitalization, POWERCHINA 2022 Implementation Plan for Partner Assistance of the Economic and Social Development of Markam County in Tibet Autonomous Region, etc., effectively helping Jianchuan County of Yunnan, Minfeng County of Xinjiang and Markam County of Tibet to promote deeper rural revitalization.

In 2022, POWERCHINA completed all the 18 assessment tasks in 4 aspects of assisting rural revitalization in 2022 with high quality, and won the "good" rating in the assessment of central units' designated-point assistance for 4 consecutive years, and was awarded the "Best Practice Case of Listed Companies in Rural Revitalization" in 2022.

Data Reading · 2022



The total amount of free investment for assisting rural revitalization is **52,761,600**

RMB



The amount of free material for assisting rural revitalization is **9,173,200**

RMB



The amount of investment in subsidizing students in assisted areas is **1,986,400**

RMB



The amount of investment in improving educational resources in assisted areas is **5,099,600**

RMB



The amount of investment in helping disabled people in assisted areas is **896,700**

RMB



The number of temporary cadres selected is **68**

In Jianchuan County

A total of RMB 23.5 million was invested in the construction of POWERCHINA Jianchuan Digestive Disease Prevention and Control Center to promote the development of Jianchuan County's wellness and medical industry; RMB 4.9 million was invested in the construction of POWERCHINA's rural tourism demonstration project to lead the development of Jianchuan County's tourism industry.

In Minfeng County

A total of RMB 25 million was invested in the construction of the Niya Culture Museum to implement the cultural enrichment of Xinjiang and promote the development of Niya culture and tourism industry in Minfeng County; RMB 1 million was invested in the establishment of POWERCHINA's Minfeng County Photovoltaic Industry Base Development Fund to promote the preliminary work of Minfeng County Photovoltaic Industry Base.

In Markam County

POWERCHINA prepared the Implementation Plan for Clean Energy Planning in Markam County, promoted the planning of service guarantee facilities along the national highway, and assisted Markam County in creating high-quality agricultural and animal products and promoting them to the market.



Mr. Ding Yanzhang, Secretary of the Party Committee and Chairman of the company, went to Mangkang County in Tibet to conduct research on counterpart support work



Mr. Wang Bin, Deputy Secretary of Party Committee and General Manager of the company, visited Jianchuan County in Yunnan Province to conduct research on rural revitalization

Fight against the epidemic and provide disaster relief with full strength

POWERCHINA prioritizes the well-being of the people and the preservation of life, and implements the decisions and deployment of the Party Central Committee and the State Council. We leverage our technology, equipment, and personnel advantages to actively support local efforts in epidemic control, disaster relief, and post-disaster reconstruction. We take our social responsibility seriously and proudly demonstrate the role and responsibility of central enterprises. Our efforts have earned high praise from both national ministries and local governments.

Jointly fight against "Epidemic"

POWERCHINA firmly implements the decisions and deployment of the Party Central Committee, adheres to the principle of "people-oriented, safety first, prevention as the main approach, and lawful and scientific methods", implements the prevention and control strategy of "preventing imported cases and preventing domestic resurgence". We continuously improve the "five have and one grid" management system, and formulates the headquarters' prevention and control emergency plan and systematically organize emergency drills to effectively safeguard the safety and health of our employees. In addition, POWERCHINA fully supports local epidemic prevention and control, donating RMB 1.5 million worth of anti-epidemic materials to Markam County, Tibet. POWERCHINA medical teams have made several trips to aid epidemic control in various regions and overseas projects, and three groups and 57 medical staff were recognized and commended by the SASAC Party Committee.



PowerChina Henan Engineering Co., Ltd. launched "Henan and Jilin Together to Fight Epidemic" volunteer service campaign to support Jilin in its battle against the epidemic



Volunteers of the SINOHYDRO Bureau 12 Co., Ltd. delivered daily supplies to community residents



POWERCHINA NORTHWEST donated anti-epidemic materials to Lhari County, Nagqu City, Tibet

Emergency response to disaster relief

Participated in **154** social emergency rescues

Dispatched more than **3500** personnel

Invested more than **770** sets of equipment

Invested more than **RMB530** million

Received **34** thank-you letters for emergency rescue from relevant departments

POWERCHINA has demonstrated the responsibility of central enterprises through practical actions. After the floods in southern China and the earthquake in Sichuan, the company initiated the emergency response at the first time and donated RMB 20 million to the earthquake-stricken areas in Luding County, Sichuan; during the floods in Guangdong, Guangxi, Guizhou and Fujian, the company dispatched personnel, donated materials, transferred people to safe places and assigned experts to participate in flood prevention and emergency rescue guidance, providing the most solid barrier for local government and people to prevent and fight against floods. In addition, during the flood disaster in Pakistan, the company actively donated food and materials to combat floods and provide relief to local people affected by the disaster, earning high praise from the Prime Minister of Pakistan.



POWERCHINA NORTHWEST participated in the emergency rescue of the sudden heavy rainfall disaster in Datong County, Xining City, Qinghai Province



Prime Minister of Pakistan highly praised POWERCHINA's donation of food and materials for fighting floods and providing disaster relief



PowerChina Eco-environmental Group Co., Ltd. supported the delivery of emergency supplies for flood fighting and emergency rescue in Yingde City, Guangdong



The Expert Committee of Sichuan Provincial Disaster Reduction sent a thank-you letter to POWERCHINA Chengdu

Service for community charity



POWERCHINA continues to deepen the construction of "Candlelight" "Firefly" "Ruo Shui" "Le Cheng" "POWERCHINA Overseas Volunteer Association", and widely organizes public welfare and charity activities such as employee voluntary blood donation, caring for the elderly and young groups, practicing low-carbon environmental protection, etc. In 2022, POWERCHINA overseas volunteers, in 34 service teams across 20 countries, participated in themed activities such as ecological and environmental protection, emergency rescue, community care, "spring sprout" action, bringing the warmth and care of POWERCHINA to local people.



SINOHYDRO Bureau 7 Co., Ltd. volunteers contributed to the G20 Summit

Data Reading · 2022

youth volunteer service organizations

957

volunteers

26281

youth volunteering activities in 2022

2660

hours of volunteer activities in 2022

28472



SINOHYDRO Bureau 4 Co., Ltd. youth volunteers assisted Zhuozhou City, Hebei "New Era Civilization Practice 'Lei Feng' Program - Volunteer Service in Rural Areas"



POWERCHINA Nuclear Engineering Company Limited donated cultural and sports supplies to Vietnam

Case 6 Guarding with heart and soul, creating a better future together

While keeping the power station in stable operation and providing power and energy for local industrial development, the Indonesia Bengkulu Project actively fulfills its corporate social responsibility. According to the research, the Mandiri Private Foundation Orphanage, where the project is located, is mainly financed by private donations and has not received any government funding, leading to operational difficulties and urgent need of assistance. The project took the initiative and actively contacted the person in charge of the organization, and purchased doors, beds, oil, rice, soccer balls, badminton and other living, cultural and sports facilities, as well as masks, disinfectant, medical alcohol and other epidemic prevention materials for the orphanage, helping it to resume normal operation. The Bengkulu Project has set the orphanage as a designated aid target and included this project in its annual corporate social responsibility plan, which has been widely recognized by the local government, media, universities, social organizations and the public. On January 7, 2022, the Director of Mandiri Private Foundation Orphanage in KampungMelayu, Bengkulu, presented the "Certificate of Honor for Caring Enterprise" to the project.



Employees of Bengkulu Project in Indonesia are learning and engaging in volunteer activities in the local community

Looking forward to a better POWERCHINA

Time waits for no one, and the seasons keep changing. The year 2023 marks the beginning of fully implementing the spirit of the 20th National Congress of the Communist Party of China and also a key year for the implementation of the "14th Five-Year Plan". It is the perfect time to advance bravely, we will continue to strive for a new journey with an unwavering sense of mission and responsibility, continue to maintain high-quality development, and showcase our loyalty and responsibility with practical work and real achievements.

Standardize governance and build a solid foundation for management: We will continue to optimize corporate governance, improve the structure of the standardized corporate governance; ensure solid information disclosure, strengthen communication with investors to establish sound relations with them; continuously strengthen the construction of the Party conduct and an honest and clean government as well as anti-corruption work; promote strategic transformation, provide high-quality products and services and protect the rights and interests of customers; strengthen supplier management and supply chain construction, improve the quality of material supply and constantly strengthen the foundation of development.

Green development, shining the color of ecology: We will continue to strictly comply with domestic and international laws and regulations on environmental protection, strengthen environmental management and biodiversity protection, actively respond to climate change, support the development of clean energy, promote green transformation to continue making efforts for the harmonious coexistence of man and nature.

Give back to society and increase people's well-being: We will actively practice opening up and cooperation and drive our partners to win together with our own development; build a firm safety line of defense and strengthen the construction of safety responsibility system; protect the basic rights and interests of employees, broaden the development channels of employees and protect their occupational health and safety; sincerely give back to society, support community development and assist rural revitalization.

When the trumpet blows, thousands of sails will rise, and we will stand at the forefront, daring to be the first. In the new year, we will continue to carry a strong sense of mission and responsibility, adhere to the work guideline of pursuing progress while maintaining stability, implement the new development concept completely, accurately and comprehensively, serve to build a new development pattern, firmly promote strategic transformation and high-quality development, move forward with courage and perseverance, actively face challenges, seize strategic opportunities for development, promote the construction of world-class enterprises, create history through our efforts, achieve the future with practical work, and demonstrate POWERCHINA's new role and make new contributions of POWERCHINA on the new journey of building a modern socialist country!

Appendix

Key Performance Table

Classification	Indicator name	Unit	2021	2022
Business performance	Total assets	RMB 100 Million	10,753.66	10,400.78
	Total operating revenue	RMB 100 Million	5,656.53	5716.49
	Profit before tax	RMB 100 Million	185.66	192.47
	Net profit	RMB 100 Million	148.64	156.84
	Asset-liability ratio	%	75.97	76.89
	Net profit attributable to the parent company	RMB 100 Million	98.64	114.35
	State-owned capital preservation and growth rate	%	109.11	110.40
	Taxes paid	RMB 100 Million	170.19	167.28
	Earnings per share	yuan/share	0.5792	0.6828
	Technology engineering and management	Technology R&D input	RMB 100 Million	165.39
Technology R&D personnel		Person	11958	21862
Annual patent applications		Item	4532	6591
Annual patent licenses		Item	4275	7454
Provincial-level construction methods		Item	428	556
National-level engineering awards		Item	34	30
Ministerial and provincial-level scientific and technological progress awards		Item	299	434
National and industry standards compiled		Item	126	157
International standards participated		Item	9	9
National-level R&D institutions		Pcs	8	7
Provincial-level R&D institutions		Pcs	60	69
Software copyrights obtained		Item	687	882
Acceptance rate of project quality inspection		%	99.71	99.79
Customer satisfaction	%	94.11	95.03	
Compliance management	Performance rate of economic contracts	%	100	100
	Training sessions of law-abiding and compliance	Times	58	61
	Participants in training sessions of Law-abiding and compliance	Ten thousand people	5.6	6.8
Responsible supply chain	Supplier certification pass rate	%	83.47	85.98
	Penalized suppliers (blacklisted)	Pcs	85	85
	Supplier training sessions conducted	Times	2	3
	Participants in Supplier training sessions	Person	590	600
	Hours of Supplier training sessions	Hrs	3	5
	Number of potential suppliers rejected due to social responsibility non-compliance	Pcs	0	0
	Suppliers reviewed during the reporting period (number of declared suppliers)	Pcs	28004	30103
	Number of suppliers whose cooperation has been suspended due to non-compliance of social responsibility	Pcs	0	0
	Responsible procurement ratio	%	100	100
	Overseas layout	Countries with management offices worldwide	Pcs	111
Management offices worldwide		Pcs	321	372
Countries (regions) covered by our business		Pcs	127	131

Continued

Employees' rights and benefits	Employees	Ten thousand people	13.2	16.41
	Female employees	Ten thousand people	2.83	3.42
	Ethnic minority employees	Person	6811	8079
	Labor contract signing rate	%	100	100
	Social security coverage rate of employees	%	100	100
	Disabled employees	Person	309	588
	Female managers' ratio (associate senior title)	%	23.88	22.80
	Employees absorbed during the reporting period	Person	9584	11797
	Localization ratio of foreign employees	%	62.3	54.06
	Paid vacation days per capita per year	Day(s)	8.3	8.18
	Employee satisfaction	%	100	100
	Loss rate of employees	%	3.04	2.28
	Safety management	Total investment in safety production	RMB ten thousand	912958.50
Training coverage rate of safety production		%	100	100
Safety production accidents		Case	9	3
Newly diagnosed cases of occupational diseases among employees		Case	0	0
Number of employee fatalities		Person	13	4
Number of Emergency drills		Times	8598	12408
Harmonious society	Total amount of external donations	RMB ten thousand	1839.15	3049.56
	Total amount of unpaid contributions to rural revitalization	RMB ten thousand	—	5276.16
	Total amount of paid contributions to rural revitalization	RMB ten thousand	—	42235.78
	Value of donated goods for rural revitalization	RMB ten thousand	165.37	917.32
	Cadres dispatched for temporary assignments	Person	56	68
	Industrial development projects	Pcs	48	74
	People benefiting from vocational skills training	Person	3178	12120
	Financial support for students in assisted areas	RMB ten thousand	222.08	198.6433
	Students subsidized in assisted areas	Person	1968	2123
	Investment in improving educational resources in assisted areas	RMB ten thousand	258.47	509.96
Environmental protection	Investment in supporting disabled people in assisted areas	RMB ten thousand	16.93	89.672
	Disabled people supported in assisted areas	Person	330	444
	Volunteers	Person	24560	26281
	Volunteering hours	Hrs	20016	28472
	Total investment in environmental protection	RMB 100 Million	7.97	9.87
	Energy consumption per RMB 10,000 of business income (comparable price)	Tons of standard coal/RMB 10,000	0.075	0.0682
	Nitrogen oxide emission	10,000 tons	1404.2	1387.7
	Sulfur dioxide emission	10,000 tons	1106.9	1100.4
	Pass rate of EIA for new projects	%	100	100
	Compliance rate of pollutant emissions	%	100	100

Suggestion feedback

Dear readers,

Greetings! Thank you for reading this Report. We highly value and appreciate your feedback on POWERCHINA's Environmental, Social and Governance Reports and we welcome your valuable opinions. We will take your comments and suggestions seriously as an important basis for the continuous promotion of social responsibility management and practices, and we promise to protect your feedback from being accessed by third parties.

1. Do you think this report can reflect the significant impact of POWERCHINA on economy, society and environment?

Yes Average No

2. Do you consider that the analysis of the stakeholders identified in this Report and their relationship with POWERCHINA is accurate and comprehensive?

Yes Average No

3. Do you consider that the information disclosed in this Report is complete, accurate and clear?

Yes Average No

4. Do you consider that the general framework, content design and format of this Report are easy to read?

Yes Average No

5. Do you consider that the information or topics you are interested in can be easily located in this Report?

Yes Average No

6. What is your overall impression of this Report from all aspects?

Very good Good Average Poor Very poor

7. What other information do you believe is of concern to you that is not disclosed in this Report?

8. Do you have any comments or suggestions on this Report and on the future preparation of environmental, social and governance reports by the company?

You may also contact us at:

Brand and Social Responsibility Division, POWERCHINA Office

Address: Haifu International Building A, Yard 22, Chegongzhuang West Road, Haidian District, Beijing

Contact person: Liu Yao

Tel: 010-58368571

Email: wanghai@powerchina.cn



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ADDRESS: HAIFU INTERNATIONAL BUILDING A, YARD 22,
CHEGONGZHUANG WEST ROAD, HAIDIAN DISTRICT, BEIJING
TEL: 010-58368571
EMAIL: WANGHAI@POWERCHINA.CN